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CHAPTER SIX

Employee Benefits in the Single Market

Daniel J. B. Mitchell and Jacques Rojot

EMPLOYEES IN MANY countries depend on their work affiliation for various types of benefits, including pensions and health insurance.[1] Their ability to change jobs may be impeded if these benefits are attached to a particular employer—as in the United States—rather than simply to being employed. Thus, an exogenous shock pushing an economy toward greater mobility affects countries differently. Countries with portable benefits will have an easier adjustment than those with benefits that act as barriers to mobility. The changes associated with the single market project represent such a shock for the European Community nations. They may well experience the kinds of pressures that have already weakened the relationship of employee and employer in the United States. However, largely for reasons of historical accident, some EC countries have benefit programs that are portable. Such countries are in a better position than the United States to cope with future pressures arising from mobility.

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1. An extensive bibliography on European benefits, social insurance, and related matters is contained in Mitchell and Rojot (1991).

Benefits and Social Europe

As a general rule, EC countries are more likely than the United States to have public policies mandating benefits of all types. But pensions attract special interest because of the impending retirement of the baby boom generation in the next century. And containing health care costs is a problem for all nations. Thus, a focus on these two types of benefits allows common concerns of the European Community and the United States to be explored.

Table 6-1 provides a profile of benefits in France, Germany, and Britain, the three EC countries on which this chapter focuses. France has diverted the largest proportion of pay into social benefits and workplace supplements. Britain has diverted the smallest proportion and would closely resemble the United States, were it not for its national health care system. Germany appears in an intermediate position.

The countries vary in the degrees of employer discretion in choosing benefit plans. French wages have a large component officially designated by the EC statistical authorities as legally required. Yet much of what the EC calls a customary expenditure for France in fact represents payments to quasi-official funds. These funds are private in form, although they resemble social security in other countries. Of the three European states, Britain gives employers the greatest freedom in setting the mix of direct pay and benefits. Differences in employer discretion arise from variations in the corporatist traditions of the three states. Where there has been a tradition of government involvement in economic affairs and government consultation with the social partners, employer discretion may be limited. Some of this tradition is reflected in the growing EC machinery of governance, so that national policy may be increasingly influenced by EC social policy. That policy, in turn, is articulated by EC Directorate General Five, Employment, Social Affairs, and Education. Some corporate managers and the considerable financial services industry also consider benefit issues from the vantage point of Directorate General Fifteen, Financial Institutions, Company Law, and Taxation.

As part of the movement toward a single European market, there has been considerable discussion of a Social Europe. There is concern that competition within the EC from low-wage areas would lead to social dumping, a reduction in labor standards. In response, a Social Charter and action program were produced and adopted by eleven of the twelve EC heads of state (Britain dissenting). The charter touches on various aspects of remuneration that could eventually affect benefit arrange-

Table 6-1. *Social Insurance and Benefits in Three Countries*

Item	*France*	*Germany*	*United Kingdom*
Percent of indirect pay in manufacturing			
1975	25.7	19.4	11.5
1989	31.4	21.9	15.1
Percent of labor cost in industrial sector, 1984[a]			
Legally required	19.4	16.4	7.6
Customary expenditures			
Insurance	0.2	0.1	n.a.
Retirement	4.7	4.4	n.a.
Other	3.8	0.1	n.a.
Total	8.7	4.6	7.0
Kind of pension system	Social security plus quasi-official defined-benefit programs external to the employer. Portable for employees. Pay-as-you-go funding.	Social security plus employer-provided defined-benefit plans. Significant barriers to portability. Funding often by company book reserves rather than separate prefunded trust.	Two-tier social security plan: basic flat-rate plan plus earnings-related second tier. Employers can opt out of second tier and set up prefunded private pensions. Employees can opt out of both and set up personal pensions. Recent reforms increase portability.
Kind of health insurance system	Basic medical plan provided through social security. Employers may provide supplementary plans. Because of basic plan, portability has not been an issue.	Basic medical plan through social security. Employer-provided plans are rare due to comprehensive nature of basic plan.	National Health Service supplies basic plan. Employer plans for private care are growing but only cover a small portion of work force. Portability is not an issue under basic plan.

Sources: Bureau of Labor Statistics (1990b, tables 10–13); European Communities (1986, pp. 184–85, 316–17, 354–55, 356–57).
n.a. Not available.
a. "Industrial" refers to manufacturing, mining, construction, and utilities establishments with ten or more employees. Similar results were reported for other sectors but are not reported here.

ments. A country's social obligations before the Community are subject to judicial review by the Court of Justice. Court decisions can in some cases override national legislation, as happened in a 1990 case overturning disparate retirement ages for men and women under a British pension plan.[2]

Economic and Political Implications for the Labor Market

Undoubtedly, most public policy toward the labor market in EC countries will remain at the national level. Any attempt to move, for instance, to a uniform social security system across EC countries would run afoul of national traditions and the problem of making a transition in twelve national systems with millions of people already covered under existing arrangements. Even the vaguer notion of a harmonization of social security systems through general EC guidelines is a concept confined solely to internal discussions within the EC bureaucracy. In any case, the major impact of the single internal market is the increased uncertainty in national product markets it will create.

INCREASED COMPETITION. Movement toward a more competitive product market is also bound to bring a more competitive labor market. Directives and programs in the spirit of Social Europe may cushion some of this impact, but cannot prevent it. Even apart from Europe 1992 competitive adjustments, there are other changes in labor markets that are difficult to reconcile with traditional views of how the employer-employee or the employer-union relationship should be conducted. Along with other aspects of economic life, the labor market is becoming "disorganized" in the EC and elsewhere. Heightened product market competition will restrict employer's ability to pay or make it less certain that their ability to pay will continue. Member countries will be less capable of protecting favored employers. Moves toward deregulation intensify this problem, as does the easing of policy toward corporate takeovers and restructuring.

INTERNAL LABOR MOBILITY. Data on comparative national mobility rates are limited. Table 6-2, which compares French, German, and British data on job tenure with comparable figures from the United States, confirms the impression that labor is less mobile in the European countries. European unemployment also seems characterized by long-term idleness in contrast to the United States.

2. *Barber* v. *Guardian Royal Exchange Assurance plc* (1990).

Table 6-2. *Employee Mobility Measurements, Selected Years, 1978–84*[a]

Measurement	France	Germany	United Kingdom	United States
Percent of workers with tenure of:				
less than two years	17.8	18.6	27.5	38.5
twenty or more years	13.2	15.1	10.0	10.0
Mean tenure (years)	9.5	10.0	8.5	7.8
Percent of job losers and leavers searching for six or more months	65.2	59.1	68.1	19.1
Structural adjustment index[b]				
1967–77	8.5[c]	7.2[c]	7.5[c]	6.8[d]
1977–87	9.7[c]	6.9[c]	10.0[c]	5.8,[d] 5.0[c]

Sources: OECD (1986, table 2-1); EC (1989, table 69); International Labour Office, *Yearbook of Labour Statistics*, various issues; Bureau of Labor Statistics (1988, table B-11); *Employment and Earnings*, various issues.
a. Data on France and Germany are for 1978; data on the United Kingdom are for 1984; data on the United States are for 1983. European data are for individuals aged 14 and older; U.S. data are for those aged 16 and older.
b. Calculated using the eight industrial classifications appearing in the *Yearbook of Labour Statistics:* agriculture, mining, manufacturing, utilities, construction, commerce, transportation, finance, and services. Employment not classified by sector was excluded. Index is equal to one-half the sum of the absolute changes in the percentages of employment in each sector.
c. International Labour Office (ILO) data.
d. U.S. data approximating ILO industrial classifications.

But pressures for increased EC mobility have grown. Table 6-2 provides an index of structural pressures experienced in France, Germany, the United Kingdom, and the United States from 1967 to 1987. The index is equal to one half the sum of the absolute changes in the percentage of each country's employment in each of the nine one-digit sectors used by the International Labour Office (ILO) in its industrial classification system.[3] The index can vary between 0 (no change) and 100 (maximum change in employment patterns).

From 1967 to 1977 the three European countries showed levels of structural pressure roughly the same as or somewhat higher than U.S. levels. But during 1977–87, France and the United Kingdom showed higher levels of structural adjustment than the United States. Notably, they showed the most marked departure from U.S. levels in their unemployment rates. By contrast, Germany, which made a lesser adjustment, experienced unemployment in the U.S. range. With pressure for increased mobility already evident in EC states, it is logical to consider social insurance and benefit structures and their possible role in facilitating or obstructing job mobility.

INTERNATIONAL MOBILITY VIS-À-VIS THE EC. It may seem surprising to relate the mobility implications of the single European market largely to mobility within the member states. In principle, incompatible benefit arrangements could interfere with cross-border movement. But language and culture have been the chief limiting influences to international mobility. The proportion of EC nationals working in EC countries other than their own amounts to only 1 percent of the total EC labor force. In fact, more than half of the foreign workers employed in EC countries are from outside the EC.

Intra-Community migrants come mainly from areas with low wages or high unemployment. They are unlikely to be constrained by incompatibilities between domestic company-level benefit arrangements in their native countries and their countries of employment. Most are unlikely to have been part of such benefit arrangements in their native countries. Only one out of ten intra-Community migrants are estimated to have any significant vested pension rights in their home countries.[4] For those few who have worked under pension schemes in their home countries, private pension vesting rules pose no more of a barrier to international mobility than they do to domestic mobility. Vesting rules vary widely across EC countries but are not based on the national destination of a worker who changes jobs.

The problem is more serious with regard to the value of the vested benefits. Some EC countries have mechanisms for transferring pension value entitlements from one scheme to another so that a worker does not lose pension value by changing jobs. However, the formulas under which such interplan transfer payments are calculated vary from country to country. Absent the creation of Community-wide rules for such factors in the calculation of actuarial tables, cross-border fund transfers would be difficult.

With regard to public social security arrangements, the least pressing mobility problems for intra-Community migrants arise with current benefits such as health care. For example, anyone employed in Germany or France and any resident of Britain is covered by the national health benefit program. Other current benefits, such as family allowances, are also available to migrants. Various totalization agreements coordinate national social security systems for migrants including those from countries outside the EC. It is unlikely that greater harmonization would have much effect on intra-Community mobility.

There is a small population of European executives who are transferred across national boundaries by multinational enterprises. Because social security accounts for a relatively small percentage of executives' pay and private executive benefit plans can be extensive, there are special

3. The sectors are agriculture, mining, manufacturing, utilities, construction, trade, transportation, finance, and community services.

4. A total of 256,000 EC migrants fall into this category. See Jolliffe (1990, p. 5).

mobility issues for this group. A 1990 survey of European, U.S., and Japanese multinationals revealed a general expectation that the completion of the single market would mean more intra-European executive mobility. For short-term transfers, most companies expected to keep their executives under the home country's private pension and social security arrangements. For longer-term transfers (and for medical coverage), there was a somewhat greater propensity to use the plans of the receiving country.[5]

Employee Benefits as Employer Costs

European employers, like employers everywhere, think about benefits in different terms than economists do. Employers view benefits as additions to labor cost. The possibility that benefits influence the mix of labor costs, rather than their level, is usually not considered. Seen as added costs, benefit increases threaten enterprise competitiveness. From the added cost perspective, countries that have high ratios of benefits to wages will be uncompetitive; those that cut benefits will be more competitive and will expand employment.

Unfortunately, the tendency to view benefits as added costs rather than as a way of dividing total compensation distorts public policy. It is true that if a given firm could reduce its benefit costs relative to others in the labor market, it would obtain a competitive advantage. However, a tax or premium for benefits across the board does not change the relative competitive position of firms within the labor market. And as far as costs relative to other countries' labor markets are concerned, the possibility that labor absorbs the cost of benefits—except in the very short run—must be considered.[6] The fact that there is no free lunch does not imply that the benefits are not entirely paid for through lost labor-cost competitiveness.

Employee Benefits, Growth, and Productivity

The matter of savings and growth arises principally with regard to pensions. Pensions can be funded in advance, representing a potential

5. Hewitt Associates (1990a, pp. 21, 35, 36, 38).

6. Zoeteweij (1986, p. 63). Generally, labor compensation can be expected to be correlated with productivity. It will be found that GNP per employee (national output per worker) is a better determinant of total compensation than just wage compensation across countries. This finding, in turn, suggests that benefits affect the compensation mix rather than the level.

form of saving. If a national pension system is based on pay-as-you-go financing (as in France), covered individuals may save less than otherwise. But the effect of pay-as-you-go systems on saving behavior is uncertain. For instance, if retirement would otherwise be financed through private intergenerational transfers (the elderly cared for by their children), creation of an alternative system need not have any effect on saving.

At this point, therefore, a modest, pragmatic assessment is best; it is unclear that public retirement programs substitute for private saving. However, increased saving in public or quasi-public systems (moving from pay-as-you-go to prefunded retirement) will probably increase national saving and is certainly unlikely to reduce it. Substituting private enterprise-level or individual-level savings schemes for public pay-as-you-go programs will also probably increase total saving, if the private schemes are prefunded. However, the transfer between savings and investment is not one-to-one, and the connection among investment, growth, and productivity is also loose.[7]

Related to the proposition that privatized pension arrangements will stimulate investment is the idea that private schemes will invest in financial instruments different from those that public schemes invest in. Private schemes might be more likely to hold private securities than government bonds. For instance, in the mid-1980s, more than one-third of U.S. private pension assets were held in stocks, as were two thirds of the assets of British plans.[8] In the case of many German pensions, the assets are effectively invested in the employer itself.[9] Thus, some argue that private arrangements make more funds available for private investment.

There are problems with this approach. Financial markets are fluid. If public pension schemes tend to hold public debt in their portfolios, fewer such instruments remain in the capital market to be absorbed by private investors, hence more private funds are available for private investment. The preference for the kind of asset is not critical. At most, the asset propensities of public funds may have an impact on risk premiums.

Clearly, public pension schemes can be used to favor public borrowers artificially. But a similar problem also occurs under private savings schemes. For instance, investing pension funds in the firm itself can create a hidden subsidy to the employer providing the pension. German em-

7. For further discussion see Mitchell and Rojot (1991).

8. Turner and Beller (1989, p. 334).

9. Noninsured German pension plans that were not directly invested in the employer held more than 40 percent of their assets in stocks. Turner and Beller (1989, p. 334).

Table 6-3. *Public Social Insurance Provisions, 1989*

Country	Date of first law	Pension[a]	Medical insurance for active employees[b]	Financing[c]
Belgium	1924	E	X	ER, G
Denmark	1892	F, E	X	ER, P
France[d]	1910	E	X	ER, EE, G
Germany	1883	E		ER, EE, G
Greece	1914	E	X	ER, EE, G
Ireland	1908	F	X	ER, EE, G
Italy	1919	E	X	ER, EE, G
Luxembourg	1911	E	X	ER, EE, G
Netherlands	1913	F	X	ER, EE, G
Portugal	1935	E	X	ER, EE, G
Spain	1919	E	X	ER, EE, G
United Kingdom	1908	F, E	X	ER, EE, G
United States	1935	E	Y	ER, EE, SG

Source: Department of Health and Human Services (1988).
a. E = earnings-related pension; F = flat-rate pension.
b. X = publicly provided medical coverage; Y = public coverage for employees and retirees aged 65 and older.
c. ER = employer tax; G = government subsidy; P = personal tax; EE = employee tax; SG = government subsidy to specialized programs.
d. Excludes national ARRCO (Association of Complementary Retirement Systems) and AGIRC (General Association of Cadre Retirement Institutions).

ployers' tenacious defense of the book reserve system of pension finance raises suspicions that such private subsidies in fact occur.

Benefits and the Employment Relationship

National benefit systems can have public and private components; the mix varies substantially across countries. The modern state-run social insurance pension is usually attributed to Bismarck's Germany, whence it spread to other European countries and eventually to the United States. National medical insurance is provided in all EC countries, but in the United States it applies only to retirees and employees age 65 and older. State subsidies to social insurance funds are common in the EC, along with payroll tax financing. In most cases, retirement benefits are related to earnings, although some minimum benefit amounts may apply. Two countries, Denmark and Britain, have explicit flat-rate and earnings-related pension programs. (See table 6-3.)

Private pension and insurance arrangements existed on a limited scale before World War II in both Europe and the United States. In Europe, these became known as occupational plans. In the postwar period, some countries followed policies that encouraged the expansion of such schemes through tax incentives. Enterprise-based pensions currently ex-

Table 6-4. *Tax Status of Employer Contributions to Private Pensions and Health Insurance, 1988*

Country	Pensions[a]	Health insurance	Country	Pensions	Health insurance
Belgium	T[b]	T	Luxembourg	T	T
Denmark	0	T	Netherlands	0	T
France	T[c]	T[c]	Portugal	0	T
Germany	0[d]	0[d]	Spain	T	T
Greece	0	0	United Kingdom	0	T
Ireland	0	T[e]	United States	0	0
Italy	0	0			

Source: OECD (1988, table A).
a. T = taxable; 0 = not taxable.
b. Contribution is part of taxable income but employee receives a tax deduction for the same amount.
c. Although listed as taxable, there is some ambiguity in French law, and tax avoidance is possible for benefits provided by collective agreement.
d. Tax-free up to specified limit.
e. Contribution is part of taxable income, but employee receives tax relief on payment.

ist on a significant scale (in Germany, Britain, and the United States for instance) and are typically related to earnings. Under the French system, national funds have supplanted enterprise-based pensions for most workers.

Widespread national health insurance arrangements have drastically limited the scope of enterprise-based medical insurance in Europe. In the United States, however, most full-time workers at medium to large firms are covered by employer-based health insurance. And about two-thirds of all U.S. wage earners and salaried workers had employment-related health insurance in the mid-1980s.[10]

There are bound to be substitution effects between public social insurance and private employee benefits. Once a substantial private benefit system exists, it is unlikely to be supplanted by a public system. Sometimes public policy may build on existing private arrangements. Examples include the state earnings-related pension scheme in Britain, which applied in cases where private firms did not already provide pensions, and recent U.S. proposals to require private health insurance from employers not providing it.

Employers' willingness to provide significant pensions or health insurance to employees depends partly on the tax treatment afforded enterprise-based benefits. Most countries allow deductions from corporate income taxes for benefit expenditures. The crucial tax variable is whether

10. Bureau of Labor Statistics (1990a, p. 4); Bureau of the Census (1987, table 17); Bureau of Labor Statistics (1988, p. 185).

employees are subject to tax on the value of the benefit contribution. As table 6-4 indicates, most EC countries allow the employer's pension contribution to escape immediate taxation. But most EC countries tax private health plans, discouraging such programs.

Various motives may account for the degrees to which countries encourage private employer-provided benefit arrangements. Countries may encourage such benefits because they want to promote social harmony by putting employees in a position to be grateful to employers for benefits received. If it is national policy to help employers to be perceived as beneficent, then company-by-company programs of social insurance are a logical tool. A second motivation for encouraging a link between social insurance and employment is to provide an incentive to participate in the work force. Fulfilling this motive does not require insurance to be provided at the firm level, however. It could be offered through a national social security system in which eligibility for benefits was tied to work experience. A third motivation is ideological. If the alternative is viewed as state-run social insurance and if there is an aversion to individual dependence on government, employer-operated plans may be preferred. Of course, the middle ground of quasi-private national funds remains available.

All of these motivations seem to have played a part in the formulation of the systems of countries that make heavy use of company-based benefits. The difficulty with this approach is that its implementation ties employees to particular firms. Of course, the mobility issue did not arise in previous eras when lifetime careers with an employer were assumed to be the norm.

Pension Issues

Government-run social security schemes (often operating on a pay-as-you-go basis) require significant tax increases as the elderly population increases relative to the active work force. Consequently, private pensions and private individual savings programs are turned to as a solution to the future problem of supporting retirees.

The attractions of this solution are partly illusory. Private savings and pensions involve anticipatory funding for retirement. Shifting from pay-as-you-go funding to prefunding will be equally painful whether done by converting public systems to prefunding or substituting prefunded private arrangements for pay-as-you-go public systems. In either case, current workers make a double contribution to support existing retirees and

to prefund their own retirements. Moreover, private pensions and officially encouraged individual savings plans (called personal pensions in Europe) often entail considerable government involvement through tax incentives and regulations. The plans themselves may not be recorded in the government budget, but their tax consequences are reflected there. Thus, the degree to which they are strictly the result of free-market incentives is open to question.

THE IMPORTANCE OF PRIVATE PENSIONS. Data on the proportion of pension income reported by retirees for their households at the beginning of the 1980s are available for the United States, the United Kingdom, and Germany. For those aged 65 to 74, the proportions of pension income in total income were 20 percent, 22 percent, and 14 percent in the respective countries. The proportions provided by social security were 50 percent, 61 percent, and 82 percent, with the balance of income supplied by investment and property income, work, means-tested benefits, and other sources.[11] In short, in the early 1980s, German pensions were less significant as a source of retirement income (and social security was more significant) than in the United States or the United Kingdom. Although data for France are not available, the relative absence of company-based pensions in that country would have revealed much greater reliance on public and national funds than in the other three countries.

Data on retirement incomes for more recent periods are available from private sources. The data in table 6-5 assume a career worker in a firm with a private pension plan; the proportion of income coming from the pension will thus be higher than an average for all retirees. Many retirees will not have had the service with a single firm assumed in table 6-5. Once again, even among those German workers best situated to receive significant private pension income, the amounts from that source are substantially less than can be expected in the United States or the United Kingdom (and German social security benefits are proportionately larger). The typical career French worker does not have a company-level pension at all. In all four countries, public plans benefit lower-paid workers the most. Private pensions partially offset this effect.

MOBILITY ASPECTS. Enterprise-level pensions are of two basic designs: defined contribution and defined benefit. In the former, money is put aside for workers based on a formula. The worker has a tax-favored savings plan through the employer that earns interest and is available

11. Turner and Beller (1989, p. 328).

Table 6-5. *Typical Retirement Incomes as Share of Final Earnings, 1989*[a]

Percent

Worker	Private company pension	Social security and national funds	Other	Total retirement income as percent of final earnings
Factory worker				
France	...	70	2	72
Germany	15	50	...	65
United Kingdom	39	40	...	79
United States	42	40	...	82
White collar worker				
France	...	70	2	72
Germany	15	45	...	60
United Kingdom	50	35	...	85
United States	53	25	...	78
Middle manager				
France	...	58	2	60
Germany	25	30	...	55
United Kingdom	50	25	...	75
United States	63	12	...	75

Source: Towers Perrin (1990).
[a]Figures are for men retiring in 1989 after a full career at a medium-sized industrial firm. Lump-sum and savings plan distributions are converted into equivalent annual income. Figures are based on estimates from graphic presentations.

upon retirement as a lump sum or annuity. The value of that account and the monthly pension it will buy at retirement are not specified in advance. These amounts depend on returns to assets while the worker is employed and interest rates and actuarial considerations at the time of retirement. Thus, the risk of providing an adequate pension is borne by the employee not the employer. A defined-benefit plan specifies a retirement benefit the amount of which is fixed independently of the return on assets, interest rates, and actuarial factors. Typically, a formula based on past earnings, age, and service determines the monthly pension. The employer bears the risk entailed in coming up with the resources needed to fund the promised pension.

A major advantage of defined-contribution plans is that they can easily be made portable. The employee can be allowed to "roll over" the amount in his or her account into another plan upon changing jobs. If the contribution is not portable, that is if it remains in the old plan with the former employer, the employee can still retain full rights to the account. Thus, it is not a barrier to mobility.

In practice defined-benefit plans do not shift all risk to the employer.

Absent a government guarantee, an inadequately funded plan may be unable to pay all of its promised benefits. And, unless the plan is indexed, retirees may face an inflation risk due to the specification of benefits in nominal terms. Still, the precise cost of the promised benefit cannot be known in advance, and inadvertent inadequate funding can create unforeseen pension costs in the future for which the employer may be liable.

The uncertainty surrounding eventual liability creates a portability problem for enterprise-level defined-benefit pensions. Under a defined-benefit portable pension system, if an employee moves from one plan to another, the receiving plan accepts the uncertain liability incurred by the sending plan. A financial transfer between the plans must be made to offset the liability. But in a decentralized pension system the prefunding assumptions may differ among plans. In order to have financial transfers common assumptions must be imposed, in effect converting the plans into a de facto national system. The problem is compounded if the sending and receiving plans do not have identical benefit formulas.

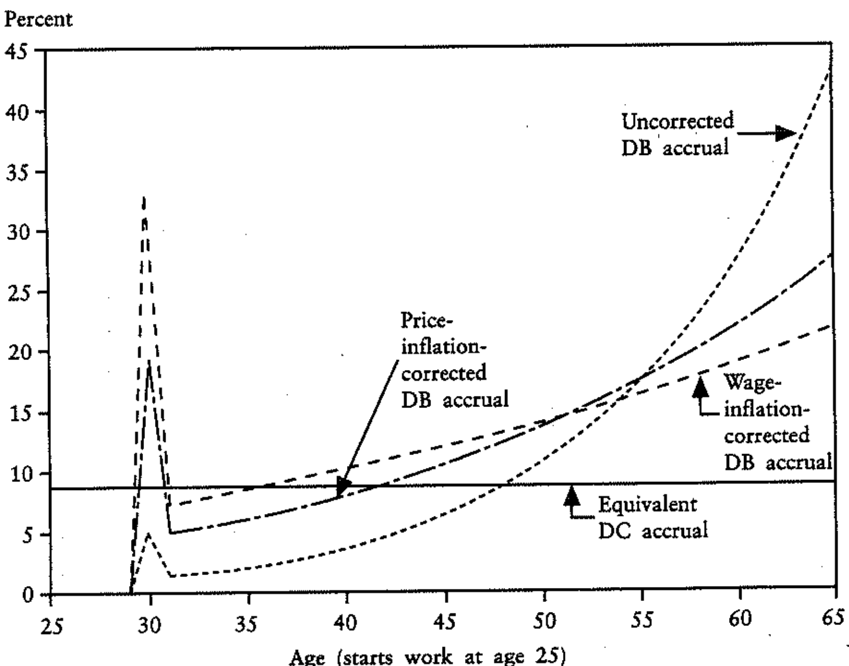
Small homogeneous countries (such as the Netherlands) with relatively few players to coordinate are better able to develop acceptable common transfer assumptions than large diverse countries. Indeed, the Netherlands has made significant steps in harmonizing its enterprise-level pensions to allow transfers. The Dutch were aided in this effort by the existence of industrywide pension schemes that already permitted mobility among member firms.[12] Developing common transfer assumptions within larger countries is more complicated.

Although the imposition of common assumptions raises technical issues, the most important barriers to portable enterprise-level defined-benefit plans are cost and behavior consequences. Defined-benefit plans tend to subsidize the benefits of immobile workers with the contributions made on behalf of mobile workers who eventually lose their benefit entitlements. There are two components of this loss: nonvested service and postvesting upward tilt of pension accrual with service.

Vesting is simply a period of minimum service before a pension entitlement begins. In the United States the typical vesting period is five years. Individuals who quit or are terminated before the vesting period ends have no benefit rights; any contributions made on their behalf can be used to meet other liabilities of the plan. Wage inflation cuts benefit costs because vested benefit entitlements are commonly based on final earnings or earnings history up to the date of departure from the plan. Thus, a

12. P. R. de Vlam (1990).

Figure 6-1. *Pension Accrual as Share of Final Wage*[a]



Source: Author's calculations.

a. DB = defined benefit; DC = defined contribution. Inflation of 4 percent, wage growth of 5.5 percent, and interest of 7 percent are assumed.

worker who departs at age 50 and who would have normal retirement benefits at age 65 loses the wage-inflation effect of 15 years of nominal wage increases between ages 50 and 65. Even at relatively modest rates of wage inflation, a substantial erosion in pension value will occur. The erosion caused by wage inflation can be broken down into two elements. Some of it reflects general price inflation, and some is due to individual real wage growth, which could be positive or negative. Moreover, because of promotions and merit increases, individuals may experience faster rates of real wage advance than is exhibited by the average wage in the firm or economy.

Some options to correct for wage inflation are depicted in figure 6-1. The figure shows the annual accrual for a worker who spends a career from ages 25 to 65 with a single firm. The figure assumes 4 percent price inflation, 5.5 percent nominal wage inflation, 7 percent interest (for discounting), and a 5-year vesting rule. After retiring at age 65, the person is assumed to live for 10 years. The plan formula is assumed to provide

1.5 percent of final earnings (defined as an average of the last 3 years of service) for each year of service. Thus, after a 40-year career, the individual would have a pension of 60 percent of final earnings.

Without any correction for wage inflation, pension accrual (the amount of discounted present pension value obtained by staying an additional year) shows a spike at vesting (30 years of age) and a sharp upward acceleration as the worker approaches retirement age. With an adjustment offsetting just the price-inflation effect, the curve shows a bigger spike at vesting but a more gradual upward slope. (Such a correction makes up for the loss of purchasing power resulting from early departure but not for the loss of the effects of real wage growth.) A correction for all erosion (the price and real wage effects combined) increases the vesting spike, but further flattens the curve.

As the curve is flattened, the antimobility effect is reduced at higher age brackets. But the sharp increase of the vesting spike reduces mobility incentives in prevesting years. Moreover, the curve cannot be completely flattened because of the impact of discounting on the present value of the pension. Even a pension entirely corrected for price and wage effects will still be worth more in later years when the worker is close to receiving it than it is in earlier years. To remove the antimobility effect entirely, it is necessary to have immediate vesting and to give the employee an entitlement to an equivalent of a defined contribution that would produce the same 60 percent pension after 40 years of service. Such a completely flattened equivalent is also shown in figure 6-1.

Governments in some countries have pressed employers to reduce the mobility barriers of defined-benefit pensions by requiring early vesting, transferability between plans, or both (table 6-6). Mobility barriers can also be overcome through laws against the adverse preretirement inflation effect that affects those who depart before retirement age. Governments may impose such mandates for several reasons.

First, the worker-retention advantage perceived by the employer at the microeconomic level is less impressive at the macroeconomic level at which governments operate. Every employee who is discouraged from quitting a current job is one more worker who is difficult to recruit by some other employer. What one employer gains, another loses. Second, there is an obvious question of whether the tax subsidies that go into defined-benefit pensions should be channeled into penalizing labor mobility. Employers who want to discourage workers from quitting can do so without a tax subsidy by paying wages that are higher than average. Third, even from the standpoint of the employer, economic circum-

Table 6-6. *Policies Relating to Enterprise-Based Pension Plans, 1991*

Country	*Legally mandated vesting*	*Common vesting period (years)*	*Transferability rules*
Belgium	No	5	Under consideration
Denmark	Yes	5	Yes
Germany	Yes	10	No
Greece	No	10[a]	No
Spain	Immediate	Immediate	Yes
France	...	...	...
Ireland	Yes	5	Yes
Italy	No	...	Under consideration
Luxembourg	No	5-10	No
Netherlands	Yes	1	Government encourages
Portugal	No	Unvested	No
United Kingdom	Yes	2	Yes
United States	Yes[b]	5	No

Sources: Steinmeyer (1990); R. Watson and Sons (1990).
a. Only a few multinational firms have plans.
b. Limited alternatives allowed.

stances change. The tight European labor markets of the 1960s gave way to softer markets of the 1970s and 1980s, reducing employers' labor-retention concerns. When layoffs are required, mobility-inhibiting pension plans make dislocations more painful.

PENSIONS AND RETIREMENT. Labor mobility generally concerns movement from job to job, but there can also be pension-related incentives to drop out of the labor force entirely. Incentives in public schemes to encourage later retirement (to minimize the resource drain as the baby boom generation approaches retirement, among other things) could be offset by early retirement incentives in private pensions. Defined-contribution plans and personal pensions have different effects, since they do not have benefit formulas based on age and seniority. If a worker with a defined-contribution plan or a personal pension chooses to delay his or her retirement, the annuity payment at retirement will be enhanced actuarially by an appropriate amount.

PENSION PROTECTION. In a system of enterprise-based defined-benefit pensions, there are two pay-as-you-go options to meet the retirement liability. The firm can simply make a pension promise without putting money aside. Or the firm can set aside a reserve on its books for future liabilities, as is common in Germany. The reserve method produces a more accurate profit calculation than a simple promise, since it recognizes accrued liabilities. And because recorded profits are smaller at the time of liability accrual, income tax payments by the firm will also

be lower. But despite the device of a bookkeeping reserve, the plan's assets are effectively invested in the firm. Whether the pension is based on a promise or is carried as a reserve, the plan's eventual ability to meet its obligations depends on the economic fate of the enterprise.

Such risk is substantially lessened if the employer prefunds the pension promise through an independent pension trust, as occurs in the United States and the United Kingdom, or contracts with an insurance company to provide the pensions, as some German firms do. Risk to workers then depends on the eventual return on the pension portfolio and the adequacy of employer funding. Deficiencies in either category could still lead to default on future payment promises.

Pension protection can be provided for any type of plan by external insurance. In some cases, as in the United States and Germany, quasi-official insurance funds are created to back private pension promises and to provide benefits when defaults occur. These systems can create complex moral hazards, since employers may have incentives to default on their obligations and transfer liabilities to the insurance fund. Even with state-backed pension insurance (or with defined-contribution plans and personal pensions), there is a potential inflation risk to retirees if benefits are calculated nominally. Social security plans are typically indexed in Europe as in the United States to consumer prices. Formal indexation of private plans is rare in the United States but more common in Europe. The two French national pension plans are indexed to point values (as opposed to price inflation); these point values reflect forecasts of future revenues and costs of the plans. German pensions can be said to have de facto price indexation of retiree benefits, at least for companies not in financial difficulty. In Britain, legislation passed in 1986 effectively indexes pensions.

THE FINANCIAL SIDE OF PENSIONS. Within the context of the single European market, there is a drive to reduce barriers to cross-border activities of financial services firms. The market for providing pension services in countries such as Great Britain, where enterprise-level pensions are common, becomes attractive for insurance firms in countries such as France, where enterprise pensions are rare. But there is a counterpart to insurance companies' crossing borders to manage other firms' plans. For multinational employers this counterpart is a European pension fund. Essentially, if financial services firms have the freedom to cross borders in a single European market, employers that provide such services for themselves should be given the same freedom. This is the goal of the proposal for European pension funds. Such a fund would draw

Table 6-7. *National Health Expenditures and Health Outcomes, 1987, 1988*

Country	Health expenditures as percent of GDP, 1987	Health expenditures per capita as percent of U.S. spending, 1987[a]	Life expectancy at birth, 1988	Infant mortality rate, 1988[b]
Belgium	7.2	43	75.4	8
Denmark	6.0	39	75.3	7
France	8.6	54	75.7	9
Germany	8.2	53	75.8	8
Greece	5.3	16	77.0	12
Ireland	7.4	27	n.a.	n.a.
Italy	6.9	41	76.7	8
Luxembourg	7.5	51	n.a.	n.a.
Netherlands	8.5	51	77.1	8
Portugal	6.4	19	74.1	16
Spain	6.0	25	77.1	11
United Kingdom	6.1	37	75.1	9
United States	11.2	100	75.3	11

Sources: *Statistical Abstract of the United States, 1989*, pp. 817–18; OECD (1990, p. 10).
n.a. Not available.
a. Converted to U.S. dollars in purchasing-power parity terms.
b. Deaths per 1,000 children aged less than one year.

contributions from all subsidiaries of the firm within the EC that have pension schemes. Each subsidiary would make its own pension promises in accordance with local law. Assets of the European funds could be invested throughout the EC, however.

In short, there is a coincidence of interests between financial services firms seeking wider markets in the EC and multinationals seeking European pension funds. Thus the likelihood that such funds will be created pursuant to policies of the EC's Directorate General Fifteen is substantially greater than the possibility that pension benefits will be harmonized.

Health Insurance Issues

Seen in monetary terms at the national level, the United States outspends its EC counterparts on health care both relative to GDP and in absolute terms per capita (table 6-7). Indeed, in 1987 even the most prosperous of the EC countries spent barely more than half the amount per capita on health care that the United States did. Moreover, the EC countries

provide national systems of medical coverage, so that almost all their populations are covered by basic systems. Yet the U.S. ratio of health expenditure to GDP is about 3 percentage points higher than would be expected based on its per capita GDP.[13]

COSTS AND BENEFITS. There is a tendency in many countries for health care costs to rise relative to GDP. From 1975 to 1987, for example, the ratio of health expenditure to GDP rose in ten of the twelve EC countries (and in the United States).[14] In the United States, the rise seems to have resulted from relative health care service inflation (a price effect) and greater use of those services (a quantity effect). Within the EC, the price effect has been more mixed, and the quantity effect has been the more general cause of the rising ratio. When measured by the most encompassing health index, life expectancy at birth, it is hard to discern any relationship between health spending and this ultimate national outcome.[15]

The U.S. enterprise-based health insurance system has not been especially effective at containing health care costs compared with EC countries' systems. Indeed, there is little reason to suppose that employers—whose main preoccupation is producing the goods and services they sell—should also be adept at controlling health costs. From the perspective of human resource management, the most striking contrast between U.S. and European employers is the lack of involvement of the latter in issues related to health. U.S. employers are overwhelmed with issues of health care cost containment. European employers, on the other hand, would not know an HMO from a PPO; they are largely content to let questions of health care be settled at the national—not the firm—level.

MOBILITY ASPECTS. Enterprise-based health insurance arrangements raise portability and labor mobility issues similar to those raised by pensions. With European-style national programs, however, individ-

13. A simple regression of the health expenditure to GDP ratio (*HGDP*) in 1987 across the twelve EC countries and the United States against (1/1,000 times) per capita GDP in U.S. dollar purchasing-power parity terms (GCAP) and a dummy value of 1 for the United States (*DUMUS*) produces the following result:

$$HGDP = 4.97^{a} + 2.82^{a}\,DUMUS + .19^{b}\,GCAP \quad \text{adjusted } R^2 = .61$$

a. Significant at the 5 percent level
b. Significant at the 10 percent level

14. OECD (1990, p. 10).

15. Regressions of life expectancy against either per capita health spending, per capita GDP, or both reveal no significant trends.

uals can change jobs without losing health care coverage. Thus the labor market changes that may accompany the completion of the single European market do not conflict with typical European health programs. In the United States, however, two kinds of portability issues arise. First, the coverage provided by employers may vary considerably in terms of expenses eligible for reimbursement and the extent of reimbursement. Thus even if an employee is accepted by a new employer, he or she may lose elements of coverage. Some U.S. employers, especially small ones, may not provide health insurance. Second, employers and their insurance companies are anxious to hold down costs by screening out bad risks among newly hired persons and their dependents. One method is to exclude coverage for preexisting illnesses.

Variations in plan coverage and the issue of preexisting illnesses are barriers to voluntary labor mobility. Moreover, not all mobility is voluntary. For some employees the loss of health insurance is an additional cost of being laid off.[16] In summary, the labor mobility pressures that can be expected to accompany the internal market integration do not conflict with European health plans. For the United States, in contrast, mobility is an ongoing problem.

Benefit Plans in Three Countries

EC data are available by detailed (mainly two-digit) industry on benefit expenditures in France, Germany, and Great Britain. Table 6-8 illustrates the variables associated with greater pension spending in each of the three countries. Industries were ranked by the percentage of labor costs going to pensions (other than government-run social security), and the mean characteristics of the top half and bottom half of the ranking were computed. Because pension costs were not available for Britain, the ranking and computation was based on so-called customary expenditures as a percentage of labor costs, a category that contains pensions.[17]

Industries that devote more pay to pension spending tend to be those with higher pay, more nonmanual workers, and larger establishments.

16. U.S. law requires employers to offer continued health care coverage to laid-off workers. But the employee must pay for the coverage (and in after-tax income), which can be difficult for someone who has just lost a job.

17. Such expenditures include payments for nonpublic schemes of insurance, retirement, guaranteed remuneration, unemployment payments, family allowances, and other payments. In Britain, pension spending is likely to predominate in this category.

Table 6-8. *Characteristics Associated with Pension and Benefit Spending, 1984*[a]

	Germany		*France*		*United Kingdom*	
Item	*Bottom 18*	*Top 18*	*Bottom 20*	*Top 19*	*Bottom 18*	*Top 18*
Pension spending as percent of labor costs	1.6	6.5	3.2	5.8	n.a.	n.a.
Customary expenditures as percent of labor costs	1.6	6.9	6.9	10.0	4.3	11.1
Monthly labor cost (ECUs)	1,610	2,269	1,497	2,203	1,160	1,700
Workers per establishment	54	714	125	530	n.a.	n.a.
Percent female	48.2	25.4	45.7	24.0	n.a.	n.a.
Percent part time	18.0	6.2	5.6	2.1	12.6	8.2
Percent nonmanual[b]	22.3	36.7	28.5	51.3	n.a.	n.a.

Source: EC (1986, various tables).
n.a. Not available.
a. Composition of available industries varies slightly across countries. Data refer to establishments with ten or more workers. "Top" and "bottom" refer to the number of industries listed in the source publication ranked by percentages of total compensation devoted to pensions or, for Britain, customary expenditures. "Top 18" means the top-ranked eighteen industries, for example.
b. Excludes data from banking, trade, and insurance sectors.

They tend to have fewer women and part-time workers. In short, pensions are associated with large size, high pay, white collar jobs, and male, permanent workers. Even in France, where the figures are distorted by the dominance of the quasi-public national pension schemes, these relationships seem to hold. Those few French industries that do have independent, enterprise-based pensions include banks and insurance companies (with large white collar work forces) and utilities (which are male dominated). These industries also tend to be relatively well paid.

All the characteristics associated with increased pension spending suggest low labor turnover. Thus pensions tend to be linked statistically to reduced mobility. The linkage need not be causal; the high overall pay levels associated with higher pension spending would tend to reduce turnover independently of the pension. Nonetheless, the pension-immobility link is a useful one to consider.

Britain

From the standpoint of pensions, Britain resembles the United States more than many other EC countries. It has a substantial sector of employer-provided pensions funded through trust arrangements. Within Great Britain, 47 percent of the employed work force (full and part time) had an occupational pension in 1987. In the private sector, pension cov-

Table 6-9. *Membership in Employer-Provided or Personal Pension Plans in Great Britain, 1987*

Percent of employment

	Membership in employer-provided pension plan			
Workers	*All*	*Public sector*	*Private sector*	*Ever covered by personal pension plan*
Full-time, men	62	92	51	15
Full-time, women	51	89	32	5
Part-time, men[a]	8	12	7	n.a.
Part-time, women[a]	11	21	6	n.a.

Source: Great Britain, Office of Population Censuses and Surveys (1989, pp. 146–48).
n.a. Not available.
a. Part-time work is defined as thirty hours a week or less.

erage is closely associated with firm size; 78 percent of employees at firms with 1,000 or more employees were covered in 1987 compared with less than one-fourth at firms with fewer than 25 employees.[18] As table 6-9 shows, pension coverage was generally higher among public employees and full-time workers than among private employees and part-time workers. About half the uncovered part-time workers at firms with pension plans indicated that they did not participate because their particular job was not covered.[19]

Mobility issues mainly involve defined-benefit plans, which are predominant in Britain. Nine out of ten workers under pension systems are covered by plans that gear retirement payments to final earnings. Only 6 percent are under defined-contribution plans as their primary pension; these are inherently portable. However, about 11 percent of covered employees make additional voluntary contributions toward their pensions, the funds from which are mainly handled as money-purchase plans.[20] Such funds—similar to U.S. 401k plans—are also portable.

Personal pensions are completely portable, but until recently they have not been major retirement income vehicles for employees. As of 1987, only 11 percent of employees had ever contributed to a personal pension. Higher-paid workers were more likely to be contributors than lower-paid workers. Workers at small firms (where employer-provided pensions are less common) were more likely to contribute than those at large

18. Daykin (1990, p. 26).
19. Great Britain, Office of Population Censuses and Surveys (1989, pp. 145–146). Data cited later in the text can be found on pp. 33–40, 82–83, 149–50.
20. The balance of workers are reported to be under plans using other formulas, presumably flat-rate or lifetime earnings plans. NAPF (1990, pp. 32, 35).

firms. But changes in government regulations are likely to increase the importance of personal pensions.

There is some evidence of a retreat from employer-provided pensions in Britain. For full-time male workers, coverage rates fell from 65 percent in 1985 to 62 percent in 1987; for female workers, from 56 percent to 51 percent. The drop has been concentrated among younger workers. New entrants to the work force seem less likely to be covered by employer-provided pensions, even if they work for employers that have pension programs and even if they hold full-time jobs. This development suggests that more young people and new entrants are taking up contingent jobs.

In the area of health insurance, Britain and the United States differ greatly. For nonelderly individuals, the United States relies on private insurance coverage, in large part through employers. The elderly are generally eligible for medicare through social security, but that scheme is a reimbursement arrangement. In Britain, the entire population is covered by the National Health Service (NHS), which is both insurer and provider.

Because the NHS rations its services, a private sector exists in Britain for patients who wish to avoid queueing. In 1987, about 8 percent of those aged 16 or older held private health insurance policies, up from 5 percent in 1982. Fifty-four percent of individuals with private health care policies obtained their coverage through their employer, although about one-fifth of these paid for the entire cost directly. However, health insurance contributions by employers in Britain do not receive the tax advantages afforded pensions, so the formality of who is said to pay for such insurance is of little consequence.

HISTORICAL BACKGROUND. Nineteenth-century Britain and the United States had much in common regarding the origin of employee benefits. There was concern about supporting persons too old to work. For the majority of the population, income for old age support was largely a matter of savings, family help, and limited poor law relief. Some unions acted as beneficial societies, and a few provided formal pensions. Burial insurance became available from commercial insurance companies.

Certain employers had informal practices of taking care of long-serving employees by providing them with reduced workloads (and pay) in their later years, or—as a last resort—with a pension. A few large firms, especially railroads, evolved formal defined-benefit pension plans, as did the civil service. By the early part of the twentieth century, recog-

nition of the potential impact of inflation helped bring into use pension formulas based on final earnings rather than career earnings. Some defined-contribution plans were also developed. Formal plans covered perhaps 5 percent of the work force in 1900.[21] Trust funds for pensions began to develop around this time and tax concessions were granted.

The development of German social security arrangements in the late nineteenth century stimulated calls for British government programs. Important voices among British employers supported some type of state-run system to head off socialist pressures. A national noncontributory, means-tested pension program was begun in Britain in 1908. In 1925 more generous pensions were provided under a contributory scheme without a means test. U.S. social security with pension entitlements was not established until 1935.

In part, the spread of pensions was a matter of marketing. Private insurance companies, importing U.S. practices, began selling group pension plans through employers. These plans helped meet the needs of employees at smaller firms, which were not easily able to administer their own programs. Eventually British unions began to negotiate pensions with employers as well as with certain multiemployer systems, which permitted pension portability. By the mid-1930s, one in eight British workers was covered by some kind of occupational pension. But by the mid-1950s the proportion had reached one-third. As in the United States by that era, tax law had evolved into an important policy lever influencing the operation and growth of the pension system.

The state social security pension was a flat-rate system, unrelated to earnings, until the late 1950s when various European countries with flat-rate schemes began to create an additional earnings-related tier of social security. The British state scheme was supplemented in 1959 by a limited earnings-related second tier that covered pay above specified levels and permitted employers to contract out.

Benefits under the state earnings-related pension system (SERPS) and the private pension schemes that contracted out of it were substantially increased in the late 1970s by the Labour government. This shift set the stage for the dramatic changes in pension provisions that occurred under the Conservatives in the 1980s. Under the Thatcher government, contracting out was taken to the individual level by permitting workers to set up their own personal pensions in place of SERPS or a substitute employer-run plan.

21. Hannah (1986, p. 13). Hannah's book is the source of much of the historical material in this section.

Britain's system of national health insurance followed a different path from its pension arrangements. As in the United States, health insurance evolved initially as a way of covering income loss through disability rather than as a way of paying medical bills per se. Various state schemes, friendly society programs, insurance plans, and employer schemes were created in response to the fear of lost income during periods of ill health, and there was a limited offering of private policies to pay medical bills. However, programs to pay such bills were largely preempted in the late 1940s with the creation of the National Health Service. Only during the Thatcher period did the private sector for medical care and insurance begin to take on nonnegligible proportions.

Although the NHS's position as a provider of health services was in greater conflict with the Thatcher government's political tilt toward privatization than other nationalized industries were, no official proposal to privatize it was ever made. The NHS appears to be the most popular form of British social insurance.[22] Privatization of the system is not an idea that could win broad public support, even though employees of the NHS accounted for about 4 percent of total British employment in the late 1980s.[23] Even attempts to structure the NHS on a more cost-sensitive model are politically difficult for the British government.

BENEFIT PORTABILITY. The existence of the NHS means that even those who elect private health insurance have a backup health plan regardless of job change. Were the private sector to become the major health care provider, the kinds of mobility questions related to health care found in the United States could develop in Britain. Such a development seems unlikely, hence, issues of portable benefits largely concern private pensions.

Important changes in British laws governing pensions were made in the Social Security Act of 1986. There were several reasons for them. The Thatcher government was nervous about the pay-as-you-go funding of the SERPS component of social security and wished to shift more of the burden of the coming baby boom generation's retirement to employers (who prefund) and to personal saving. A shift away from SERPS to prefunded private arrangements could conceivably increase national saving.

In addition to various budgetary and saving concerns, the Thatcher government harbored an ideological attraction for individual responsibility. In this regard, even private pension plans provided by employers

22. Hennessy (1987, pp. 248–60); Crewe (1988, p. 43).
23. Great Britain, Central Statistical Office (1990, pp. 67, 109).

were a reflection of welfare-state policies accumulated over several decades. As noted before, the private pension system has been closely tied to public social security. Therefore, improving occupational pensions would not really wean British society from past collectivism.

Under the 1986 legislation, which took effect in 1988, the individual employee controls his or her participation in all retirement systems except the mandatory flat-rate part of social security.[24] If the individual works for an employer that does not offer coverage under an occupational pension plan, he or she would ordinarily be covered by the SERPS part of social security in which size of the pension depends on earnings. However, the 1986 law allows the individual to contract out of SERPS and maintain a personal pension instead. If the person would ordinarily be covered by an employer-provided plan contracted out of SERPS, he or she in turn can contract out of the employer plan and maintain a personal pension. If the employee elects the personal pension option, the employer's contribution, which would otherwise go to its own occupational plan or to SERPS, goes to the personal pension.[25] Obviously, the decision involves the risks of a defined-contribution plan (which is, however, completely portable) versus the security (but incomplete portability) of a defined-benefit arrangement.

Although the 1986 legislation enabled saving by means of a personal pension, it also attempted to make defined-benefit schemes more portable. Vesting was cut to two years and a price-correction factor was introduced for workers who leave a plan before retirement age. As noted earlier, defined-benefit plans produce seniority-related upward-sloping costs of quitting due to price inflation, real wage growth, and discounting. Price correction tends to flatten the cost-of-quitting curve (figure 6-1) but does not completely even it out.

The British price-correction factor is the increase in the retail price index up to a cap of 5 percent a year.[26] Thus, if inflation runs above 5

24. The description that follows relies heavily on Great Britain, Department of Social Security (1990).

25. Occupational pension plans often go beyond the minimum required for contracting out of SERPS. The employer is not obligated to contribute beyond the minimum to a contracted-out personal pension, however, and many will not do so.

26. This rule also applies to pension plan terminations. As in the United States, there were complaints that overfunded plans were being terminated as part of corporate takeovers or otherwise. Terminations are not forbidden but the price correction of promised benefits increases the liability of the plan and makes it less likely to appear overfunded. Moreover, overfunded plans are required to increase benefits, provide contribution holidays, or issue refunds subject to tax. The objective is to keep overfunding at or below 105 percent.

percent, even the required price correction will not be complete. Nonetheless, the official recognition of the mobility problem in Britain goes far beyond attempts in the United States, which have been limited to cutting normal vesting from ten to five years. Moreover, the cash equivalent of the promised pension can be transferred to another employer's plan (if the plan will accept it), a personal pension, or an annuity. In addition, the new rules allow defined-contribution plans to qualify for contracting out for the first time. Such plans are inherently portable. The rules also encourage voluntary employee contributions to supplemental pensions similar to U.S. 401k plans.

Various subsidies to the private pension system are provided. First, defined-benefit plans are responsible for paying at least a guaranteed minimum pension (GMP). Once the retiree begins to receive the GMP, the private plan is only required to index benefits up to a cap of 3 percent a year. Should inflation exceed 3 percent, the social security system pays the additional amount needed to protect purchasing power. This government guarantee of a pension in real terms provides a stimulus to private pensions.

Second, employers with their own occupational pension plans may deny supplemental payments to employees who contract out of the plans and establish personal pensions. Such policies could in principle discourage this contracting out. However, to promote personal pensions, the 1986 legislation provided for a subsidy of 2 percent of pay beyond the contribution to social security of 5.8 percent that was rebated to personal pensions until April 1993. (The 2 percent subsidy is also available to employers creating new occupational pensions.) An estimated 500,000 employees were expected to open personal pensions in 1986 with an expansion to 1.75 million by April 1990. In fact, by then the number had risen to 4 million. The net cost to SERPS (reduced liabilities minus rebates) has been estimated at £6 billion through April 1993. Part of the eventual cost reflects incentives to contract back into SERPS at later ages; many persons are expected to play the system by contracting for personal pensions and back in to obtain a greater combined pension from the two sources.[27]

OBSERVATIONS ON THE BRITISH EXPERIMENT. The British experiment in creating more labor market flexibility through benefit reform is especially instructive to the United States, where little creative effort in that area has been made. But British policy could in theory have gone

27. Great Britain, National Audit Office (1990).

much farther. It could have terminated defined-benefit pensions and substituted personal pensions and money-purchase plans. But such a change would have been far more radical than was politically possible, given the millions of employees already in defined-benefit programs. Termination of defined-benefit plans would have created complete portability, but it would have exposed the work force to greater pension risk. Thus the 1986 reform was a compromise.

It is ironic, however, that the ideological bias against public social security reduced the role of the SERPS plan, which offered perfect compatibility with an atomistic labor market while ensuring retiree income security. That is, SERPS would be completely portable if no contracting out were permitted; all employers would be covered by the same plan. Shifting from pay-as-you-go funding to prefunding would require an increase in employer contribution rates to SERPS, but these would not necessarily be greater than the increased costs of shifting to personal pensions and other contracted arrangements. In that regard, the French approach to pension provision is instructive.

France

As early as 1793, an official French decree refers to securing the means of survival for citizens unable to work. However, the modern system of French social insurance is largely a creation of the years after World War II, with some absorption of earlier programs.

PENSION PROVISIONS. After World War II, French policy aimed to make the basic pension component of social insurance universal. Thus there exists a government-run (but theoretically private) social security system, supplemented by programs administered by various other quasi-public entities. Over the years, these many "regimes" have been coordinated. As a result, though operating procedures and formulas may be complex, the individual pensioner generally deals with a single administrative institution. In addition, there are a few private pensions.

Although there is some balkanization of the basic system, the outlines are roughly similar for all subcomponents. All components are supported through a combination of compulsory employer and employee, or self-employed, contributions. All are funded on a pay-as-you-go basis (*répartition*). Pension payments from the basic system (which tend to be low) are defined for employees by a formula linking the highest ten years of earnings, labor force experience, and age.

The French approach to social insurance and benefits diverges dramatically from the U.S. approach with respect to complementary systems of retirement income. In the United States, benefits beyond basic social security are left to the discretion of the individual employer, albeit with tax incentives. In France, however, there is a second tier of national arrangements that are compulsory, though not created by statute. These arrangements were established through interindustry collective agreements between employer and union federations.

Creation of the complementary systems had its roots in the ceiling on wage levels on which the basic social security system bases its pension. The first level up to the ceiling is termed the "A-slice" (*tranche*) and is somewhat analogous to the taxable wage base in the U.S. social security system. For higher-paid employees, coverage of successive slices (B, C) became an issue. The issue was especially important to employees classified as *cadres*, a term that roughly corresponds to managerial and professional.

Pressure for retirement income based on higher wage levels prompted the creation of the AGIRC (General Association of Cadre Retirement Institutions) immediately after the war. In later years, AGIRC pensions came to be based on the A-slice of wages as well as higher slices. This program and similar arrangements for noncadres eventually came to be covered by ARRCO (Association of Complementary Retirement Systems) in the early 1960s. Complementary systems are in principle run by the social partners but are tightly regulated by the social security code.

Because there are a variety of retirement schemes, mechanisms for benefit coordination are provided for employees who have established eligibility in more than one system. Financial transfers between the various systems also occur. These transfers sustain plans applying to such industries as railroads, where the ratio of pensioners to active workers is high.

Table 6-5 provides one estimate of expected benefit levels for career employees under the French retirement system. Unfortunately, there appears to be no ongoing data base concerning the system's average results. However, it does appear from other sources that the career outcomes are generally in keeping with the data shown in table 6-5. Generally, the replacement rates of the highest paid workers are less than those of employees earning average or below-average wages.

Within the ARRCO-AGIRC framework, firms have some discretion over the size of the pension their employees receive. Thus, the principle of independent internal corporate policy regarding retirement remains alive in France despite the high degree of intervention. Beyond the vari-

Table 6-10. *Lifetime Number of Enterprises by Which Workers Who Became ARRCO Pensioners Were Employed, France, 1989*

Number of enterprises	Percent of pensioners	Cumulative percent of pensioners
1	6.4	6.4
2	12.0	18.4
3	13.0	31.4
4	12.4	43.8
5	9.6	53.4
6	7.6	61.0
7	6.2	67.2
8	5.2	72.4
9	4.4	76.8
10	3.6	80.4
11	3.0	83.4
12	2.6	86.0
More than 12	14.0	100.0

Source: Unpublished data provided by ARRCO.

ation allowed within the ARRCO-AGIRC framework there are instances of supplementary enterprise-based retirement programs.

MEDICAL INSURANCE. Employees who work a certain number of hours a year, along with pensioners, the unemployed, and dependents of persons in these groups, are covered by medical insurance through the social security system. The system is based on reimbursement with co-payments. Doctors' associations and other health providers enter into agreements with the authorities regarding costs. Some providers who are outside the system charge more than the agreed costs; patients who use such providers are reimbursed at a lower rate and must pay the difference. The system is supported by a combination of employer and employee taxes.

The system does not reimburse all medical expenses. Thus supplementary health insurance provided by private carriers or beneficial institutions is often available through larger employers. Policies for cadres and noncadres appear to be the norm in larger firms.[28] Unlike the U.S. practice, employers do not exclude new hires from coverage on the grounds of preexisting illness, probably because so much of the risk is borne by social security. Hence, the mobility issue this creates in the United States is not significant in France.

LABOR MOBILITY. Although table 6-2 indicates that French workers tend to be less mobile than their U.S. or British counterparts, in absolute terms there is considerable mobility. (French workers who change jobs are less likely than workers in other countries to experience benefit losses because of national social insurance arrangements.) An indication of the extent of employee mobility is given in tables 6-10 and 6-11.

28. Hewitt Associates (1990b).

Table 6-11. *Job Changes in France, 1975–88*[a]

Percent of work force

Worker date of birth	Job changes: Never	One	Two	Three or more
1925	44.1	29.5	12.1	14.3
1930	32.7	30.6	16.0	20.6
1935	26.9	27.5	17.6	28.0
1940	23.9	27.2	18.2	30.7
1945	22.6	24.2	19.2	34.0
1950	19.8	24.4	18.0	37.8
1955	13.7	18.7	17.2	50.4

Source: Unpublished data provided by the French social security system (CNAVTS).
a. Active workers under basic social security.

Table 6-10 is based on the reconstructed lifetime work histories of workers who retired under ARRCO in 1989. The median reported number of employers these retirees had over their careers is between four and five. About one-fifth of the retirees reported having had ten or more employers. Since employment that took place during these retirees' youth may not be fully recalled, figures shown in table 6-10 are certain to be underestimated.

A different measure of mobility is given in table 6-11. These data consist of the number of job changes active workers made during the fourteen-year period 1975–88, organized by age cohort. Within the youngest cohort—those born in 1955 and who were just entering the labor market in 1975—about half are recorded as having made three or more job changes during the period. Among the oldest group (those born in 1925) a majority report at least one job change. Thus, even among age groups that are the least mobile, job changes are very possible, and the fact that the changes will not entail benefit losses is an advantage.

The French system of national and nearly comprehensive health insurance relegates private enterprises in retirement and health care to a small role. Certainly, there are problems with the system. The pay-as-you-go aspect of retirement income financing may become troublesome as the baby boom generation retires. And although health care spending is well below U.S. levels, French health expenditures as a percent of GDP (table 6-7) are high by European standards. However, if the single European

market creates added pressures for job mobility, the French approach to social insurance and benefits will not be an obstacle to needed structural shifts in employment.

Germany

The unification of East and West Germany has distracted German policymakers from other social issues. Nonetheless, more conventional issues remain.[29] The single market poses potential problems for the German benefits system, especially pension provision. Germany is the largest economy within the EC, and its markets will certainly feel the impact of the competitive forces unleashed by the 1992 reforms. These pressures can already be seen in legislation in the 1980s designed to regularize the use of temporary workers in Germany. The use of part-time workers and changes in work hours (initiated by employers) have begun to be negotiated in collective agreements.

BASIC SOCIAL SECURITY. With respect to state-run social insurance, Germany has long been regarded as the pioneer of the nineteenth century. To fend off a socialist threat, the early German social insurance system provided for pensions as well as accident and sickness insurance. However, as in most industrialized countries, the modern system of German private benefit provision is largely a post–World War II creation.

German social security covers almost all workers other than civil servants, who have their own program. Administration of the system is shared by federal and state authorities, although social security policy is a federal responsibility. As in France, the system operates on a pay-as-you-go basis. Thus, concern about the cost of the baby boomers' retirement has been reflected in recent system changes. For example, early retirement options are scheduled to become less generous, and increased employer and employee contributions are being phased in.

MEDICAL INSURANCE. German social security includes medical insurance for all employees earning less than a specified maximum. The insurance is administered by more than 1,100 decentralized funds con-

29. In principle, German laws concerning employee benefits cover east Germany. The social security systems of East and West Germany were broadly similar with the exception of unemployment insurance (which did not exist in the east on the grounds that full employment was guaranteed). (U.S. Department of Health and Human Services, 1988, pp. 92–95). A complicating factor was the role official unions in East Germany played in administering the system.

trolled by boards representing employers and the insured. About 90 percent of the population is covered by the program as a whole.[30] Medical insurance is intertwined with a program of paid sick leave under which employers must pay 100 percent of earnings for an initial specified period during medical leaves; thereafter, statutory sickness funds pay 80 percent of earnings for an additional period. Medical care is provided by doctors, hospitals, and pharmacists under contract with the funds.

Persons earning more than the specified maximum can participate in the social security medical system or obtain private insurance. In either case the employer must make a designated contribution. The private health insurance market mainly covers higher-paid individuals who decide not to belong to the social security plan.

The medical insurance system is generous; most health expenses are covered in full or with only a small deductible. Because the system remains so comprehensive, even large firms are unlikely to provide supplemental medical programs.[31] Thus, issues of employee mobility based on health insurance are absent from the German system.

RETIREMENT BENEFITS. Retirement benefits in Germany come from two primary sources: social security and enterprise-administered pension programs. In that respect, Germany resembles Great Britain and the United States more than France, although its basic social security arrangements are more generous. Contributions to social security are divided between employee and employer, as in the United States, although employees with very low incomes are exempt from contributing. Social security retirement benefits are based on work force experience and on earnings (up to a cap). They are indexed to the average pay of active workers.

As in other countries, some large firms in Germany had pension plans by the late nineteenth century. But the modern (West) German pension system developed after World War II in part because of a perception that pensions could be used as a source of enterprise finance, and hence, a tool to stimulate growth. Despite the widespread belief that pensions are important to the economy, data on the operation of German pensions are remarkably sparse.

There is no mandate requiring German firms to provide pensions. Roughly two-thirds of German employees, however, are reported to be

30. Goebel (1989, p. 462).
31. Of the twelve firms Hewitt Associates used to illustrate sample German employee benefits, only one had a supplemental medical program. (Hewitt Associates, 1990c).

covered by some form of pension arrangement. But not all will necessarily qualify for pensions as a result. A long vesting period of ten years' service is the legal maximum. Nine out of ten plans are of the defined-benefit type.[32] However, defined-contribution plans are experiencing increased popularity.

Four types of funding mechanisms for pensions are found in Germany: book reserves (70 percent of total reserves in 1989), solidarity funds (10 percent), direct insurance (5 percent), and pension trusts (15 percent).[33] Pension trusts are similar to the U.S. model; monies are invested in an independent trust to provide for future liabilities. Direct insurance refers to a contract between the employer and an insurance carrier whereby the latter undertakes to meet future pension commitments and charges the employer sufficiently to pay for it. In effect, the insurance carrier acts as a pension trust. Solidarity funds are multi-employer pensions; a central trust receives payments from various employers in an industry and pays benefits to retirees. Finally, the book reserve system, which is by far the most important funding mechanism, involves carrying a "reserve" on the books of the employer against pension liabilities.

With the exception of direct insurance plans, all pension arrangements are required to be (partially) insured with the Pension Security Fund (PSV), a specialized insurance company created by employers and private insurance carriers. Contributions are based on the experience of the fund. Major corporate bankruptcies, such as AEG Telefunken's in 1982, can deplete the fund's reserves and call forth increased contributions from active employers.[34]

German pension liabilities are not fixed in nominal terms, as is the U.S. norm. By law, retirement benefits must be reviewed every three years, taking into account price inflation, pay increases of active workers, and the firm's economic state. Except in periods of financial stringency, this means that pensions are increased by the lesser of the first two factors.

32. Turner and Beller (1989, p. 338). However, there is provision for salary reduction plans similar to U.S. 401k plans which resemble defined-contribution programs.

33. Data from Maillard (1990, pp. 145–47).

34. During the period 1975–89, the PSV made pension payments to about 140,000 retirees as the result of 3,800 bankruptcies (Swiss Life, 1990, p. 170). Contribution rates have varied substantially as the result of PSV experience. Rates have been as high as 0.69 percent of payroll in 1982 and as low as 0.06 percent in 1989 (Foster, 1990, p. 212).

THE BOOK RESERVE SYSTEM. The book reserve system of pension finance is in fact varied. In its simplest version, book reserves are difficult to differentiate from unfunded pension liabilities. The firm creates a "reserve" equal to its accrued liabilities. This accounting transaction reduces recorded profits (and taxes) but no asset other than the commitment of the firm stands behind the liability. Workers have their pensions invested in their employer. Without the backup PSV scheme, an employer's bankruptcy would threaten receipt of pensions. Even with the PSV, bankruptcy still puts some pension risk on retirees because its coverage is partial.

Book reserves have been seen by German employers and policymakers as giving a national advantage in providing for corporate finance. Yet it is not obvious at the national level that efficiency is encouraged if firms can borrow more cheaply from their workers than from the outside market. Having a source of funds available without external scrutiny creates a classic principal-agent problem. And there is a potential for inefficient allocation of resources.

Without full backup insurance, investing employee pensions in a single employer puts workers at special risk in the event of bankruptcy. Some economists might describe such an arrangement as an ersatz profit-sharing plan designed to achieve group incentives. However, German employers can institute more typical profit-sharing if they wish; there is no evidence that pensions were developed in place of profit-sharing. Although the PSV does act as a partial guarantee of pension promises, this system simply transfers the problem of having a risky claim on a single employer to another institution. And workers still bear some risk because the insurance is incomplete. As U.S. experience with compulsory pension insurance indicates, ethical hazards can arise from such arrangements, threatening the solvency of the backup plan.

GERMAN PENSIONS AND THE SINGLE EUROPEAN MARKET. Compared with French and British arrangements, German pensions seem most in need of scrutiny in light of the single European market. Their book reserve funding is predicated on continued corporate stability, a questionable assumption. Their lengthy vesting period assumes long-term worker attachments and an absence of involuntary separations, again questionable assumptions. Unlike some other EC countries, Germany has not been developing policies aimed at providing transferability of pension rights across pension systems. Finally, the assumption that book reserves stimulate economic growth (relative to other forms of financing) is at best an unexamined assertion.

Conclusions

European countries have almost uniformly tended toward public provision with respect to health insurance. That tendency has left less room for an employer role in health care than is typical in the United States. As regards pensions, although Europeans have tended to develop a larger public presence than is found in the United States, there is wide variation in the employer role vis-à-vis retirement. In seeking to harmonize policies in various economic spheres, EC countries are being forced to make comparative assessments. The impact of cross-border mobility is in fact not great. But growing awareness of differences in approach to benefits among countries could have important long-term effects on benefits and social insurance within Europe. The existence of alternative routes to retirement income and health care is becoming evident.

Internal labor mobility pressures may also have important long-term effects. The single European market is likely to require significant structural change; greater labor mobility, both voluntary and involuntary, can be expected. Countries with benefit structures external to the firm have one less barrier to labor mobility about which to worry. Thus, French workers can change jobs without jeopardizing pension rights. British workers can obtain new employment without losing health coverage due to preexisting illnesses.

European benefit and social insurance arrangements are better adapted to changing labor markets than are corresponding U.S. arrangements. This feature is mainly a historical accident rather than the result of either prescient planning or economic forces; in the past, there have been higher rates of labor mobility in the United States than in Europe. Nonetheless, some European countries—notably Britain—whose pension systems might pose mobility barriers are experimenting with reforms. That is more than can be said about the United States, where reform has meant little more than unproductive tinkering with the tax code and hand wringing about health care cost containment.

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Lloyd Ulman
Barry Eichengreen
William T. Dickens
editors

The Brookings Institution
Washington, D.C.