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Chapter Author: Axel H. Boersch-Supan

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4 Savings in Germany—Part 1: Incentives

Axel Börsch-Supan

4.1. Introduction: Overview of Household Savings

This paper is the first of two that report on household saving in Germany. This paper concentrates on incentives for saving; the second paper will provide an analysis of the composition of household savings and the factors that influence it.

Germans are said to value saving per se, by tradition. They were reluctant to follow American consumerism despite strong American influence on German postwar development. Although this attitude appears to be changing with each new generation, it does so surprisingly slowly. Table 4.1 presents comparable personal savings rates for Germany and the United States. It shows that, since 1960, savings rates have always been higher in Germany than in the United States but that this discrepancy is particularly large in recent years. Although savings rates in both countries have declined since 1975, the relative decline is much smaller in Germany than in the United States.

The different historical experiences of Germans and Americans may help to explain the higher aggregate savings rates that emerged in Germany as soon as a moderate standard of living was achieved in the 1960s. The elderly in the decade 1982–92 have all experienced World War II. This catastrophe, however, affected Americans and Germans very differently. During wartime and until the German currency reform in 1948, most Germans could not even satisfy such basic needs as food and clothing, an experience not shared by their American contemporaries. In addition, during the so-called economic miracle in the

Axel Börsch-Supan is professor of economics at the University of Mannheim, a research associate of the National Bureau of Economic Research, and a research fellow of the Centre for Economic Policy Research.

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Table 4.1 Aggregate Savings Rates (personal savings as % of personal disposable income)

Year	West Germany	United States
1960	8.6	5.7
1965	12.2	7.0
1970	13.8	8.0
1975	16.2	8.7
1980	14.2	7.9
1985	13.0	6.4
1990	14.8	5.1

Source: Monatsberichte der Deutschen Bundesbank (Frankfurt am Main: Deutsche Bundesbank, 1992); *Economic Report of the President,* Statistical Appendix (Washington, D.C.: Government Printing Office, 1992).

1950s in Germany, saving was heavily promoted in large-scale public campaigns.

Tables 4.2 and 4.3 report on how these large savings are invested. The tables are based on two very different surveys: table 4.2 is based on the German Income and Expenditure survey, which excludes the very rich[1]; table 4.3 is based on property tax returns, which need only be filed by the very wealthy, due to the large exclusions. On average, about 70 percent of net household wealth is held in real estate, as is evident from the last column in table 4.2. Another 10 percent is invested in company shares and the remaining 20 percent in financial assets. However, portfolio choice varies greatly with the total amount of wealth available. Company shares and bonds are preferred by the rich, while the less wealthy prefer general savings accounts. According to table 4.3, more than 70 percent of all company shares and almost 60 percent of all stocks and bonds are held by the wealthiest 1 percent of households in Germany. Real estate, however, is much more equally distributed.

The attitude that saving is good per se (and that personal loans are to be avoided) is reflected in the German tax treatment of savings and loans. Although all income is nominally taxed equally, the taxation of interest income and capital gains is only half-heartedly enforced. In addition, there are several schemes subsidizing savings in Germany, many of them heavily advertised. A description of these incentives is the main topic of this paper.

Section 4.2 will detail the taxation of capital income in Germany. Section 4.3 is devoted to a discussion of property taxes. Because this paper is concerned with tax incentives to household saving, we concentrate on personal taxation and largely ignore the taxation of corporations. Sections 4.4 and 4.5 describe the incentives for retirement and precautionary saving in relation to pension provisions and health and unemployment insurance. Section 4.6

1. Households with net incomes exceeding DM 250,000 per annum (U.S. $156,000).

Table 4.2 **Distribution and Composition of Household Wealth (based on the 1973 Income and Expenditure Survey)**

	Average Net Household Wealth (DM)									
Total Net Household Wealth	0 and Less	1 to 4,999	5,000 to 9,999	10,000 to 19,999	20,000 to 34,999	35,000 to 99,999	100,000 to 499,999	500,000 to 999,999	1,000,000 and More	All Households
Population share (%)	8	11	11	15	11	20	21	2	1	100
Company shares	1,165	68	146	246	731	4,266	19,660	66,594	507,397	11,606
Real estate	16,298	785	874	2,046	7,184	39,856	163,366	537,495	1,538,713	70,697
General savings	2,280	2,708	5,150	8,145	12,266	13,410	17,807	29,383	107,621	11,715
Bausparkassen	1,258	314	814	1,842	3,226	3,767	4,405	7,295	14,026	2,824
Bonds	298	104	286	804	2,028	3,030	5,075	13,739	406,926	6,451
Life insurance	550	361	587	1,527	2,509	3,706	8,621	28,072	132,907	5,107
Cash and checking accounts	884	639	1,333	2,401	3,959	4,875	8,158	20,181	104,095	5,214
Gross wealth	22,717	4,979	9,389	17,011	31,903	72,910	227,090	702,755	2,811,710	113,614
Home mortages	21,773	1,006	1,026	1,852	4,502	9,465	16,210	35,013	104,903	9,787
Consumer loans	6,950	1,461	1,016	888	1,052	1,549	2,094	4,565	40,295	2,321
Net wealth	−6,006	2,508	7,347	14,272	26,349	61,896	208,786	663,175	2,666,285	101,505

Source: Mierheim and Wicke (1978).

Note: Excludes households with annual incomes above DM 250,000 ($156,000 U.S.).

Table 4.3 **Distribution and Composition of Household Wealth among the Very Rich (based on 1980 property tax returns)**

	Average Household Wealth of Top x % (thousand DM) and % of Total Wealth Held by Top x %							
x	Agricultural Property	Real Estate	Company Shares	Stocks and Bonds	Other	Gross Wealth	Debt	Net Wealth
0.5	12	1,240	1,522	441	537	3,754	379	3,374
	3.6	13.2	61.8	50.7	6.1	17.2	12.0	8.1
1.0	9	894	877	251	355	2,389	243	2,146
	5.2	19.1	71.3	57.9	8.1	21.9	15.5	23.0
1.5	7	721	624	179	278	1,811	184	1,627
	6.4	23.1	76.2	61.8	9.5	24.9	17.6	26.1

Source: Baron (1988, 188).
Note: Excludes households with wealth below property tax exclusion. Property tax considered is the *Vermögensteuer* in section 4.3.1.

examines special incentive programs for saving in Germany, in particular the *Vermögensbildungsgesetz*, a wealth accumulation program for the lower middle class that has existed since 1961. Section 4.7 concludes and delivers a summary of the programs and their associated expenditures from 1975 to 1990. We will refer to this summary (table 4.11) throughout the paper.

4.2. Taxation of Capital Income

The basic principle of German personal income taxation is that all income of German residents—wherever and however earned—is taxed equally. Therefore, the original intention of the German legislature was to provide no special provisions for capital income taxation and to avoid any distortions related to differential taxation. All asset income is supposed to be taxed as ordinary income. This includes capital gains: Germany does not have a capital gains tax like the one in the United States, and there is no distinction in statutory tax rates among different income sources like the different Massachusetts state income tax rates. Moreover, Germany has only a federal income tax, with no state or local income taxes that can create additional regional distortions.[2]

Reality, however, deviates from this principle. Effective tax rates differ between various income sources, not because of differential statutory tax rates but because of differential valuation methods, differential exclusion rules, and differential enforcement of taxation.[3]

2. However, property taxes are regional or local, see sections 4.3.1 and 4.3.2.
3. Summaries of the German tax system can be found in Petersen (1988) and Stiglitz and Schönfelder (1989).

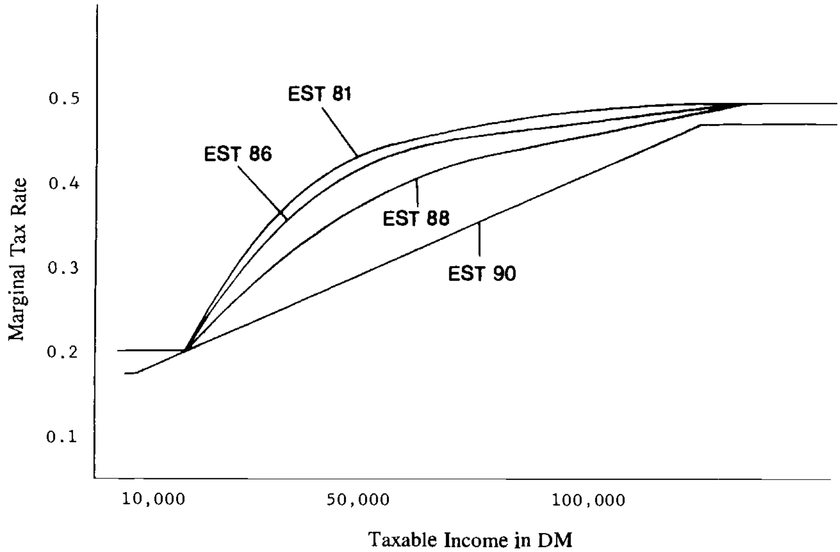

Fig. 4.1 Marginal personal income tax rates before and after German tax reform
Source: Einkommensteuergesetz (various issues).
Note: EST 81 refers to the *Einkommensteuergesetz* (1981), i.e., the German personal income tax code in 1981. The notation is analogous in 1986, 1988, and 1990, when the three steps of the tax reform took place.

The German federal income tax code has a single tax schedule defined piecewise by polynomials. The polynomials are stated in the law as mathematical formulae. Germans do not use the notion of "tax brackets," although three pieces of the schedule can be distinguished: two proportional zones and a progressive zone. Until 1989, the basic structure consisted of a constant marginal tax rate of 22 percent for low incomes, then a degree-four polynomial for middle incomes, and finally a top marginal tax rate of 56 percent for high incomes. All three pieces were smoothly tied together. The 1990 tax reform reduced the marginal tax rates and flattened the so-called middle-class belly by replacing it with a quadratic polynomial, resulting in a flat increase of the marginal tax rate from 19 percent to the top rate of 53 percent. Figure 4.1 displays the marginal tax rates of the German federal income tax schedule before and after the 1990 tax reform.

Marriages are subsidized by a splitting rule that is applied to the tax schedule outlined above: a married couple filing jointly pays twice the tax on half of their joint income. Due to the progressivity of the German income tax schedule, this results in substantial tax savings relative to two single earners if the individuals have different incomes.[4]

As mentioned, this tax schedule is to be applied to the sum of income from all sources. Mainly for technical reasons, German tax law distinguishes among

4. The maximum subsidy—to a married couple filing jointly with a single income subject to the top marginal tax rate—is DM 22,842 (U.S. $14,300) per annum.

seven income categories: (1) agricultural income, (2) income from business, (3) labor income from self-employment, (4) labor income from employment, (5) income from capital, (6) rental income, (7) other income, in particular speculative capital gains and pensions returns. Not included among these income sources and therefore not subject to federal income tax is income in the form of gifts, inheritances, and prizes such as those from lotteries. There is, however, a special tax for gifts and inheritances, which we will discuss in section 4.2.4.

Only taxes on labor income from employment and taxes on profit shares are withheld at source. All other income has to be declared in the yearly income tax statement. Compared to the United States, less income is withheld at source. The most important difference here is the tax treatment of interest income.

4.2.1 Interest Income

Of interest income, the first DM 600 (DM 1,200 for married couples filing jointly; about U.S. $375, U.S. $750 for married couples) is formally tax-exempt.[5] This exclusion was originally intended to avoid the taxation of interest from insignificant savings but is now explicitly considered a subsidy to savings. Interest income in excess of the exclusion is taxable income. Table 4.11 presents the estimated tax losses as a result of this exclusion, from 1975 to 1990.

However, the main feature of interest income taxation in Germany is its lax enforcement. Interest income from passbook savings or similar liquid capital and bonds is currently not subject to automatic withholding but is self-reported on the tax return. Direct notification of the internal revenue service by the bank (as routinely done in the United States on Form 1099) would be considered a violation of German privacy laws. Bankers' discretion in Germany is almost as sacred as in Switzerland. Hence, interest income remains widely undeclared, and the public does not really share the notion that this constitutes tax evasion.

Two mechanisms enforce some degree of interest income taxation. First, there is a provision which states that, when land and houses are purchased, the sources of payment must be specified. If these sources include financial assets or inheritances, the revenue service routinely cross-checks whether the appropriate income and estate taxes have been paid. There are, of course, obvious ways to avoid revealing the primary sources of payment. Second, the German internal revenue service freezes all assets of a deceased person. The estate is redistributed to the heirs only after a careful check that all taxes have been paid by the decedent. If this is not the case, the heirs have to pay the tax liability before the estate can be released.

Five years ago the government tried to introduce automatic withholding of

5. This amount is called the *Sparer-Freibetrag*. It is to increase 10-fold, when automatic withholding is reintroduced (see below).

interest income taxes (*Quellensteuer*) at a rate of 10 percent. This rule was heavily opposed and induced substantial flows of capital from German banks to banks in neighboring countries such as Luxembourg. It ultimately led to the demission of the secretary of finance and a repeal of the withholding rule only half a year later (Nöhrbaß and Raab 1990).

However, in 1991 the German supreme court issued a decision that the government must take action to enforce equal taxation of all income sources. In response to this, the government has stepped up its public relations effort to stimulate compliance with the tax code but has been reluctant to change the privacy laws that might enable enforcement. Moreover, it will revive withholding taxes on interest at source, now at a rate of 30 percent, beginning in 1993. However, this only appears to be a dramatic change. In fact, the government will increase the interest income exclusion tenfold to DM 6,000 (DM 12,000 for married couples filing jointly; about U.S. $3,750, U.S. $7,500 for married couples). Hence, the reform will continue to shield most interest income from taxation, with the exception of income of the very rich. Because the tax liability will be transferred as a lump sum from each bank with no possibility for the internal revenue service to trace each individual taxpayer, the very rich can still cheat on the difference between the withholding tax of 30 percent and the, presumably higher, marginal tax rate applicable to them.

Somewhat of a counterpart to the lax taxation of interest income is the nondeductibility of interest expenditures for any kind of consumer loan. In particular, German consumers cannot deduct mortgage interest on land and housing purchases, an important deductible item in the United States.[6] Interest payments are deductible only if they can be considered business expenses. The most important example here is mortgage interest related to a dwelling that is rented to somebody else.

The symmetry between lax taxation of interest received and no deduction for interest paid is not a statutory one. In fact, while interest income ought to be taxed by law, the law also explicitly forbids the deduction of consumption and mortgage interest payments.

4.2.2 Dividends and Corporate Income Taxes

Income from dividends and other kinds of profit shares is, in general, subject to automatic withholding at a rate of 25 percent, which is then credited against the actual income tax burden. There is no exclusion for dividend income, unlike interest income. Thus, a rule is applied to dividend income that was politically infeasible for interest income.

In addition, dividends are subject to corporate income tax (*Körperschaftsteuer*) at a flat rate of 36 percent. However, this tax too is credited against

6. Temporary and restricted exceptions were in place in 1986–89 and 1992–1994. The current exception allows for the deductability of mortgage interest up to DM 12,000 (U.S. $7,500) per annum for three consecutive years after buying a newly built house.

personal income taxes. Hence, Germany has no double taxation of dividend income as in the United States.

Because it can be deducted from personal income tax, the German corporate income tax is in essence not a separate tax. Effectively, corporate profits—unless they are retained earnings—are taxed at the applicable marginal income tax rates of the corporation's owners, in proportion to their ownership shares.

Retained earnings are treated very differently. They are taxed at a flat 50 percent at the company level and cannot be credited against the personal income taxes of the shareholders.

4.2.3 Capital Gains

The taxation of capital gains in Germany deviates from the Anglo-Saxon principle of a specific, often complicated capital gains tax. In fact, capital taxation of households in Germany is very simple.[7]

Capital gains are subject to personal taxation only when they are obtained by what the law considers speculation. Speculation is defined as selling a financial asset (e.g., bonds) within six months of the purchase date, or selling land or land leases within two years of the purchase date. In these cases, capital gains are computed as the nominal difference between actual sales price and actual purchase price, reduced by associated transaction outlays. This amount is then taxed as ordinary income. If capital is held longer than six months (or two years, in the case of land) capital gains are not taxed.

In addition, the first DM 1,000 (about U.S. $625) of capital gains are tax-exempt in all cases. Capital gains of one asset and capital losses of another asset within a given calender year can be consolidated.

Income achieved by investing in a pension scheme is also only partially taxed. German tax law distinguishes between the insurance part of pension income and the internal return of a pension scheme. The share of the second part is tabulated by age at retirement. These tables are computed as imputed interest earned on fictitious pension wealth based on an annuity rule that underestimates the actuarial fair accrual and ignores the intergenerational redistribution between contributions and pensions. For a worker retiring at age 65, the assumed internal return of his pension investment amounts to 24 percent of annual pension income. This part is taxable as ordinary income. Because of the actuarially unfair computation and the omission of transfer gains, pension income is effectively taxed at a substantially lower rate than ordinary income.

4.2.4 Gift and Estate Tax

Capital transfers in the form of gifts and inheritances are not subject to German federal income tax but to a specific gift and inheritance tax (*Schenkung-* and *Erbschafsteuer*). Bequests and inter vivos gifts are taxed at the same statutory rate. This should in theory eliminate distortions between inter vivos gifts

7. Tax treatment of capital gains at the company level is different.

and bequests. In fact, however, taxation is a disincentive to leave bequests because it is much easier to evade taxation by transferring wealth while still alive, while German law requires the freezing of all assets as soon as a person dies.

Tax rates and initial exclusions depend on one's relation to the donor (see table 4.4).[8] Spouses and children are allowed very large exclusions (DM 250,000 and DM 90,000, respectively; about U.S. $150,000 and U.S. $56,000, respectively) and subject to low tax rates (3–35 percent: e.g., 4 percent for DM 100,000 and 10 percent for DM 1,000,000), while nonrelatives face a low exclusion (DM 5,000) and high tax rates (20–70 percent: e.g., 24 percent for DM 100,000 and 48 percent for DM 1,000,000). Because real estate is valued at assessed values, which are very low, substantial estates remain tax-free.

4.3 Property and Transaction Taxes

Property taxes play a minor role in the German tax system except for the very wealthy. In contrast to those in the United States, they have little effect on middle-class taxpayers on the one hand and are only a minor source of revenue for local governments on the other.

The German system has two kinds of property taxes: a general property tax on all asset types (*Vermögensteuer*), which is uniform across Germany—though technically a state tax—and a local property tax on land, which differs among communities (*Grundsteuer A und B*).

4.3.1 State Property Taxes

State property taxes are due on net wealth, that is, the sum of all assets minus debt. The tax base is total net wealth at the beginning of each calender year, reduced by an exclusion of, normally, DM 70,000 per household member (about U.S. $44,000). A proportional tax rate of 0.5 percent is applied to the tax base. In addition, corporations pay another 0.6 percent state property tax, nonrefundable to owners.

Computation of total wealth is regulated by a special evaluation law (*Bewertungsgesetz*). This law defines the value of financial assets as basically their current market value and the value of real property as basically their assessed value. The law also specifies assessment rules. These rules result effectively in assessed values for land and housing that are on average about one-seventh of actual sales values (Schöffel 1986). However, this ratio varies both between and within communities. Assessed values are updated every six years for land and housing, and every three years for business property. The updating procedure is commonly not a property-specific but a universal adaptation of prop-

8. This is quite different from the United Kingdom, the United States, and Japan. See Richter (1987).

Table 4.4 **Gift and Inheritance Tax Rates (%)**

Taxable Wealth (thousand DM)	Relationship Category I	II	III	IV
0–50	3	6	11	20
50–75	3.5	7	12.5	22
75–100	4	8	14	24
100–125	4.5	9	15.5	26
125–150	5	10	17	28
150–200	5.5	11	18.5	30
200–250	6	12	20	32
250–300	6.5	13	21.5	34
300–400	7	14	23	36
400–500	7.5	15	24.5	38
500–600	8	16	26	40
600–700	8.5	17	27.5	42
700–800	9	18	29	44
800–900	9.5	19	30.5	46
900–1,000	10	20	32	48
1,000–2,000	11	22	34	50
2,000–3,000	12	24	36	52
3,000–4,000	13	26	38	54
4,000–6,000	14	28	40	56
6,000–8,000	16	30	43	58
8,000–10,000	18	33	46	60
10,000–25,000	21	36	50	62
25,000–50,000	25	40	55	64
50,000–100,000	30	45	60	67
More than 100,000	35	50	65	70

Source: Author's calculations based on *Erbschaft-* and *Schenkungsteuergesetz.*

Note: The relationship categories and, in parentheses, their corresponding tax-free exclusions are as follows: I—spouses and children (spouses: DM 250,000, children: DM 90,000 plus supplements for minors), II—grandchildren (DM 50,000), III—parents and siblings (DM 10,000), IV—everybody else (DM 3,000).

erty values to general increases in land and housing prices. The last major individual reassessment was in 1964.

The combination of large exclusions and small assessment ratios render the state property taxes fairly irrelevant for all but the very wealthy. For a three-person household with no other wealth, for example, the sales value of a house must be larger than DM 1.5 million (about U.S. $900,000) to be subject to the state property tax. Moreover, a small amount of financial debt is sufficient to offset great real estate wealth, resulting in zero taxable net wealth.[9]

9. The amount of financial debt necessary to wipe out property taxes is the assessment ratio times real estate wealth.

4.3.2 Local Property Taxes

Local property taxes are due on land only. While assessed values are the same as for state property taxes, tax rates are set by communities. Variation across communities, however, is relatively small, particularly in comparison to the variation among communities in the United States. Effective tax rates vary by land usage. Land for housing is effectively taxed at rates between 0.15 and 0.2 percent of market value, rates much lower than in the United States.

Because of the small tax burden, the problem of differential effective taxation due to different assessment ratios and the resulting call for reassessment are not political issues in Germany.

4.3.3 Transaction Taxes

Transaction taxes were levied when stocks, companies, and land were sold. With the exception of that on land transactions, these taxes have been abolished. The former transaction tax on the sale of stocks (*Börsenumsatzsteuer*) was 1 per mill of the sales value for the seller as well as for the buyer. It was abolished effective January 1, 1991. The former transaction tax on the sale of companies (*Gesellschaftsteuer*) was 1 percent of the sales value for the seller. This tax was abolished effective January 1, 1992. Finally, the transaction tax on the sale of land (*Grunderwerbsteuer*) is 2 percent of the assessed value. This tax is still being levied on the buyers of land.

4.4 Pension Plans and Retirement Saving

Germany has a pay-as-you-go public pension system, which supplies, in effect, a minimum level of retirement income to almost every worker. Coverage is very broad. Only the self-employed (8.9 percent of the labor force in 1988) and workers with very small incomes (5.6 percent) are not required to participate, although they may do so (Casmir 1989).

However, the basic principle of the German retirement system is not the provision of a last-resort retirement income but the appropriate replacement of individual lifetime income. The German public retirement system is more insurance than a social safety net or transfer program, which is reflected in the name *Gesetzliche Rentenversicherung* (mandatory retirement insurance) as opposed to "Social Security" in the United States. Private pensions, either on an individual or a firm-based level, are therefore much rarer than in countries with a less pronounced link between individual labor and retirement income.

4.4.1 The German Public Pension System

Until 1992, public pension benefits were computed by a formula in which, in principle, number of years of service, current wage level, and relative former income position of the individual worker entered multiplicatively. This resulted in three features: pension benefits were only slightly affected by retirement

Table 4.5 **Net Replacement Ratios of Social Security Old-Age Pensions**[a]

Relative Income (% of APW wages)[b]	United States	Germany
50	61	67
75	55	66
100	53	71
150	45	77
200	41	75
300	30	53

Source: Casmir (1989, 508, 512).

[a]Net replacement ratios for a worker with 40 years of service. Married-couple supplement not included.

[b]Wages of an "average production worker" according to the OECD.

age, pensioners benefited from labor productivity increases achieved by the younger generation, and, even more important for savings, pension income for the middle class was roughly proportional to labor income and thus conserved relative income positions even after retirement. Because the lifetime income base had a lower and an upper limit, this proportionality holds only roughly.

The system was reformed in 1992, but essentially retains these features, except that the relation between pension benefits and retirement age is more actuarially fair. In addition, the link between pension benefits and current wages was changed from a before-tax to an after-tax basis.[10]

The philosophical difference between this and other pension systems, most notably the U.S. Social Security system—the German system is not designed to prevent poverty but to provide approximately the same living standard before and after retirement—results in substantially higher replacement rates than, for example, the U.S. Social Security system, particularly for higher income levels. As a matter of fact, the rationale for not having a 100 percent replacement ratio in Germany is not the added utility of leisure but the cessation of work-related expenses after retirement.

Table 4.5 presents net replacement ratios by income class, that is, after-tax retirement incomes as percentages of the preceding after-tax labor incomes. On average, German social security income is about 33 percent higher than American, resulting in an average net replacement ratio of more than 70 percent.

Payments to the retirement insurance program are directly subtracted from wages, similar to Social Security contributions in the United States. The current contribution rate is 17.7 percent on the first DM 6,800 of gross monthly earnings, shared equally between employer and employee (about U.S. $51,000

10. More precisely, "before" and "after" mean before and after personal income taxes and social security contributions.

per annum), a low point between the 18.7 percent rate in 1980 and the expected increase to 20.1 percent in 2000, and even higher thereafter. Even so, the German contribution rate is perceptibly higher than the contribution rate in the United States, due partly to the higher replacement ratio and partly to the different age structure of the German population.

German public retirement insurance is augmented by mandatory accident insurance, an institution close to a combination of disability insurance and workers' compensation in the United States. Every employee, except for civil servants, is enrolled in this branch of the German social insurance system. Accident insurance covers on-the-job accidents and provides compensation, full or partial pensions in case of accident-related early retirement, and pensions for widows and widowers in case of accident-related death. Contributions are paid exclusively by employers.

4.4.2 Employer-provided Pension Plans

Employer-provided private pensions play only a minor role in Germany. They provide approximately 3 percent of the retirement income of the German elderly. In 1984, 82 percent of all elderly in West Germany received *only* social security income. Another 8.5 percent had additional private pension income (mainly annuities from life insurance), and only 7.6 percent had both social security and firm pension income (Börsch-Supan 1992a). This is in stark contrast to the United States, where employer-provided pensions provide a significant fraction of retirement income (about 15 percent of American retirement income). About half of Americans age 60 and older are covered by pension plans. For 13 percent of these, pensions contribute more than 20 percent of their retirement incomes; for 2 percent, pensions make up more than half (Hurd 1989, table II 6).

Contributions are treated as taxable income for the employee, but there are tax incentives for employer-provided pension plans on the employers' side, because pension funds can escape corporate income taxation in certain circumstances when they are used as reserves. This is relevant mainly for large companies.

4.5 Health Insurance, Unemployment Insurance, and Precautionary Saving

Germany has a considerably tighter social safety net than the United States. Health insurance is mandatory, and unemployment compensation can last up to two years.[11] One is tempted to conclude that Germans need precautionary savings less than Americans.

11. Extensive descriptions of the German social policy system are contained in Frerich (1987) and Lampert (1985).

4.5.1 Health Insurance

In Germany, virtually every worker is enrolled in the health insurance system, which covers all health expenditures, the only exception being long-term institutionalized care not related to acute illness. Coverage includes hospital costs, costs of doctor visits, and medication and medical aids. It covers expenditures not only for catastrophic illnesses but also for many bagatelles (over-the-counter medicines), and until recently even cold remedies.[12] Therefore, German coverage is far more comprehensive than that of the U.S. Medicaid and Medicare systems.

Germany has a dual health insurance system, partly private, partly social. The social health insurance system is not like the British National Health Service. Rather, it consists of several heavily regulated insurance companies—some public, some private—that engage in limited competition. Enrollment in the social health insurance system is mandatory for employees with monthly incomes below about DM 5,000 (about U.S. $37,500 per annum). Wealthier households and self-employed workers are free to choose which insurance to enroll in or to self-insure. However, once private insurance has been chosen, there is no way back into the social system. Competition in the private sector is also limited because government regulations enforce rather high service standards and require the redistribution of surpluses to customers. Although social health insurance serves as last-resort insurance because it is required to accept every customer initially, there is little adverse selection. The main reason is, of course, the mandatory participation of all households except upper-middle-class and wealthy households. Moreover, standards in the social insurance system are high, and the system is not considered inferior, unlike, for example, the British system.

Monthly contributions to social health insurance are subtracted from wages, like contributions to retirement insurance. Payments are shared equally between employer and employee and amount to 12.5 percent of the first DM 5,000 (U.S. $3,125) of monthly gross income.

The only significant gap in the safety net for health expenditures is costs of long-term institutionalized care not related to acute illness. The government has promised to establish long-term care insurance that would fill this gap by 1994. After much discussion about a fully funded system, which would be a novelty in the German social insurance system, the present coalition government has decided on a pay-as-you-go system, much like the social health insurance system. It features an initial contribution rate of about 2 percent of gross income, shared equally between employer and employee, and would cover most costs of long-term institutionalized care.[13]

12. Bagatelle medication is nonrefundable, as of the *Gesundheitsreformgesetz* (German Health Reform) of 1989.

13. The contribution rate is likely to increase substantially with the aging of the German population.

4.5.2 Unemployment Insurance

The third component in the German social insurance system is unemployment insurance. All employees must be enrolled; only the self-employed and civil servants do not participate. Monthly contributions to unemployment insurance are subtracted from wages, like contributions to health and retirement insurance. Payments are shared equally between employer and employee and amount to 6.3 percent of monthly gross income.

In case of unemployment, there are two kinds of payment. During an initial period, in general lasting one year, the unemployed worker receives unemployment compensation (*Arbeitslosengeld*). The replacement rate is 68 percent of net wages for workers with children, 63 percent of net wages for workers without children.

After this period, if the worker is still unemployed, he or she is eligible to receive unemployment relief for one more year (*Arbeitslosenhilfe*). This relief is much like welfare because it requires the exhaustion of the personal wealth of the worker and his immediate family.[14] The replacement rate for unemployment relief is 58 percent of net wages for workers with children and 56 percent of net wages for workers without children.

Eligibility rules and the duration of the first period actually depend on years of service as well as on age (see table 4.6). In order to receive unemployment compensation at all, the worker has to demonstrate a minimum duration of service of one year. In this case, unemployment compensation is paid for half a year. Each additional four months of service add another two months of unemployment compensation, so that a minimum of two years of service is required to be eligible for one full year of unemployment compensation. For workers age 42 and older, this scheme is continued. At a maximum, workers age 54 and older with at least five years and four months of service are eligible to receive two years and eight months of unemployment compensation. In each case, another year of unemployment relief can be added if the worker is eligible. Thus, compared to unemployment insurance in the United States, German benefits last substantially longer and feature a higher replacement rate.

4.6 Special Incentive Programs

The German government has several programs that subsidize savings. These programs had their heyday in the seventies and early eighties but have recently been reduced. A general program designed to foster wealth accumulation among lower income groups (*Vermögensbildungsgesetz*) is a means for wealth redistribution. Several other programs are incentive programs for specific kinds of savings, most prominently savings in building societies (*Bausparkassen*) and life insurance policies.

14. This requirement includes parents and own children. Housing wealth is not counted.

Table 4.6 **Duration of Initial Period of Unemployment Compensation (weekdays)**

Employment Duration		Age				
Total Number of Days Worked	Years since First Workday	0–41	42–43	44–48	49–53	54+
360	3	156	156	156	156	156
480	7	208	208	208	208	208
600	7	260	260	260	260	260
720	7	312	312	312	312	312
840	7		364	364	364	364
950	7		416	416	416	416
1,080	7		468	468	468	468
1,200	7			520	520	520
1,320	7			572	572	572
1,440	7				624	624
1,560	7				676	676
1,680	7					728
1,800	7					780
1,920	7					832

Source: Bundesminister für Arbeit und Sozialordnung (1990).

4.6.1 *Vermögensbildungsgesetz*

The *Vermögensbildungsgesetz* (wealth accumulation program) was put in place in a rudimentary form in 1961 and substantially extended in 1970. It very much exemplifies the German idea of a social market economy. Its stated intentions were to at least partially equalize the wealth distribution in order to stabilize trust in a market economy, cushion the conflict between labor and capital, and induce savings to provide sufficient capital for economic growth.

The basic mechanism of the program is as follows: Employees authorize the deduction of a certain amount from their pay, which is direct-deposited into long-term funds. Originally, the contributions were paid by the employer only. Currently, no distinction is made between employer and employee contribution. The employer may not impose the selection of a particular fund. The funds must remain on deposit for at least six years. If the employee's income is below a certain limit, the government supplements the contributions at a fixed percentage until an upper limit is reached.

Currently, funds eligible for a subsidy include shares in the employee's own or any other company and savings accounts at building societies.[15] Until recently, regular long-term savings accounts at banks and contributions to life insurance qualified, as well. Currently, contributions of up to DM 936 (roughly U.S. $600) for individuals and twice that amount for married couples are subsi-

15. These are the provisions of the *Fünftes Vermögensbildungsgesetz, Fassung* 1990.

Table 4.7 **Premia in the Wealth Accumulation Program**

		Subsidy (%)					
		General Savings		*Bausparkassen*		Productive Capital	
Year	Limit of Contribution (DM)	(a)	(b)	(a)	(b)	(a)	(b)
1975–82	624	30	40	30	40	30	40
1983–89	936	16	26	23	33	23	33
1990–92	936	0	0	10	10	20	20

Source: Author's calculations based on *Vermögenbildungsgesetz.*
Note: (a) households without children; (b) households with 3 children.

dized. Company shares are currently subsidized by a 20 percent premium, while the subsidization rate is 10 percent for savings accounts at building societies. The current income limit for participation in this program is DM 54,000 per year for married-couple households (about U.S. $33,750), a lower-middle-class income in Germany, and half that amount for single-member households. In the seventies, these premia were as high as 40 percent, and the income limit for eligibility was sufficiently high to cover incomes far into the middle class. An overview is provided in table 4.7.

In addition to the above program, employees can receive shares of their employers' companies as tax-exempt income, if they do not sell these shares for six years and if the market value does not exceed DM 500 per annum (about U.S. $312). There are no income limits to this tax subsidy.[16] Estimated government expenditures on these programs are tabulated in table 4.8.

4.6.2 *Bausparkassen*

Savings to accumulate the down payment for housing purchases are subsidized by a special incentive program (*Wohnungsbauprämiengesetz*). The system centers on the German building societies (*Bausparkassen*). Each building society is a completely closed and self-financing savings and loan institution in which all funds for housing mortgages are taken from savings in the building society, and only former savers in the society are eligible for home mortgages. This pay-as-you-go system is almost completely detached from the general capital market. The combined savings and loan contracts in building societies have the following form: Building society and saver agree on a specified contract sum. The saver accumulates 40 or 50 percent of the contract sum. If this amount has been accumulated, the contract is called "mature" and the saver is eligible for a mortgage of the remainder amount, 60 or 50 percent of the contract sum, respectively. Neither the time for the accumulation of the savings nor the time of the payout of the loan are part of the contract. Average accumu-

16. These are the provisions of § 19a of the *Einkommensteuergesetz.*

Table 4.8 **Government Expenditures in Savings Subsidies, 1975–90 (million DM)**

Year	General Interest Income Exclusion (1)	Tax Deduction *Bausparkasse* (2)	Premium for *Bausparkasse* (3)	Premium for General Savings (4)	Wealth Accumulation Program (5)	Company Participation Program (6)	Total Savings Subsidies: Nominal (7)	Total Savings Subsidies: Real (8)
1975	300	765	3,169	1,633	3,230	0	9,097	14,326
1976	300	800	2,241	2,508	3,415	0	9,264	13,973
1977	315	780	1,852	4,367	3,500	0	10,814	15,741
1978	330	750	1,870	2,390	3,450	0	8,790	12,468
1979	350	720	1,926	1,351	3,000	100	7,447	10,132
1980	365	690	1,974	1,270	2,900	100	7,299	9,430
1981	380	500	1,967	1,408	2,835	70	7,160	8,710
1982	390	570	1,941	1,692	2,130	70	6,793	7,853
1983	400	840	1,076	2,332	1,780	40	6,468	7,235
1984	410	820	938	1,492	1,850	50	5,560	6,070
1985	425	790	878	1,023	1,790	120	5,026	5,375
1986	440	640	885	845	1,800	130	4,740	5,075
1987	455	720	862	532	1,935	200	4,704	5,026
1988	470	630	842	5	2,040	210	4,197	4,427
1989	1,300	600	980	0	2,050	225	5,155	5,293
1990	1,200	320	590	0	1,000	225	3,335	3,335

Source: Bundesminister der Finanzen (ed.), *Subventionsberichte des Deutschen Bundestages* (*Annual Report of the German Parliament on Subsidies Granted*) (Bonn: Heger, 1978–90).

Note: The associated parts of the German tax code are: (1) §20.4 Einkommensteuergesetz (EStG), (2) §10.1 EStG, (3) Wohnungsbauprämiengesetz (WoPG) including state contributions, (4) Sparprämiengesetz (SparPG), (5) §§13, 15 5th Vermögensbildungsgesetz (5.VermBG) and the corresponding earlier versions, (6) §19a EstG and §8 Kapitalerhöhungsgesetz (KapErhG). Col. (7) is the sum of cols. (1) through (6). Col. (8) is col. (7) divided by the consumer price index, 1990=100.

lation time is about six to seven years, and the waiting time between the accumulation of savings and the payout of the total contract sum (loan and savings) can be between one and two years. The waiting time is the crucial mechanism used to balance the pay-as-you-go system. The interest paid on savings is very low (currently 3 percent, whereas market interest is about 7.5 percent) but so is the mortgage interest (currently 5 percent, whereas market rate is about 10 percent).

There are basically three incentives for participation in the system. First, the nominal interest differential between loan and savings interest is lower than in the market. However, this "incentive" is deceiving because it ignores the time structure of the payments. Second, the contract forces households to save, and they appear to like this. Although this is not an argument that appeals to economists, it appears again and again in surveys that ask people why they participate. Finally, the government subsidizes this kind of savings, and the subsidy was both deep and widespread until recently. Table 4.9 provides participation rates by sociodemographic group.

The law specifies two kinds of subsidies which are exclusive of each other but are on top of subsidies granted by the wealth accumulation program described above. The mechanism of the first kind of subsidy is the same as for the wealth accumulation program: a percentage premium with a cap for households below an income limit. The second mechanism is independent of an income limit and allows contributions to building societies to be deducted from federal income tax. Contributions are implicitly capped by the provision that the deduction not exceed the permissible sum of deductions for what the law calls "precautionary expenses" (*Vorsorgeaufwendungen*). These include contributions to the social insurance system (health, unemployment, and retirement insurance) and contributions to private health and life insurance.

Like the wealth accumulation program, this program was rather generous in the seventies and early eighties but recently has been severely cut. Table 4.8 summarizes the impact of these changes on estimated government expenditures. Currently, the premium of the first mechanism is 10 percent of contributions up to DM 1,600 (about U.S. $1,000), and the income limits are DM 54,000 per year for married-couple households and DM 27,000 for single-member households, exactly as for the wealth accumulation program. The subsidization rate was in excess of 40 percent in the mid-seventies. Subsidies have since dramatically decreased, see table 4.10.

The viability of the second mechanism has been severely hampered by a deduction limit for precautionary expenses that has not been changed in spite of substantially increased contributions, particularly to health insurance payments. In many cases, health insurance payments alone have crowded out the possibility of deducting contributions to building societies. Moreover, after the 1990 tax reform, only 50 percent of contributions to building societies can be deducted. Table 4.8 shows the impact on tax expenditures.

A similar incentive program existed for general long-term savings, the *Spar-*

Table 4.9 **Participation in the *Bausparkassen* Program, Contributions, and Percentage of Financial Wealth in *Bausparkassen* Accounts.**

Demographic Categories	Participation (%)		Contributions (DM per year)		Wealth Share (%)	
	1978	1983	1978	1983	1978	1983
All households	43.9	49.4	2,356	2,270	17.9	16.6
Age:						
18–34	61.3	60.2	3,039	2,457	23.8	23.2
35–44	59.6	65.6	2,787	2,672	17.0	15.7
45–54	47.2	58.0	2,233	2,566	14.5	13.5
55–64	33.9	38.2	1,964	1,973	15.4	13.3
65–99	16.8	18.1	1,735	1,495	17.3	15.8
Married	47.6	55.4	2,495	2,488	17.5	15.7
Single	17.1	21.9	1,353	1,270	25.1	27.3
No children	30.0	33.4	2,026	1,877	20.2	19.5
One child	52.3	56.7	2,699	2,413	18.3	16.5
Two children	61.9	69.3	2,744	2,801	16.5	15.0
Three or more children	61.3	71.7	2,531	2,803	14.1	12.8
Renter	33.8	35.6	2,418	2,065	26.9	25.8
Homeowner	56.0	63.5	2,279	2,478	11.3	11.3
Single income	38.6	43.5	2,061	1,989	17.6	16.8
Double income	61.0	67.0	3,307	3,110	18.5	16.1
Income (DM):						
<1,000	6.2	8.5	755	727	40.0	45.6
1,000–1,999	16.8	15.3	1,366	941	25.5	32.9
2,000–2,999	39.8	31.8	1,890	1,371	20.0	21.8
3,000–3,999	55.3	51.3	2,587	1,964	17.5	17.3
4,000–4,999	64.2	63.8	2,999	2,450	15.5	15.3
5,000–10,000	68.8	71.2	4,835	3,763	13.0	13.3
>10,000	63.3	56.5	10,117	7,764	12.0	9.0
Self-employed	57.7	60.9	3,212	2,808	12.9	8.5
Civil servant	66.5	70.6	3,207	3,139	21.2	19.4
White-collar	54.6	58.5	2,712	2,627	18.0	16.6
Blue-collar	49.4	58.2	2,134	2,006	16.6	15.4
Unemployed	19.7	22.1	1,687	1,487	18.7	17.8

Source: Einkommens- und Verbrauchsstichprobe 1978 and 1983, quoted from Börsch-Supan and Stahl (1991)

Note: "Participation" is the percentage of households with *Bausparkassen* contracts in the corresponding household group. "Contribution" is the average annual contribution of households in the program. "Wealth share" is the average percentage of financial net wealth held in *Bausparkassen* contracts among participating households. "Income" is nominal monthly net household income.

Table 4.10 **Subsidies in the *Bausparkassen* Program**

Year	First Mechanism: Premium (%)	Second Mechanism: Tax Deduction (%)
1975	23 + 2 for each child	100
1976–81	18 + 2 for each child	100
1982–89	14 + 2 for each child	100
1990	10	50

Source: Author's calculations based on Wohnungsbauprämiengesetz.

prämiengesetz. However, it was removed in 1990. Together, the special incentive programs and the general wealth accumulation program have historically provided a substantial subsidy to saving. Table 4.11 presents some illustrative examples for the 1988–89 fiscal years, before the 1990 tax reform severely reduced the subsidies.

4.6.3 Life Insurance

Savings in the form of contributions to life insurance funds are subsidized because they can be deducted from federal income taxes. However, the same implicit cap exists as in the second mechanism used to subsidize contributions to building societies: the deduction must not exceed the permissible total of all precautionary expenses. The internal returns from investing in a life insurance system escape taxation, much like the returns from a pension scheme. This is very much like the tax treatment of life insurance contributions in the United States.

4.7 Conclusions

Capital markets per se do not differ greatly between the United States and Germany. In the two countries, financial markets are only mildly regulated, and portfolio options are quite comparable. The only difference may be that the wealthy in the United States face more portfolio options due to a somewhat more dynamic market for financial instruments than their German counterparts. Policy-induced differences in savings options between Germany and the United States include mainly different dedicated savings programs. In the United States, IRAs and Keoghs are subsidized savings dedicated to retirement income. In Germany, bequeathable savings dedicated to housing investments and company shares have been substantially subsidized and still play a major role in private wealth accumulation.

If we sum up the incentives for savings in Germany and the extent of German social safety provisions, we receive a mixed message about the impact of public policy on savings. On one hand, tax treatment of savings is more favorable in Germany than in the United States, which should, ceteris paribus, induce relatively higher savings rates in Germany. On the other hand, two of

Table 4.11 **Examples for Total Savings Subsidy**

Household Type	*Bausparkassen* Savings: Maximum Contribution	*Bausparkassen* Savings: Premium %	*Bausparkassen* Savings: Premium DM	General Savings: Maximum Contribution	General Savings: Premium %	General Savings: Premium DM	Total Subsidized Savings DM	Total Subsidy DM	Total Subsidy %
				1988					
Single, no children	800	14	112	624	23	144	1,424	256	17.9
Married, no children, one earner	1,600	14	224	624	23	144	2,224	368	16.5
Married, no children, two earners	1,600	14	224	1,248	23	287	2,848	511	17.9
Married, two children, one earner	1,600	18	288	624	23	144	2,224	432	19.4
Married, two children, two earner	1,600	18	288	1,248	23	287	2,848	575	20.2
Married, three children, one earner	1,600	20	320	624	33	412	2,224	526	23.6
Married, three children two earners	1,600	20	320	1,248	33	412	2,848	732	25.7
				1992					
Married, one earner	1,600	10	160	936	10	94	2,536	254	10.0
Married, two earners	1,600	10	160	1,872	10	187	3,472	347	10.0

Source: Author's calculations based on *Wohnungsbauprämiengesetz, Sparprämiengesetz,* and *Vermögensbildungsgesetz.*

the main economic rationales for saving—assuring a comfortable retirement income and precaution against high health-care expenses—are less important in Germany than they are in the United States because the safety net is tighter in Germany. This should, ceteris paribus, reduce savings among households below retirement age.[17] Among the older elderly, however, the tighter safety net in Germany might actually increase net savings since the generous retirement income might not only prevent the German elderly from depleting their assets but even provide income levels sufficiently large to induce savings in old age (Börsch-Supan 1992b).

In order to gauge the impact of the incentive programs on one side and of the tight safety net on the other, we need to know the elasticity of savings with respect to after-tax returns, as well as the substitution elasticities among different kinds of savings, including especially the substitution between private

17. That is, provided the young generation believes in the stability of the current pension system in spite of the dramatic aging of the German population.

and public savings. Börsch-Supan and Stahl (1991) provide evidence that the special incentive program favoring saving in building societies had a positive net impact on total savings, i.e., new savings in building societies more than compensated for substitution out of general savings. Similarly, tabulations of household wealth in comparable data sets indicate that private household wealth is about 20 percent lower in Germany than in the United States. However, imputed social security wealth is about 33 percent higher in Germany (Börsch-Supan 1991a). Again, although there is some substitution, the total wealth effect is positive.

Finally, it is important to note that savings incentives in Germany have dramatically changed since the mid-eighties. While the favorable incentive programs are still in place and capital income frequently escapes taxation, many of the subsidies have been severely reduced, in particular since the 1990 tax reform. See table 4.8, which summarizes this. It is too early to observe changes in savings behavior. And, in fact, the aggregate savings rate went up from 1985 to 1989 in spite of a reduction in tax incentives.

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