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**The Political Economy of
Corporate Governance in Germany**

by

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The Political Economy of Corporate Governance in Germany¹

Mary O'Sullivan

The question of how corporate enterprises should be governed to enhance economic performance is one that has, in recent years, attracted growing attention in Germany. The intensification of international competition, especially from Japan, has created unprecedented challenges for German corporate enterprises and has led to a questioning of the way in which corporate resources and returns are allocated. The extant system of corporate governance in Germany is also under pressure from the financial sector and, in particular, from changing patterns of savings and pension provision.

To understand the potential economic implications of challenges from the real and financial sectors for the system of corporate governance – the social process that shapes who makes investment decisions in corporations, what types of investments they make, and how the returns from successful investments are distributed – we need an economic theory of governance. In previous work, I have argued that, if it is to be relevant, a theory of corporate governance must take account of innovation, that is, of the process through which productive resources are developed and utilised to generate higher quality and/ or lower cost products than had previously been available (O'Sullivan 1997; Lazonick and O'Sullivan, 1997a; 1997b; 1997c; O'Sullivan, 1996).

Innovation is central to the dynamic through which successful economies improve their performance over time as well as relative to each other. Historical research on innovation in all of the advanced industrial nations has highlighted the importance, as *loci of innovation*, of corporate enterprises that compete for markets to survive. A relevant theory of corporate resource allocation and its governance must therefore incorporate an understanding of the central characteristics of the innovation process.

On the basis of the extensive literature on the subject, innovation, and the learning process that is its substance, can be characterised as one that is collective and cumulative and, hence, organisational. A system of corporate governance, if it is to support innovation, must generate the social conditions that permit collective and cumulative learning to take place. Specifically, it must provide support for *financial commitment* -- the commitment of resources to irreversible investments with uncertain returns -- and *organisational integration* -- the integration of human and physical resources into an organisational process to develop and utilise technology (Lazonick and O'Sullivan, 1996).

Organisational integration describes the social relations that provide participants in a complex division of labour with the abilities and incentives to integrate their capabilities and efforts within organisations so that, potentially, they can generate organisational learning. Financial commitment describes the social relations that are the basis for a business organisation's continuing access to the financial resources required for sustaining the development and utilisation of productive resources. Financial commitment and organisational integration represent social conditions that together support "organisational control" over the critical inputs in the innovation process: knowledge and money. By contributing to the innovation process, however, these inputs are not commodities but reflect the social relations to the business organisation of those who supply knowledge and money.

¹ Unless otherwise explicitly stated, Germany is used herein to refer to the former Federal Republic of Germany.

Without institutions that support organisational control, business enterprises cannot generate innovation through strategic investment in collective and cumulative learning processes. Yet, that organisational control is supported by social institutions does not imply that innovation will in fact occur. Innovation is defined relative to the competitive environment in which it occurs; whether certain products are considered higher quality and/ or lower cost depends on the quality and cost of competitive offerings. Since the competitive context varies across industry as well as, within industry, over time, so too does the nature of the innovation process and the strategies and learning that comprise it.

As a result, the financial and organisational requirements of the innovation process differ across industries as well as, with economic development, over time. Particular social conditions that in one time and place support successful investment strategies and organisational learning processes may prove unsuitable as a basis for competition as the investment strategies and the organisational learning processes that generate innovation evolve. To understand the relationship between social institutions and innovation we must therefore analyse the interaction of the social conditions that support economic development with the dynamics of competition.

In historical perspective, it is evident that governance institutions come into existence and evolve in response to forces that are closely related to their functional role in the productive economy. But they also evolve in response to forces that have different origins. As far as the systems of corporate governance in the advanced industrial economies are concerned, a critical source of institutional change in recent decades has been the growth of intergenerational dependence. What is of importance for the governance system is not the demographic phenomenon of population ageing *per se* but the social construction of the ageing process as reflected in the structures of working lives and pension systems.

The nature of the dynamic interaction between systems of governance and evolving challenges in the real and financial sectors cannot be determined in the abstract. Rather it must be studied with reference to evolving historical realities. Section 1 describes the system of corporate governance that was put in place in the postwar decades in the former Federal Republic of Germany. In Section 2 the relationship between these corporate governance arrangements and economic performance is analysed. Section 3 is concerned with the challenges for the German system of governance that emanate from the real and financial sectors of the economy. In Section 4 the implications of these pressures for the German system of corporate governance are considered.

1. The Foundations of Postwar Governance

From the late nineteenth and early twentieth century, the competitive success of major German enterprises was built on a system that integrated the knowledge of managers in organisational learning processes. Supporting investments in the incentives and abilities of managers was the evolution of a governance system that created the social conditions on which insiders gained control over the allocation of resources and returns in the German corporate economy. The institutions of worker apprenticeship and codetermination have roots that date back to the medieval guilds and the Bismarckian era respectively. These institutions were not, however, systematically integrated in the prewar German system of governance, notwithstanding attempts to do so during the Weimar period; organisational control in Germany before the war was essentially managerial control (Lazonick and O'Sullivan, 1997).

Immediately after the war, in reaction to the abuse of concentrated power to which, as evidenced during the Nazi period, managerial control could lead, there was considerable political support for transforming the German system of corporate governance. With Germany's defeat, the declared intention of the Allied Occupation forces, particularly the Americans, was to break up the concentration of economic power in German industry and banking and to replace it with market control. But the onset of the Cold War, and the perceived importance of the West German economy as a bulwark against the power of the Soviets, led to a decline in the commitment to this path.

1.1 The Persistence of Financial Commitment

Despite the dissolution of industrial trusts, such as the I. G. Farben chemical combine, the constituent companies often reemerged as dominant autonomous enterprises and established links with one another. Many of the major German industrial enterprises on which the post-World War II German economy has relied to undertake innovative investment strategies are those that became dominant before World War II and prime vestiges of pre-World War II managerial control -- namely, inter-company shareholding networks and bank-industry relations -- remained strong in the postwar decades.

In general, inter-company links remained extremely tight in the postwar West German economy; in 1960 non-financial enterprises accounted for 35.7 per cent of total assets held in West Germany in the form of shares, making them by far the largest stockholder group (Edwards and Fischer, 1994, p. 182). Although strictly comparable figures are not available, the level of inter-company stockholding would seem to have at least remained steady since then; in 1984 non-financial enterprises held 36.1 per cent of shares issued by German enterprises (Ibid., p. 180). Although much less important as a stockholding group than non-financial enterprises, banks and insurance companies also held significant equity participations in German corporations in the postwar period. Banks accounted for between 7.6 per cent and 10.3 percent in 1984 (depending on whether you include investment funds which are, to a large extent, owned by the banks) of the total nominal value of shares issued by German companies (Ibid., p. 180).

A study of bank holdings in 74 large West German enterprises in 1974-5 showed that Deutsche Bank, Dresdner Bank and Commerzbank together accounted for two-thirds of bank participations, and were thus among the most influential stockholders in the West German economy (Gessler Commission, 1979, p. 467). The single most important stockholder in Germany is not, however, a bank but the country's largest insurance company, Allianz AG. Insurance companies as a group account for a relatively small proportion of the shares of German enterprises, but Allianz appears in many of the inter-company shareholding networks that span German industry (Owen Smith, 1994, p. 338) and for this reason is often referred to as "the spider in the web".

The importance of inter-company shareholding is the source of the substantial difference between patterns of direct and ultimate shareholding in the German corporate economy. In 1973 more than 70 per cent of the market value of the equity capital of listed AGs was accounted for by companies in which the share of the largest shareholder was at least 25 per cent (Iber, 1985, p. 1111). A study of the 300 largest German industrial enterprises in 1972 showed that, classified in terms of direct ownership, "owner-controlled" companies accounted for 75.1 per cent of the sample's aggregate turnover; in contrast, when categorised in terms of ultimate ownership, manager-controlled firms accounted for the majority of total

turnover (64.6 per cent) and owner-controlled firms for 35.4 per cent (Schreyogg and Steinmann, 1981, pp. 533-556).

The gap between direct and ultimate ownership largely stems from the fact that the companies that represent the most important nodes in inter-company shareholding networks are among the most widely held in Germany. But even these companies have, in the postwar period, been insulated from market control. More than 75 per cent of the value of domestic shares in Germany are held on deposit by the private banking sector and the vast majority of these shares are deposited with the Big Three (Owen Smith, 1994, p. 359). They exercise proxy voting rights for these shares, subject to certain requirements for stockholder approval. The *Monopolkommission* concluded from an analysis of the equity votes represented at general meetings of stockholders in 1974 that banks controlled an average of 56.7 percent of the total votes. Only 7 percent came from the banks' own stockholdings and an enormous 49.5 percent was based on the proxy votes that they exercised on behalf of their depositors (Monopolkommission, 1978, p. 199). The importance of proxies was greater for the largest AGs; in the ten largest AGs by turnover the banks controlled a total of 67 per cent of the votes compared with 42.6 per cent in the AGs ranked from 51 to 100 (Ibid.).

It is their role as depositories of the shares of diffusely-held companies that is the greatest source of potential influence by the banks on the German corporate economy. It gives them a significant voice at shareholder meetings and, since shareholders' representatives on supervisory boards are elected at the annual general meeting, on the composition of supervisory boards. In a study of supervisory board representation, the German *Monopolkommission* found that banks were directly represented on the supervisory boards of 75 of the largest 100 AGs in 1974, with 179 seats in total being occupied by the banks, 102 by the Big Banks and 55 by Deutsche Bank alone (Monopolkommission). Yet based on their analysis of bank representation on supervisory boards of AGs with more than 2,000 employees in 1979, Gerum, Steinmann and Fees concluded that banks could not control decision making on the supervisory board even if they acted in concert because they only occupied 16.4 per cent of shareholder seats on average and 8.2 per cent of the total number of supervisory board seats. They also found, based on their study of these companies' articles of incorporation, that in only 20 percent of these cases was supervisory board consent required for the enterprise's general product or market strategy; in only 10 percent was such consent needed for general business plans or investment finance plans (Gerum, Steinmann and Fees, 1988, p. 74). Members of the supervisory board tended to meet infrequently; for 86 percent of the AGs surveyed their supervisory boards met only twice a year (Ibid., p. 108). With some exceptions, the *Vorstand* (management board) rather than the *Aufsichtsrat* (supervisory board) is the main decision-making body of the German AG and its members are salaried managers who, in the postwar decades, generally have been promoted up through the enterprise (Lawrence, 1984, p. 36). For all of these reasons, members of the supervisory boards -- bankers or otherwise -- were highly dependent on insiders for their understanding of the business.

The relationship of the Big Banks to the allocation of corporate resources in the FRG has been the subject of ongoing controversy, as it was prior to and during World War 2. These banks have perhaps most often been portrayed as controllers of West German industry. Yet the available evidence shows that the banks appear to have acquiesced in a postwar system of governance that bolstered managerial control. In the highly regulated financial system that was put in place in the FRG and in which, through the regulation of banking competition, the Big Banks were accorded the scope to develop strong positions in a number of attractive market

segments, they had stronger incentives to support organisational control in the corporate economy than to confront it. They had a significant interest in the continued success of the Federal Republic of Germany's leading industrial enterprises since these companies represented a lucrative source of revenues for their short-term lending, export financing, and corporate financial services businesses (Gall et al, 1995, p. 610-56). Bank control over corporate resource allocation, and certainly its uncontested exercise, also seems implausible because of the banks' limited ability to exercise it. As I have already observed, there were real limitations to the exercise of bank power through their direct shareholding, proxy votes, and supervisory board seats. Moreover, the access of the major industrial enterprises to internally generated funds rendered most of them relatively independent of external sources of finance (Dyson, 1986; Esser, 1990, pp. 17-32; Edwards and Fischer, 1994, pp. 228-240).

As had been the case before the war, so in its aftermath, internal funds soon became the predominant source of investment finance for major German industrial enterprises (Wallich, 1955, p. 166). Indeed, the importance of retained earnings in financing German industrial reconstruction created considerable concern about the concentration of power in the hands of the propertied classes (Roskamp, 1965). As early as the 1950s internally-generated funds were by far the most important sources of finance for German enterprises, funding more than 75 percent of net investment. The banks, focussed on the reconstruction of their own organisations and asset bases, had only limited funds to lend, and these tended to be provided in the form of short-term loans. Sometimes these funds were used by companies for long-term purposes but the banks attempted to limit this behavior to control their maturity risk. To the extent that long-term funds were provided by the banking system, they were ultimately funded from the Marshall Counterpart Fund and channelled to the banks by the *Kreditanstalt für Wiederaufbau* (Reconstruction Loan Corporation) (Shonfield, 1965, p. 276). The banks bore the credit risks of the loans that they made out of these monies -- loans that were primarily directed toward bottleneck investments in the economy (Shonfield, 1965, p. 279; Abelshauser, 1982, pp. 34-53).

As Table 1 shows, the importance of internal sources of investment finance persisted throughout the entire period from 1950 to 1989. Even after the reopening of capital markets in 1956, to the extent that large German companies have sought access to external finance, bank loans have been the preferred source rather than equity or bond issues; long-term debt accounted for 12.1 percent of the net sources of investment finance and equity issues for a tiny 1.5 per cent (for an extended discussion, see Edwards and Fischer, 1994, pp. 49-70). In major industrial enterprises internally generated funds were even more important as a source of finance for investment than for producing enterprises in general; internal funds accounted for 88.1 per cent of the net sources of finance for investment by large manufacturing AGs compared with 72.7 per cent for producing enterprises for the period from 1971 to 1985 and long-term loans were 1.7 per cent and 14.4 per cent respectively (Edwards and Fischer, 1994, p. 127). In international comparison German enterprises -- large firms as well as the producing sector as a whole -- are as reliant, and if anything more reliant, on internal funds as a source of investment finance than their counterparts in other advanced industrial economies (Mayer and Alexander, 1990, pp. 450-475; Hall, 1994, pp. 110-143; Corbett, 1996, pp. 71-96).

Table 1 Net Sources of Investment for German Producing Enterprises, 1950-1989,
%

	1950-1989	1950-1959	1960-1969	1970-1979	1980-1989
Internally-generated funds	75.4	75.4	74.1	71.3	80.1
Provisions for pensions by enterprises	3.7	3.2	2.0	4.3	4.9
Capital transfers from government	5.5	1.2	4.0	7.9	9.0
Bank borrowing of which	11.7	11.8	13.4	12.0	10.2
Long-term	12.1	9.0	11.5	15.6	12.6
Short-term	-0.4	2.8	1.9	-3.7	-0.4
Funds from insurance enterprises	0.5	1.2	0.9	0.5	-0.4
Bonds	0.5	2.3	0.7	-0.4	-0.7
Shares	1.5	1.9	2.4	0.6	1.1
Other of which	1.2	3.0	2.6	3.9	-4.1
Foreign trade credit	-1.2	0.0	-1.1	-1.5	-2.2
Total	100.0	100.0	100.0	100.0	100.0

Source: Edwards and Fischer, 1994, p. 54.

1.2 Contesting Managerial Control: The Institution of Codetermination

Managerial control in the prewar period was supported by company law and in particular by the institution of the two-tier board structure which dates back to 1870. The supervisory board was initially intended as "a substitute for the state charter and the continuous state control which were abolished. This is the historical reason why the Aufsichtsrat is an outside board, i.e. it links people *other than the owners* with the enterprise. It performs functions not unlike those historically intended for the disclosure requirements in Britain (Hopt, 1997, p. 6, emphasis added; see also Hopt 1979)". In practice the supervisory board did not perform as intended and the 1884 corporate law reform attempted to improve its functioning by, for example, strengthening its rights to information. Nevertheless, it was never intended that the supervisory board would actually control managers, notwithstanding the impression given by those who have tried to understand its governance role through the lens of agency theory (for a discussion, see Edwards and Fischer, 1994). The new legal framework of the FRG preserved the main features of company law that ensured the subservience of the individual shareholder to the business organisation (Raiser, 1988). As Thomas Raiser put it:

[u]nder German law, in the public company the power of the managing board is rather strong, because Article 76 rules directors to guide the company under their own responsibility, free from any binding instructions of either shareholders or supervisory board. Only fundamental changes require approval of the shareholder meeting, and the supervisory board may exercise a veto in certain cases where the by-laws provide such a veto. This widely discretionary power of the managing board favors a bias towards managerial 'absolutism' which sometimes hardly can be stopped (Raiser, 1992, p. 37).

The institution of codetermination has, however, been central to a shift away from managerial control toward a contested form of organisational control. The onset of the Cold War led the US military government, with the cooperation of the newly installed Federal Republic of Germany (FRG) government, to block the more ambitious plans for integrating workers into the governance of industrial enterprises. The West German movement for industrial democracy thus fell short of its ambitions. Nevertheless, the postwar institution of codetermination (*Mitbestimmung*) did extend

workers some direct influence over the allocation of corporate resources, giving the FRG the most extensive formal system of employee representation in the world.

Codetermination is comprised of two key elements: employee representation on the supervisory boards of corporate enterprises and on works councils that operate at plant level. Passed only under the threat of a major strike, the Codetermination Act of 1951 mandated parity worker representation on the supervisory boards of enterprises in the coal, iron, and steel industries (*Montanmitbestimmung*). It also provided that the labour director in these companies -- a member of the management board -- could not be appointed against the wishes of the worker representatives. In other industries, workers were denied equal representation; enterprises with more than 500 employees were obligated by the Works Constitution Act of 1952 (*Betriebsverfassungsgesetz*) to reserve only one-third of the supervisory board seats for employee representatives. The Codetermination Act of 1976, however, mandated that all companies with more than 2,000 employees increase employee representation on their supervisory boards from one-third to one-half of the seats. The chairman of the board was required by law to be a shareholder representative. In the event of a tied vote he was granted a double vote. Thus the law firmly tilted the balance of control of the supervisory board against employees. Companies with more than 500 and less than 2000 employees continued to allocate one-third of their supervisory board seats to worker representatives (Streeck, 1984, pp. 391-422; Raiser, 1988, pp. 111-129).

The control over resources that labour representatives exercise through their participation on supervisory boards is limited by the restricted role that the board as a whole plays in corporate decision making. Indeed, there have been suggestions that employers have limited the powers of the *Aufsichtsrat* as a whole with a view to further controlling the influence of employees (Gerum, Steinmann, and Fees, 1988). Certainly, many German employers were hostile to the Codetermination Act of 1976 and they challenged it in the Federal Constitutional Court on the grounds that it violated private property rights (Raiser, 1988; Thimm, 1981, pp. 13-22). The employers' case was, however, overturned.

The formation of works councils (*Betriebsräte*) -- the second instrument of employee influence over corporate decision making -- was mandated by the Works Constitution Act of 1952. These councils are elected by all blue-collar and white-collar workers in a plant and are designed to give labour the right to participate in and receive information about the management of the shop floor. Under the 1952 Act, works councils have important codetermination rights over issues such as working hours, piecework rates and bonuses, working conditions, as well as transfers and dismissals. The act also gives works councils rights to information about personnel planning, financial matters, and major strategic changes. Works councils' codetermination rights are thus strong with respect to social and personnel matters but weak in relation to financial and strategic issues (Müller-Jentsch 1986, 1995).

In contrast to the codetermination of supervisory boards, the works councils were a conservative initiative, designed to some extent to curb the excesses of unaccountable managerial control. But, in being granted exclusive domain over labour representation at the plant level, works councils were made formally independent of the unions. Intended to serve as a counterweight to the political power of the unions, the role of works councils was to cooperate with management for "the benefit of the employees and of the establishment". Fearing that they would transform labour representation in the FRG into a system of "yellow" or enterprise unions that would ultimately undermine labour's political power, German unions stridently opposed the introduction of works councils (Markovits, 1986; Müller-

Jentsch, 1995). What transpired in fact was that, notwithstanding their initial objections, the unions established close links to works councils so that by the early 1970s more than 80 per cent of works councillors in the FRG were union representatives (Thelen, 1991, p. 80; Müller-Jentsch, 1995).

Through works councils, worker representatives arguably exercise more influence over the allocation of enterprise resources and returns than they do through their seats on codetermined supervisory boards (Markovits, 1986; Müller-Jentsch, 1995). Even in areas where it does not have formal codetermination rights, a works council can delay management decisions by strategically using its rights in other areas (Müller-Jentsch, 1995). The power of the works councils is, however, proscribed by the statutory ban on strikes to enforce workplace demands. Moreover, in exercising their influence through the mechanism of the works council, labour representatives, union members or otherwise, are legally bound to act in a manner that promotes the overall health of the enterprise (Müller-Jentsch 1986, 1995).

Besides the formal institutions of codetermination, the role of labour unions in collective bargaining is an important indirect channel through which workers, or more precisely worker representatives, can influence the allocation of corporate resources. The unions are organised along industrial lines and come together under an umbrella organisation, the DGB (German Federation of Unions). Most employers are members of an employers' organisations that bargain with unions over wages and other matters. Employers' organisations are united under the BDA (German Federation of Employers). Another employers' organisation -- the BDI (Federation of German Industry) -- deals with issues of economic policy (Markovits, 1986; Baethge and Wolf, 1995).

The substance of employee representation in German corporate governance depends on how the various channels of worker influence -- supervisory board representation, works councils, and union bargaining -- interact with each other. Yet, the restrictions on each of the channels of employee influence, as well as the challenges for the labour movement in coordinating them do not take from the fact that, in historical and comparative perspective, codetermination has extended organisational control in German industry beyond the narrow pre-World War II confines of managerial control.

1.3 Organisational Integration

The conditions of financial commitment and corporate control that emerged in postwar Germany were complemented by institutions that supported the organisational integration of resources in German business enterprises. Of particular importance in the post World War 2 era was the West German system of apprenticeship -- the dual system -- that provided the institutional support for the integration of workers with managers as insiders to the processes of organisational learning that generated the innovative capabilities and competitive advantages of German enterprises. The German experience is thus starkly contrasted with that of the US where, to a large extent, workers have been excluded from organisational learning in the postwar decades.

German companies initially acquired international competitive advantage from the late 19th century primarily by developing and integrating skills within the managerial structure rather than on the shop floor. An apprenticeship system in *Handwerk* existed that had its roots in the guild system of craft apprenticeship in the Middle Ages. It provided many workers to the burgeoning industrial sector but was not specifically designed to serve the needs of industry (Sorge and Warner, 1986). Many of the larger employers thus invested in their own facilities and programmes to modify and supplement the traditional training structures. However, these schools

provided only minimal instruction in industrial work for traditionally-trained craftsmen. German employers controlled the workplace, and dominated the process of shop-floor skill formation but generally proved unwilling to extend organisational integration to their shop-floor work forces.

The apprenticeship training structures in handicraft, industry, and services remained independent of each other until the Nazi period (Sorge and Warner 1986). During the last half of the 1930s and the early 1940s, the Nazis mobilised and reorganised the productive capabilities of the German economy for war. The authoritarian hand of the state intervened to shape the skill formation process in a critical way by integrating the *Handwerk* sector to German industry. The training system was standardised and regulated, thus laying the foundation for the modern German system of apprenticeship (McKittrick, 1994). After World War 2 the government of the FRG retained training structures in much the same way that the Nazis had shaped them. The regulation and administration of apprenticeship training changed, however, to reflect changes in the social order.

The postwar German system of apprenticeship is a "dual system" that combines formal vocational education and on-the-job training. Specifically, a full apprenticeship in this dual system entails practical training in a company for three or four days per week and attendance at a vocational school (*Berufsschule*) for the remainder of the work week. The practical workplace training provides systematic exposure to the whole range of work situations and problem-solving tasks in a legally defined and regulated occupation. At the end of three years the apprentice is examined on both theoretical and practical competence, and receives his skilled worker's certificate (*Facharbeiterbrief*) (Münch, various).

German training structures ensured that the German production worker was highly skilled, thus permitting functions such as maintenance and quality control to be kept to a large extent on the shop floor (Sorge and Warner, 1986, p. 124). A German worker's skilled status was not inextricably tied to his current job, and German unions were organized on an industrial rather than a craft basis. Technological change, therefore, did not threaten his conditions of employment to the same extent as it did a British craftsman, for whom the demarcation of his realm of work was a critical foundation of his bargaining power and reward structure. Hence the virtual absence of demarcation disputes in German companies (Lawrence, 1980, p. 134; Sorge and Warner, 1986, p. 101, 125; Lane, 1989). Because workers were versatile in the tasks that they could perform, they could be redeployed in response to day-to-day variations in staffing requirements (Maurice, Sellier, and Silvestre, 1986, p. 69). The standard term in German companies for this redeployment capability is *Einsatzbreite*, which was used both formally and informally in evaluating individual workers for promotion (Lawrence, 1980, p. 134). The German worker's understanding of the systemic nature of production enhanced his capacity for technical problem solving (Maurice et al, 1986, p. 70; Sorge and Warner, 1993).

Employers and workers, through their respective associations, exerted substantial influence on the structure of the apprenticeship system. Trade unions, employers' associations and a number of government ministries participated in the joint regulation of the training system at the industrial and national levels. Employer and worker representatives influenced regional training policy through their participation on the vocational training committees of local chambers of commerce. The unions exerted only an informal influence on training at the enterprise level, but workers had some influence over the structure of in-firm training programmes and their implementation in the workplace through the works council (Münch, various; Streeck et al, 1987). The costs of the apprenticeship system were borne in part by

governments at the national and *Länder* levels, in part by employers through voluntary participation, and in part by apprentices themselves in the form of low training wages (Münch, various; Casey, 1986, p. 65).

The training structures that supported worker learning ensured that German production workers were highly skilled. Central to the postwar success of German industry has been the integration of worker skills with the technical skills of managers. German managers are notable for the high level of formal qualifications that they hold (Lawrence, 1980, p. 76). The vast majority of managers engaged on the technical side of German companies had engineering qualifications. Although less prevalent on the commercial side, engineering nevertheless boasted a stronger showing than any other discipline (Lawrence, 1980, p. 80; Lane, 1989).

Their strong technical backgrounds gave managers a detailed knowledge of the production process with a particular emphasis on how to build high-quality products. The formal structures of skill formation on the commercial side of German enterprises have historically been less well developed than those on the technical side. German universities provided courses in business economics (*Betriebswirtschaftslehre*), but this distinctively German approach to business education emphasized management operational techniques rather than management as a discipline in its own right. German managers were traditionally rather sceptical that the qualities required in top managers could be effectively taught in the systematic manner used in American business education programs. As a result German post-experience management education programs have placed more emphasis on building relationships among top managers than on academic instruction. Business education is also available through the vocational system in the form of commercial apprenticeships (*kaufmanische Lehre*). Like the study of business economics, however, these apprenticeships have a strong production focus (Lawrence, 1980, p. 65; Locke, 1984, 1989).

The high level of formal qualifications in German companies did not reflect an exclusive reliance on university campuses as a source of future managerial talent. German companies did recruit for their management structures from universities, in particular favoring those graduates with an engineering degree (*Diplom Ingenieur*) (Lawrence, 1980, p. 76). These graduates were rarely admitted to senior levels immediately, however, and were expected first to gain experience on the factory floor or in other operational areas (Smyser, 1992, p. 70). Those who were recruited by the company without a university degree could also climb up the company hierarchy, in some cases from the shop floor to the boardroom. At the upper management levels, about one-quarter started their careers as workers (Maurice et al, 1986, p. 118).

To travel this path, an aspiring manager had to accumulate formal qualifications in addition to displaying practical capability within the firm. A network of vocational schools facilitated access to the formal education that allowed the student to build on his basic apprenticeship training. Before 1970 the standard route to admission to an engineering course, at what was then called an *Ingenieurschule*, was a three-and-a-half year apprenticeship (Münch, 1982). The engineering qualification offered by these schools, the *Ing. Grad.*, was thus evidence of a student's extensive academic and practical training. The possibility for German engineers to position themselves for managerial careers through apprenticeship and vocational school provided an alternative to the academic route through a university. The *Ing. Grad.* degree proved very popular among German companies, and was particularly common at the middle management level (Lawrence, 1980, p. 66; Münch, 1982).

The importance of additional formal education in improving promotion prospects in German companies was manifest in the close relationship between

hierarchical position and formal qualification in German industry. The ability of apprenticed workers to become engineer-managers promoted hierarchical cooperation with a strong technological foundation. Many engineers, and the *Ing. Grad.* in particular, held the *Facharbeiterbrief*, and thus shared a common theoretical and practical knowledge base with the skilled worker and the foreman (*Meister*). The organizational integration of technical skills in the managerial and blue-collar structures of German companies led to a focus on quality in product and process, and many German companies competed on the basis of the excellence of their goods and services (Streeck, 1992, p. 341). This common commitment of managers and workers to the strategy of producing high-quality products also complemented the extensive decentralization of production decision making within enterprises.

The increase in the importance of technical skills in building competitive advantage rendered functional expertise, rather than a more general entrepreneurial capability, important as a basis for top managerial authority in German companies (Lawrence, 1980, p. 183). Although functional expertise may not have been sufficient for a candidate to be promoted to the ranks of top management, the promotional policies of most German companies meant that functional expertise was a necessary condition to be considered a candidate for top management in the first place. In 1979 based on his study of fifteen large West German firms Heinz Thanheiser observed:

The managers at the highest level, even on the board, were extremely sceptical about the idea of professionalism in management. They did not, then, share the confidence that their American colleagues had in the transfer of "management-know-how," confidence which gave them the courage to create the "conglomerates". The German leaders [*dirigeants*] view diversification from a different angle: "we have seriously studied the potential of Sector X (close to us from a technological standpoint) into which we could have easily entered. But nobody on the Board of Directors knows the market, the competitors, the clients... Consequently we don't touch it (Thanheiser, 1979, cited in Locke, p. 273)."

As Thanheiser pointed out, such a view differed greatly from the dominant perspective in American business in the postwar decades (see also Dyas and Thanheiser, 1976).

The German postwar system of corporate governance transformed prewar managerial control into organisational control. Codetermination of supervisory boards, works councils, intercompany shareholding and the banks' relationships with industry, as shareholders and in the exercise of depositors' proxies, make it very difficult to pinpoint exactly where control resided in major German enterprises in the postwar decades. Who exercised control in particular German enterprises depended on such particulars as the articles of association that defined the responsibilities of the various organs of the corporation, as well as the organisational structure that a holding company put in place to manage its participations, and in particular on the degree of integration with the operations of the parent company that such a structure entailed. But whatever the variations in corporate control across particular German enterprises, the institutions discussed above, as well as other elements of legal and financial regulation (Franks and Mayer, 1990), ensured that control over the allocation of corporate resources and returns was an organisational phenomenon in the FRG in the postwar period.

Yet, especially in comparison with post-World War II organisational control in Japan, organisational control in Germany has been contested for a number of reasons. Firstly, the central foundations of pre-World War II managerial control -- namely, bank-enterprise relations and intercompany shareholding networks -- remain strong. Secondly, whereas lifetime employment and enterprise unionism -- two key

elements of the Japanese system of governance -- foster employee commitment to the enterprise, in Germany institutions such as unionism and the system of skill formation encourage competing loyalties (Streeck, 1996; Teague 1997). Finally, the German banks, although they have bolstered financial commitment in the postwar decades, have always been much more diversified beyond, and independent of, industrial finance than the Japanese main banks. Their business interests are, as a result, more autonomous of those of major German industrial enterprises (for a description of the Japanese system of corporate governance, see Lazonick 1998).

2. Corporate Governance and Performance

The institutionalisation of organisational control in postwar Germany played a crucial role in the competitive strategies of those West German companies that competed on the basis of quality, and allowed them to develop a competitive advantage in markets such as luxury automobiles, precision machine tools, and electrical machinery -- industries that until recently qualified as stable technology. The prevalence and success of high quality, niche market strategies in the German economy, and more fundamentally the social foundations of innovation and development in Germany that supported these competitive strategies, are readily seen in the structure of West German foreign trade. In 1979 the leading German exports were electrical and non-electrical machinery which together amounted to DM78.2 billion, chemicals and pharmaceuticals (DM58.8 billion), and road vehicles (DM50.3 billion). Combined these industries accounted for 62.3 per cent of manufacturing exports but other product groups were also significant net exporters (OECD, 1995, p. 146-7). Indeed, what was distinctive about West Germany's performance, relative to other advanced industrial economies, was the wide range of industries in which she proved successful (Keck, 1993, p. 135).

From the late 1960s and 1970s new industrial competitors and, in particular, the Japanese, mounted competitive challenges for German industry as they had for the Americans. However, most German producers whose competitive advantage was based on their capacity to produce high quality products managed to avoid confrontation with Japanese competitors. In the automobile industry, for example, luxury car producers such as Daimler-Benz, BMW, Porsche and Audi were not directly hit by Japanese competition and they expanded production and employment through the 1970s (Jürgens et al, p. 36). In the German car industry as a whole, however, import penetration increased from 30 per cent of the German market in 1970 to 41 per cent in 1980. In 1980, a quarter of the imported cars were produced in Japan (Jürgens et al, 1993, p. 36); the share of Japanese brands in total registrations in Germany increased from 0.1 per cent in 1970 to 1.7 per cent in 1975 and then to as high as 10.4 per cent in 1980 (Sachwald, 1994, p. 65).

These changes largely confronted Germany's high volume car producers -- VW, Opel and Ford. All of these companies experienced a sharp fall in output and employment in 1974-5; VW, for example, cut back employment by 26 per cent or nearly 33,000 workers in 1974-5 (Streeck, 1984, p. 56ff). These companies experienced a rapid recovery after the oil price crisis, although it was somewhat more muted at VW than at Opel and Ford (Jürgens et al, 1993, p. 36). But in the face of growing import penetration by the Japanese, all of the German car producers began to reorganise their production processes to move upmarket to higher value-added strategies. They improved their product designs, quality and product ranges and focussed to an increasing extent on the European market to which the Japanese producers had restricted access. With the domestic mass producers, especially

Volkswagen, biting at their heels the German luxury producers also pursued upgrading strategies during this period (Jürgens et al, 1993, 59-62; Streeck, 1989).

An important exception to the sustained competitive success of the high quality strategies of German producers was the binocular and camera industry. The Germans had achieved an apparently impenetrable market position but the Japanese managed to outcompete them through process innovation. By the early 1970s, German companies like Rollei, Voigtlander and Zeiss, that had previously dominated the world market for expensive amateur photographic equipment, were reeling in the face of competition from comparable quality but much lower-priced Japanese products (Vogl, 1973, pp. 131-132).

The relative strength of Japanese producers in process innovation was also at the root of their success in competition with German producers in industries in which cost competition prevailed and in which the Germans had failed to develop distinctive bases of competitive advantage. In both Germany and Japan, organisational integration is prevalent, but differences in the nature of organisational learning and in the social institutions that support it are reflected in important variations in the innovative capabilities of enterprises. In Germany the internal organisation of the enterprise derives from an industry-wide strategy to set high-quality product standards, whereas in Japan the organisational structure derives from an enterprise strategy to engage in continuous problem-solving to cut costs. In industries such as steel and consumer electronics, for example, the relative strength of Japanese companies in process innovation was to prove formidable.

The German steel industry expanded rapidly in the 1950s; from 1950 to 1960 German output of crude steel more than doubled from 14 million tonnes to more than 34 million tonnes (Esser and Vāth, 1987, p. 632). Production increased from 1960 to 1974 but the industry was then already in the throes of modernisation and rationalisation; the number employed in the industry was reduced from 418,000 in 1960 to 346,000 in 1974 (Esser and Vāth, 1987, p. 634). With the intensification of competition in the 1970s, the German steel industry moved into crisis. Japanese capabilities posed a serious competitive challenge by this time; in 1975 a Japanese worker required 6.2 hours to produce a ton of raw steel; a German worker 8.9, an American worker 10.5, a French worker 12.1 and a British worker 17.4 (Esser and Fach, 1989, p. 240). As Esser and Fach described the competitive position of the German steel industry: "[i]n technology and organisation Japan's steel industry was its superior, and the Japanese advantage held with respect to product quality as well as production technology (Esser and Fach, 1989, p. 240)". Production, exports and profits in the German steel industry all experienced major declines from the mid-1970s; employment fell by 60,000 in the period from 1974 to 1980 (Esser and Vāth, 1987, p. 635). By 1977 the European Community had introduced protectionist measures for the steel industry (Tsoukalis and Strauss, 1987). The German steel producers were generally hostile toward these measures but in the event, these measures gave West German steel industry the space to restructure itself without sparking social conflict (Esser and Fach, 1989, p. 241).

The German consumer electronics was also severely affected by rising foreign competition. The industry had grown rapidly after the war; in 1950 it employed about 20,000 people and by 1970 employment had risen to 127,000 (Bosch, 1990, p. 54). By 1983 40 per cent of the jobs in existence in 1970 had been lost and the industry was predominantly in foreign hands. Once again the main challenge came from the Japanese who had developed superior capabilities in improving product reliability. But they were also strikingly more productive; in the 1970s man hours per television set in Japan were 1.9 compared with 3.9 in Germany. The productivity difference has been attributed to the integrated approach

to automation technology and the intensive training of personnel at all levels in Japanese firms (Scibberas, 1977; Idem., 1981; Wengenroth, 1997, p. 168).

It was not only in the integration of electronics in consumer goods that German companies encountered competitive problems during this period. Where the post-World War 2 system of governance was least successful as a basis for the competitive advantage of German enterprises was in computers, semiconductors, and telecommunications, industries that came into existence or were completely transformed after WW2 by the development of electronics technology. Some German companies competed in these industries, for example, Siemens and Bosch in telecommunications, but in general the Germans failed to establish a national competitive advantage in these sectors in the postwar decades (see Malerba, 1985; Van Tulder and Junne, 1988; Sachwald, 1994).

However, one German high-technology industry -- the pharmaceuticals industry -- performed extremely well. Indeed, German enterprises have a long history of competitive success in the pharmaceuticals and chemicals industry. One important explanation for the success of German companies in pharmaceuticals relative to other high-technology sectors seems to be rooted in the structure of the postwar educational system and in particular, its shortcomings as the basis for the organisational integration of scientists into enterprise learning processes; in 1965 Japan had 8 per cent more scientists and engineers employed in nonacademic jobs than West Germany; by the mid-1980s the gap had grown to 27 per cent (Keck, 1993, p. 141). The German pharmaceuticals companies had benefitted from such an integration but in a much earlier era when the educational system had been structured along different lines; in the late nineteenth century, "technological innovation, based on the country's educational and research systems, was the key factor that enabled the [dyestuffs, synthetic fertilizers, and pharmaceuticals] industry to establish itself as leader on the world export market." (Keck, 1993, p. 127).

The system of organisational control had an important influence not only on the patterns of wealth generation in the Germany economy but also on the manner in which that wealth was distributed. It ensured that German employees participated in the fruits of industrial success as well as their generation. As Table 2 shows, the West Germans also managed to maintain a relatively low inequality of incomes as they increased their overall wealth.

Table 2 Wage Spread in International Comparison

Country	D9:D5 a	D1:D5 b	Small Enterprise as Percent of Large Enterprise c	CEO Earnings: Manual Worker Earnings in Manufacturing d
Germany	1.63	0.61	90	10.2
UK	1.72	0.68	80	15.5
Japan	1.63	0.63	77	7.8
USA	2.16	0.45	57	25.8

a Ninth over fifth decile

b First over fifth decile

c Average earnings of workers in small enterprises as a percentage of average earnings of workers in large enterprises

d Ratio of CEO Earnings to Average Earnings of Manual Workers in Manufacturing

Source: Wolfgang Streeck, "German Capitalism: Does It Exist? Can It Survive?" in Colin Crouch and Wolfgang Streeck, eds., Modern Capitalism or Modern Capitalisms?, Francis Pinter, 1995.

The system of organisational control was important not only in sharing the gains from the success of German industry; it also facilitated the spreading of the costs of industrial rationalisation. Social plans, which provided for the protection of workers in the event of mass redundancies, were pioneered in the coal industry in 1957 and in the steel industry in 1963. There were major layoffs in other sectors of German industry in the 1950s and 1960s but it was only in the Montan industries, where parity representation had been established and unions were strong, that these plans were implemented (Bosch, 1990, p. 31). In the event, the coal and steel social plans were to have an effect on all sectors of the German economy. They were the basis for the compulsory requirement of the Works Constitution Act of 1972 for all firms with more than 20 employees to negotiate a social plan with the works council in the event of major changes in the firm.

The early social plans relied primarily on financial compensation to sustain redundant employees while they looked for new jobs (Bosch, 1990, p. 31). From the mid-1970s, as the opportunities for redundant workers to find alternative jobs diminished, these plans relied heavily on early retirement schemes to ease the burden of downsizing. Employers went along with these plans because they allowed them to substantially reduce their labour forces without massive labour strife at a cost that was heavily subsidised by the state's early retirement schemes. Particularly important was the early retirement programme for unemployed workers. If an employee was made redundant at the age of 59 he could draw unemployment benefits for a year and then qualify for a pension from the Federal government at age 60. Employers made extensive use of this scheme by "firing" workers at 59 and supplementing the unemployment and pension benefits that they received from the government (Bosch, 1990, p. 34; Abraham and Houseman, 1993, pp. 26-27).

Figures for the steel industry in North Rhine Westphalia during the period 1976 to 1986, as shown in Table 3, illustrate the importance of early retirement schemes in the process of rationalisation. In the steel industry alone approximately 130,000 jobs, or nearly 40 per cent of the industry's employment, were eliminated from the mid-1970s to the mid-1980s. Many of these job losses were regionally concentrated or located in economically depressed parts of Germany. Nevertheless, West Germany was alone among the European steel-producing countries in contracting production and employment whilst preserving social peace (Esser and Fach, 1989, p. 223). Early retirement was also used extensively in the automobile industry. In the wake of the oil price crisis, for example, VW reduced employment by 33,000 or 26 percent of its workforce (Streeck, 1984, p. 56ff). Notwithstanding the pressures to reduce employment at VW, as Jürgens, Malsch, and Dohse noted, "it was possible to achieve the reduction of personnel by means of so-called "bloodless" measures: voluntary pay-offs, early retirements, "natural fluctuation," and a hiring freeze" (Jürgens et al, 1993, p. 116).

Table 3 Rationalisation of the steel industry in North Rhine-Westphalia
No. of employees, 1976-1986

Adjustment Measures	Hoesch	Krupp	Krupp Klöckner	Mannes- mann	Thysse n	Total
Transferred to other group companies	809	2969	96	6400	5200	15474
Placement in other firms	98	-	-	-	-	98
Early retirement	11864	10700	850 (1)	7630	19783	50827
Other cuts in manning levels						
(a) dismissals for operational reasons	-	-	-	-	-	-
(b) severance agreements and/ or redundancy payment schemes	1500	-	118	-	4849 (2)	6467
Notes: (1) Since 30 September 1983						
(2) Including foreign workers who departed under the terms of legislation introduced on 28 November 1983						

Source: Bosch, p. 33.

The burden of rationalisation was also distributed through the use of the state's short-time working programme. If employers reduced the work hours of their employees, with the works council's approval they were permitted to pay them only for the hours that they worked; the Federal Labour Office then paid them a prorated amount of the statutory unemployment benefits for the hours that they did not work. The scheme was made increasingly generous in a number of ways during the 1970s. For example, before 1969 short-time benefits were available for a maximum duration of six months; by 1975 the limit had been extended to twenty-four months. Thus, as Abraham and Houseman pointed out, "[c]ompanies engaged in long-term restructuring have been able to minimize layoffs by using short-time work schemes while their work force was being reduced through attrition and, in many cases, through early retirement (Abraham and Houseman, 1993, p. 25)."

Notwithstanding the common perception that measures to protect job security and to spread the burden of downsizing inhibit the process of rationalisation, a recent comparative analysis of restructuring in Germany and the US concluded that "[o]n the whole, the evidence that we have examined suggests that German policies are effective in stabilising employment in the short run without imposing burdensome costs on employers... we do not find any consistent difference between the medium-run responsiveness of German employment to changes in shipments and that in the corresponding U.S. industry (Abraham and Houseman, 1993, p. 97)." However, they identify primary metals, automobiles, and nonelectrical equipment as three industries in which employment and hours adjustment in Germany were far below that in the US.² In a previous study of industrial restructuring in the European steel industry, one of the authors, Susan Houseman, concluded that the especially strong protection for German workers in this industry, based largely on the strength of the powerful metalworkers union IG Metall, inhibited employment adjustment in the medium term as well as investment and plant closure decisions (Houseman, 1991). Abraham and Houseman suggest that a similar analysis may apply to the automobile and nonelectrical equipment industries where "the very strong and somewhat radical metal workers' union" is also strong (Abraham and Houseman, 1993, p. 99).

² German employment and hours adjustment were also below the US in nonelectrical equipment and stone, clay and glass but the authors argue that a large part of the difference stems from differences in demand conditions in Germany and the US (Abraham and Houseman, 1993, 98).

To fully assess the impact of employment protection measures on economic performance, however, it is not sufficient to look at relatively short-term ("medium term" is defined in the Abraham and Houseman study as a period of only one and a half years) and adaptive responses to competition. Of considerable importance is the relationship between employment protection and measures to upgrade products and processes as part of a creative or innovative response to competition. Many scholars have highlighted the importance of job protection as one important element in a system of governance that gives workers the incentives and abilities to promote innovation precisely in the industries in which the unions, and especially IG Metall, is strong.

In the case of the steel industry, for example, Kathleen Thelen, has argued that:

Works councils tolerate -- indeed they encourage -- rationalization investment, which they see as their only hope of making the remaining jobs "krisensicher" (crisis-proof). Labor's influence on supervisory boards ensures that investment goes toward this end. This has meant, among other things, that industrial adjustment in the German steel industry has been adjustment more *within* as opposed to *out* of steel than for example in the United States (Thelen, 1991, p. 134; see also Thelen, 1987; Esser and Fach, 1989).

In the automobile industry the German system of governance seems to have facilitated technological change compared with, for example, its British and American counterparts (Jürgens et al, 1993, pp. 173-214). In his study of the automobile industry in the 1970s and 1980s, Wolfgang Streeck reported a "successful adjustment to turbulent markets". Specifically he pointed out that:

Codetermination with its peculiar rules of the game, has become the institutional core of what is best described as a firmly established productivity coalition between management and labor at the point of production. Prototypically in the automobile industry, codetermination has provided the basis for a trade union policy of cooperative productivism... The tendency of works councils in West Germany to identify with the economic fate of their firm because they are elected as representatives of an enterprise's entire work force is reinforced in the auto industry by a keen sense, shared by the external union, of exposure to a volatile and competitive world market. As a consequence, hardly anywhere is there greater willingness than among automobile trade unionists to think through and accept the consequences of labor-management cooperation. Together with the opportunities offered by the framework of industrial unionism and codetermination, this has given rise in the 1970s and 1980s to an interactive configuration of policies and institutional structures which appears to have formed a "virtuous circle" ideally matched to, and indeed almost making inevitable, an industrial strategy of upmarket restructuring (Streeck, 1989, pp. 128-9).

While the German system of organisational control has played an important role in sharing the gains and losses of the process of development, in doing so it has proven most successful in advancing the interests of skilled, male, German workers in industries in which the representation of their interests is strongest and where the organisational integration of their skills is critical to the competitive success of industrial enterprises. These workers gained most from the rising prosperity of the postwar decades. The system was, however, much less of a boon to contingent members of the labour force, those euphemistically described as *Gastarbeiter* (guest workers) in Germany, as well as to women. The account by Esser and Văth of the

strategy of IG Metall toward the restructuring of the steel industry is worth quoting at length:

The circle of those who were energetically defended was limited, and in itself carefully graded; the top rank consisted of the most *efficient and productive nucleus* of the labour force, because it is from here that the union recruited its membership predominantly. Next came the group of *old workers*, highly threatened by redundancy and therefore to be conciliated by all possible means of rhetoric. They were mostly old union members, with a higher interest in honourable social programmes than in safe jobs. It was not the union's problem what happened to these men when, after a life of hard work in the steel mills, followed by early retirement, the first wave of euphoria had gone, and the feeling of uselessness set in. *Young employed* can also be sure of provoking any amount of verbal welfare. Yet here again, it was not the concern of IG Metall to help them really, when existing jobs had disappeared through rationalisation, and recruitment to the steel plants had virtually ended. Guest workers were left without any union protection and were therefore, as a rule dismissed first, likewise those 'black sheep' who were already in the bad books of personnel departments, shop-floor supervisors and works councillors, and whose poor work record gave good enough reasons for sacking. Briefly, IG Metall accepted a reconstruction policy for the steel industry which was characterised by the need for competitiveness on the international market, and it merely stressed the need for a *safety net* of social programmes, retraining, further training, etc. IG Metall did not look for an alternative to this logic. Instead it fully exploited the advantages of its strategy -- without paying the price; more precisely, the union, in company with the State and industry, made the fringe groups of the labour force pay that price (Esser and Vöth, 1987, p. 659, emphasis in original).

The importance of guest workers in the German labour force grew steadily in the decades after the war to reach 8.1 per cent of total employment in 1970 (Giersch p. 127). These workers have tended to be treated as a buffer stock of flexible labour to insulate the domestic workforce from layoffs as evidenced by the higher rate of unemployment experienced by foreign workers in the latter part of the 1970s and during the 1980s (Abraham and Houseman, 1993, pp. 124-5). In times of recession foreign workers have often been "persuaded" to return to their native lands; indeed in 1983 the German government offered payments to foreign workers who were unemployed or on short-time work if they left Germany with their families (Abraham and Houseman, 1993, p. 125). Significant attempts have, however, been made to give these workers the chance to improve their employment opportunities, especially by encouraging them to participate in the dual training system. Foreigners' share of apprentices increased from 2.8 per cent in 1985 to 6.7 per cent in 1990 although they are still underrepresented in the apprenticeship system compared with their importance in the workforce (Winkelmann, 1996, p. 663).

Nor have women directly participated in the gains of postwar economic development to the same extent as men. Their employment opportunities have, in general, been more limited than those available to men. The workforce participation rate of German women was, at around 40 per cent in the 1960s and 1970s, among the lowest in the advanced industrial economies. Moreover, the German women that did work were disproportionately concentrated in low-skilled jobs. This pattern undoubtedly reflects, at least in part, a lower average tenure than their male counterparts which, because of the emphasis on continued education as the means to promotion in the German employment system, is a particular handicap to women's career advancement (Abraham and Houseman, 1993, pp. 114-123).

3. Economic Challenges to German Governance

In recent decades the institutional foundations of organisational control in Germany, as in Japan, have proven to be more enduring than in the United States (Lazonick and O'Sullivan, 1997). Nevertheless various pressures on the German system of governance have emerged and, in combination, have posed and continue to present a challenge to the sustainability of German organisational control, at least in its postwar form. Some of these pressures emanate from sources external to the operation of the domestic economic system such as the process of European integration and German reunification. The more powerful pressures, however, are productive and financial challenges that are integrally related to the structure of the West German economy and they are the focus of the following discussion. International competition, emanating especially from Japan, has become an even more formidable challenge to German organisational integration as a basis on which to compete in international markets. Increased pressures for financial liquidity are also discernible and can, to a considerable extent, be traced to growing intergenerational dependence.

3.1 *Productive Challenges*

Industries that had already contracted like steel, shipbuilding, coalmining, and consumer electronics (Bosch, 1990, p. 54) were hit by new job losses in the early 1980s. For example, employment in iron and steel fell from 624,000 in 1979 to 473,000 in 1991 and in shipbuilding from 60,000 in 1979 to 34,000 in 1991 (OECD, 1996, p. 142). In contrast, production and employment expanded in sectors of particular German strength. During the period from 1979 to 1991, employment increased from 971,000 to 1,077,000 in non-electrical machinery (excluding office and computing machinery), from 876,000 to 963,000 in transport equipment, from 923,000 to 987,000 in metal products, from 996,000 to 1,118,000 in chemical products and from 578,000 to 677,000 in electrical machinery (excluding radio, TV and communication equipment). The export performance of these industries also proved extremely strong, especially in the second half of the 1980s.

The success of these industries contributed to Germany's strengthening export position during this period. As a whole, the German economy continued to grow during the 1980s and the reunification process prompted a further upsurge in economic performance around 1989. However, unemployment rose substantially in the early 1980s, although it remained at a lower level than in the United States for most of the decade and much lower than in most other European countries. By the end of the 1980s, confidence in the ability of the "Rhenish system of capitalism" to deliver economic performance without sacrificing social cohesion was running at an all time high (Albert, 1991).

When the dust settled in the early 1990s, however, it became clear that throughout the 1980s the competition that German enterprises faced on international product markets had intensified further. Besides the structural problems that reunification posed, key industrial sectors in the former West German economy faced a systematic challenge from international and, in particular, Japanese competition. By 1992 the German economy had plunged into the worst recession since World War 2. Among the industries that were worst hit were automobiles and machine tools, the great bastions of German postwar industrial strength.

Employment in the motor vehicles industry had increased from 699,000 in 1979 to 823,000 in 1991. Exports had more than doubled in current DM prices during the same period. All of the West German car producers had increased their production in the 1980s and were hit heavily by the slump that followed the decade

of expansion. VW and Opel reduced production by 25 per cent, Audi by 31 per cent, Ford by 30 per cent and BMW by 12 per cent in 1993/4. Only Mercedes-Benz managed to increase sales by launching a new series. The successful introduction of luxury cars by Toyota and Nissan, however, suggested that the sustainability of the German company's success could not be taken for granted.

Concerns about the German automobile industry's competitiveness had already been heightened by the publication in 1991 of a German-language version of The Machine that Changed the World, the MIT comparative study of the auto industry, particularly when it was revealed that the European plant held up to unfavourable scrutiny for its low productivity was Daimler-Benz's most important assembly plant. (Womack et al, 1990). Other symptoms of serious underlying problems were also to be found in the rapid growth of automobile imports to Germany during the 1980s; the share of Japanese brands in total German car registrations had risen from 10.4 per cent in 1980 to 25.3 per cent in 1991 (Sachwald, 1994, p. 65). Moreover, a substantial proportion of German export gains in the 1980s had been won in European markets that were still relatively protected from Japanese competition (Keck, 1993, p. 136).

The machine tool industry also faced serious challenges from foreign competitors. The traditional competitive advantage of German machine tool producers had been based on their ability to produce high-quality customised machines for which cost considerations were secondary in influencing demand. By the 1990s, however, Japanese competitors had succeeded in developing their standard machines so that they could perform many functions previously possible only with highly specialised machines (Schumann et al, 1994; Herrigel, 1996, p. 37). Symptoms of emerging competitive problems were discernible in the 1980s. Although the German share of export markets held steady during the 1980s, German enterprises were weak in the most rapidly expanding markets for machine tools; in 1988, German producers accounted for only 9.3 per cent of machinery imports by south-east Asian NICs compared with 50.4 per cent from Japan and 26.4 per cent from the US (VDMA, quoted in Deutsche Bank Bulletin, January 1991, p. 3). Between 1991 and 1993 the value of German machine tool production fell from DM17 billion to DM12 billion (Economist, October 16, 1991; July 16, 1994). Despite a recovery of orders in 1994, Japanese machine tool makers maintained a considerable cost advantage over their German competitors.

As Table 4 shows, the economics of German machine tool producers had been deteriorating relative to their Japanese competitors for some time. Japanese productivity, measured by value added per employee, was double that of German machine tool companies throughout the 1980s (Englmann et al 1994, p. 37). In part, the difference can be attributed to the longer hours worked by the Japanese; in 1990 hours worked per employee in Japan were 2,197 compared with 1,604 in Germany. But the Japanese performance also reflected their success at integrating human and physical resources to generate continuous innovation (Finegold et al, 1994, p. 23).

Table 4 Comparative Performance of German and Japanese Machine Tool Companies

Per employee, thousands of DM

	1980	1985	1989
<i>German enterprises</i>			
-- Sales	109	138	174
-- Staff expenditure	45	55	64
-- Value added	55	63	77
<i>Japanese enterprises</i>			
-- Sales	315	391	447
-- Staff expenditure	48	59	67
-- Value added	119	147	166

Source: Adapted from Englmann et al, 1994, p. 37

In general in machine-based industries, where process innovation has been important in driving down costs, the Japanese have been able in recent years to generate organisational learning that, even in industries such as precision machine tools and luxury automobiles in which the Germans were previously unrivalled, has permitted the Japanese to move into progressively higher quality market segments at lower unit costs. The industries in which the Germans were competitively strong and that have historically been considered stable technology have been transformed by the Japanese who have leveraged their flexibility at the enterprise level as a basis for continuous innovation (Schumann et al, 1994; Herrigel, 1995; Herrigel 1996, p. 36).

The key organisational advantage of Japanese companies that has allowed them to generate superior performance relative to their German competitors seems to be their capacity to achieve cross-functional integration on the shop floor as well as in management structures.³ German enterprises, like their Japanese counterparts and in contrast to most American companies, have in the postwar period attained considerable success in organising the hierarchical integration of technical skills. However, two key features of the German system that facilitated hierarchical integration -- specialised skills among production workers and functional divisions within the managerial organisation -- impeded cross-functional integration (Schumann et al, 1994, pp. 643-64; Herrigel, 1995; Idem., 1996, pp. 38-43; Jürgens and Lippert, 1997).

The weaknesses of the German system of organisational integration in facilitating cooperation across functions is rendering them vulnerable in competition with the Japanese. Herrigel argues that the problems with the German system are readily apparent in the development of new products:

Each time a new product or a new technology is introduced -- as opposed to an old one that is customised for a customer -- the various roles that each of the categories of skill and management will play in the production and development of the new product must be bargained out. Each currently existing cluster of expertise and institutional power, naturally, wants to participate; each has its own ideas and solutions; each defends its turf against encroachments from the others; each takes for granted that it should have a legitimate place in the new arrangement within the firm. Electrical masters and technicians, for example, will fight with mechanical ones both on the shop-floor and in the design studios over different kinds of technical or manufacturing solutions to problems that have direct consequences for the amount and character of work that each will have to do and on the overall value that their role within the firm will contribute to the value of the product (Herrigel, 1996, p. 42).

³ For a discussion of cross-functional integration in Japan, see Lazonick, 1997.

There now seems to be a widespread recognition among employers, workers and unions in Germany of the existence of organisational problems. They are, predictably, proving extremely difficult to solve. For German industry as a whole to move from one system of organisational integration to another would require a veritable social transformation of enterprise organisations and social institutions. Herrigel describes the day-to-day obstacles to such a transformation as forming a dynamic process of "self-blockage" which involves all stakeholders, be they workers or managers, who have entrenched interests to protect. He argues that:

[f]ew producers, large or small, have had success up until now in being able to overcome the opposition of entrenched groupings of skilled workers threatened with the loss of status through incorporation into teams that deny the boundaries of former jurisdictional specializations or of independent departments, reluctant to have their functional areas of power within the firms redefined and diluted through recomposition with other areas. It is difficult, after all, to tell workers and managers who with considerable legitimacy understand themselves as having contributed significantly to the traditional success of high quality manufacturing in Germany that their roles have become obstacles to adjustment (Herrigel, 1996, p. 43).

In all of the industries in which they have previously been highly successful German enterprises are currently able to produce and to export quite successfully. They are likely to continue to be able to do so for some time, despite intensified competition, because of the depth of organisational capabilities that reside in these companies. Indeed, the temptation of adaptation is perhaps the major obstacle to the fundamental transformation of their organisations that is necessary if German enterprises are to recreate the foundations on which they can compete effectively in the future. In the absence of a creative response in these industries the future does not look bright for German industry. It is unlikely that the high-technology sector of the economy, given its current condition, will be capable of making up for the loss of wealth generating capacity in the medium-technology industries. Indeed, the deficiencies of the German system of governance with regard to cross-functional integration have arguably proven even more debilitating in industries such as computers and semiconductors.

4.2 Financial Challenges

Critical to the responses of German enterprises to the competitive challenges that they now face will be the extent to which financial commitment is forthcoming from the German system of governance. In recent decades, financial commitment has proven to be more robust in Germany than in the United States but whether it will continue to be so is an open question. There are clear indications of an increasing emphasis on financial liquidity in the German system of governance which, if it gains momentum, will exacerbate the existing organisational problems in German industry. Growing systematic pressures for financial liquidity are rooted in the rising level of savings generated by the country's postwar economic success. They are likely to be strengthened as intergenerational dependence grows in Germany.

The Federal government controlled interest rates after the war, thus limiting interest-rate competition not only among different sectors of the banking sector, but also from savings instruments provided by other financial enterprises (Schneider et al, 1978; Francke and Hudson, 1984, p. 81). The objective of this restriction was to stabilize the banking system and thus protect depositors; its effect was seen in the channelling of the vast majority of German savings through the banking sector;

although the formation of monetary assets was limited during the 1950s, about 75 percent of these assets was channelled into the banking sector (Francke and Hudson, 1984, p. 76).

As their incomes expanded, Germans were able to save more, and the success of public campaigns and state subsidies to promote saving led to the emergence of higher aggregate saving rates in Germany than in the US by the 1960s. Automatic wage deposits for workers helped mass consumer banking to become the major source of expansion in the banking business in the 1960s. Once restrictions on branch banking were removed in 1958, competition in the banking sector occurred primarily through the expansion of branch networks (Francke and Hudson, 1984; Deeg, 1991). In 1970, as Table 5 shows, claims against banks accounted for almost 60 percent of the financial assets of German households, and over three-quarters of these bank deposits were in savings accounts.

Table 5 Structure of Financial Assets of Private Households
% of total private financial assets

Assets	1970	1992	1993 total Germany
Bank Deposits	52.4	40.7	41.7
Cash and Sight Deposits	10.6	8.0	8.8
Time Deposits	1.8	8.0	12.6
Savings Deposits	39.1	19.4	20.3
Savings Certificates	0.9	5.3	---
Savings and Loan Deposits	7.6	3.7	3.5
Insurance (1)	13.3	18.5	19.8
Fixed-Income Securities (2)	7.7	20.9	15.9
Stocks (3)	11.3	5.2	5.4
Investment Fund Certs			6.3
Other Receivables (4)	7.7	11.0	7.4

(1) include. life insurance and pensions

(2) include. bond fund shares

(3) include stock fund shares

(4) include pension claims within the company

Source: Deutsche Bank Research Bulletin, January 9, 1995, p.7.

In the 1950s and 1960s competition for the rapidly growing funds of German savers took place primarily among the savings banks, the private banks and the cooperative banks. In 1970 the savings banks dominated the market with 58.8 per cent of total savings deposits; the credit cooperatives followed with 18.2 per cent and then the private banks with 17.3 per cent (Oberbeck and Baethge, 1989, p. 285). During the 1970s investors began to move out of bank deposits and into higher yielding savings instruments. As Table 5 shows, the proportion of financial assets held as savings deposits in banks was almost halved during the period from 1970 to 1992. Insurance investments increased from 13.3 per cent of private financial assets in 1970 to 18.5 per cent in 1992. The share of fixed-interest securities in financial assets also showed a substantial increase from 7.7 percent in 1970 to 20.9 percent in 1992. In the 1980s and early 1990s mutual funds increased their share of private financial assets. By the end of 1993 they accounted for 6.3 percent, up from 2 percent at the end of 1980 (Deutsche Bank Research, January 1995, p. 8).

The absolute volume of private financial assets also expanded dramatically from 1970. Between 1972 and 1988 the financial assets of German households rose by 290 per cent compared with an increase in their total income of 150 per cent. At

the end of 1988, households had accumulated a massive DM2.6 trillion (gross) in financial assets which amounted to nearly twice their annual disposable income ((Deutsche Bank Bulletin, June 1989, p. 10). By the end of 1993, private households in Germany as a whole had financial assets amounting to nearly DM4.2 trillion; 94.5 per cent of these assets were held by West German households (Deutsche Bank Bulletin, January 9, 1995, p. 6).

The changes in the structure and level of German financial assets are striking in historical perspective. Yet, the pressures for financial liquidity, although increasing rapidly, have to date proven much weaker than in the United States. In particular, the German savings system has not generated anything approaching the vast liquid funds under management by US financial institutions. There has been a significant increase since 1960 in personal provision for pensions through contributions to life assurance enterprises and private pension funds; in 1989 32.7 percent of households' total net acquisition of financial assets was placed with insurance enterprises compared with 18.1 percent in 1960 (Edwards and Fischer, 1994, p. 53). As a result of this trend, as Table 5 shows, insurance investments made up about 19.8 percent of private assets at the end of 1992 compared with 13.3 percent in 1970. There are, however, restrictions on the proportions of the assets of pension funds and insurance companies held in different types of assets which has limited the pressures for financial liquidity from this source. For example, the limit for domestic equities is 30 per cent; it is 6 per cent for foreign equities. In 1994, German pension funds put about 72 per cent of their assets in domestic bonds and only 9 per cent in equities (Queisser, 1996, p. 14). The investment limit was, however, only increased to 30 per cent for domestic equities in 1990 from a maximum of 5 per cent.

The comparative difference in pension funds under management also reflects the way in which German employers fund the pensions that they provide to employees. Employer pensions were originally introduced as elements in the compensation packages offered to key workers to keep them with specific companies, mainly larger companies, when labor markets became tight from the mid-1950s. In more recent periods of relatively high unemployment, some German companies have reduced these benefits. Moreover, changes in German pension law in 1974 that allowed workers to transfer their pensions from one company to another have reduced the effectiveness of this device for retaining workers. The number of workers covered under these schemes fell from 70 to 66 per cent of all industrial workers (Queisser, 1996, p. 12). Nevertheless, these pensions represent a significant accumulation of pension liabilities in the German economy; in 1993 the total pension obligations of companies amounted to c. DM 460.6 billion (Queisser, 1996, p. 12).

Company pensions are financed through private pension funds or "Pensionskassen". Employers and employees generally make contributions to these funds and the investment behaviour of these funds is regulated by the life insurance laws (Turner and Watanabe, 1995). Some employer pensions are funded by direct insurance (*Direktversicherungen*) through a life insurance company. Another channel for employer pensions consists of support funds (*Unterstützungskassen*). These funds are legal entities that are financed by allocations of resources from the employer company but are legally separate from it. The funds are generally lent back to the employer company as an interest-bearing loan (Turner and Watanabe 1995 p. 97). As Table 6 shows, these three channels together comprise just over 40 per cent of employer pension assets in Germany.

The remainder, nearly 60 per cent of the funds earmarked for the payment of company pensions, remain in the company as book reserves. The company builds

up its pension reserves (*Pensionrückstellung*) and the increases in its pension liabilities are tax-deductible. The company is permitted to invest the funds allocated to pension obligations in the normal course of its business. In effect, this system affords the company a tax-effective means of borrowing from its employees. As Table 1 shows, company pension funds were used to finance almost 5 per cent of the net investment of German producing enterprises in the period from 1980-1989 and thus represent a more important source of finance for industrial enterprises than equity issues.. For large manufacturing A.G.s provisions for pensions were even more important, accounting for nearly 15 per cent of their net investment in the period 1970-85 (Edwards & Fischer, 1994, p. 128) Major German A.G.s have enormous pension reserves on their balance sheets; as Hauck put it, "Siemens has over DM 14 bn of pension reserves and can be compared in this respect with a good medium-sized life insurance company (Hauck, 1994, p. 557). The importance of book reserves has fallen since 1981 from 67 per cent of all occupational pension assets. In contrast, direct insurance has increased its share from under 5 per cent in 1981 (Queisser, 1996, p. p. 14). Nevertheless, the accumulation of book reserves remains the prevalent practice with regard to German employer pensions and thus limits pension funds under management compared with the US.

Table 6 Allocation of Employer Pension Assets in Germany

% of total, 1991

Type of plan	% of total pension assets
Book reserves	58
Private fund	22
Direct insurance	11
Support fund	9
Total	100

Source: Ahrend, Peter. 1995. "Pension Financial Security in Germany," in Bodie, Zvi, Mitchell, O., and J. Turner, eds., *Securing employer-Based Pensions: An International Perspective*, Philadelphia, University of Pennsylvania Press.

The final and most important reason for the differences between the Germany and the US in accumulated pension funds under management is the relative importance of the state pension system in Germany. As Table 7 shows, social security accounts for nearly 70 per cent source of the retirement income of German pensioners; in the US, by comparison, social security contributes about 40 per cent of retirement income (Turner and Watanabe, 1995, p. 136). As a pay-as-you-go system, the German government pension system generates no reservoir of surplus funds to be allocated. Instead, almost 75 per cent of the financing for the system comes from employee and employer contributions on the basis of earnings up to a ceiling of 1.8 times the average gross earnings of all insured individuals; the remainder is paid by the federal government out of general revenues (World Bank, 1994, p. 361).

Table 7 Sources of Retirement Income in Germany

% of total, 1992

Source	Percentage of retirement income
Social security	68.8
Public employer pensions	14.4
Private employer pensions	5.3
Other	11.7
Total	100.0

Source: Schmahl, Winfried. 1994. "Umbau der Sozialen Sicherung im Alter? Zur Diskussion Über Die Weitere Entwicklung der Alterssicherung in Deutschland," in Staatswissenschaften und Staatspraxis.

There has been a steady increase in the social insurance premium rates in Germany since 1960. The contribution for pensions constitutes the largest element of this premium and it rose from 14 per cent in 1960 to 19.2 per cent in 1994. At the beginning of 1997 it was further increased to 20.3 per cent (Deutsche Bundesbank, Monthly Report, September 1997, p. 42). The levy is expected to rise still further in the decades to come as growing life expectancy and a decline in fertility contribute to a double ageing process in Germany.

Demographic trends are not, however, the only source of increased pressure on the financing of the pension system. They are compounded by labour market pressures. All major OECD countries have experienced a strong decline in labour supply by the elderly but the German participation rate for older people is now among the lowest of the major OECD countries. It is just over half that of the comparable US figure and much lower than the Japanese rate. Some scholars have attributed these trends to the structure of the state pension system which provides generous incentives to retire and, until recently, did not decrease with age in a manner which was actuarially "fair" (Börsch-Supan, 1991).

The low average retirement age also reflects companies' use of inducements for workers to retire early as a means of contracting their workforces. In recent years early retirement due to unemployment has risen sharply. 190,000 people or 21 per cent of all those making pension claims applied for early pensions in 1994. In 1995 the number had increased to 290,000 with an average retirement age of 59.9 years. In that year alone the cost to the system of early pension claims was DM 69,000 m of which DM 37,000m was paid by the statutory contributory pension funds, 27,000m DM from unemployment insurance, and 5,000DM was paid by employers (EIRR 272). The process of German reunification has been an important contributor to the growing burden of early retirement in the 1990s. As part of this process the German welfare system, including the pension scheme, was extended to cover the whole country. The restructuring of industry in the east has left many older workers jobless and claims for pensions in the east because of unemployment increased from 373 in 1992 to more than 180,000 in 1995 (EIRR 272).

Disability pensions have also grown in importance since the definition of disability was broadened in 1969 by the German courts. In 1995 those in receipt of disability pensions accounted for about 26 per cent of all pensioners (Queisser, 1996, p. 8). The German system now makes provision for occupational and general disability. The former applies when a person's earning ability falls by more than 50 per cent. Successful claimants under this scheme qualify for two thirds of the benefits under a normal pension. General disability pension benefits are equivalent to normal pension benefits and are paid to those who are considered to be permanently incapable of earning a basic income (Queisser, 1996, p. 8).

The importance of early retirement and disability pensions increases the pressures on the pension system beyond what the growing old age dependency ratio

would imply. In 1994, only 29 per cent of new pension benefits awarded were paid to those retiring at "normal" retirement age (Queisser, 1996, p. 18). How Germany deals with the problem of supporting more and more people in old age will have critical implications for the sustainability of financial commitment in the German economy. The growing concerns that have been expressed in Germany about the funding of pensions suggest that if the evolution toward financial liquidity in Germany is to get a major push in the near future it will come from changes in the pension system.

4. Implications for the German System of Governance

The productive and financial challenges outlined above are, in combination, putting significant pressure on the extant German system of corporate governance. They interact directly with each other through the effect of the process of industrial rationalisation on retirement obligations and through the influence of the growing strains in pension financing on indirect labour costs. But the ramifications of Germany's investment and savings challenges go beyond these obvious effects to challenge the foundations of the entire postwar system of corporate governance. We can gain some insight into the possible implications for the German system of governance by analysing the manner in which those with substantial interests in the allocation of German corporate revenues have responded to the productive and financial challenges that confront the German economy.

Response to the Productive Challenges

The use of early retirement as an employment adjustment measure continued into the 1980s. The restrictions on the use of the early retirement scheme for unemployed workers were eased through a lengthening of the maximum period for receipt of unemployment benefits. For workers aged 54 or more, for example, the maximum period had, by 1987, been increased from 12 months to thirty-two months. Thus companies could take advantage of the scheme to retire workers who were as young as 57 years and four months (Abraham and Houseman, 1993, p. 27). By 1984 6 per cent of new retirees qualified under the early retirement scheme for unemployed workers, up from less than 2 per cent in 1974 (Abraham and Houseman, 1993, p. 27); in 1994, 21 per cent of all those making pension claims applied for early retirement (EIRR 272).

In 1984 the government introduced a new scheme to permit early retirement for private sector workers who reached the age of 58 during the years 1984 to 1988 or who were already over 58. The employer was required to pay the early retiree at least 65 per cent of his previous gross income until he became entitled to collect a state pension (at 63 years of age for men and 60 for women). The proposal was intended as a temporary measure to ease the unemployment situation (EIRR 120, 125). It was tied explicitly to this objective by allowing the employer to clawback more than half of his payment to the retired worker if the vacated job was filled by a registered unemployed person. The scheme did not, however, prove very popular seemingly because the early retirement scheme for unemployed persons was financially more attractive to employers (Abraham and Houseman, 1993, p. 27).

Early retirement schemes for the unemployed remained a relatively low-cost means for employers to reduce their workforces notwithstanding the government's attempts to shift some of the costs of these programmes from the social security funds to individual employers. Since 1982, companies have been obliged to reimburse the Federal Labour Office for unemployment benefits paid to older workers whom they have "fired" and who are waiting to take early retirement, unless

this would be a threat to the company in light of its precarious economic situation (Bosch, 1990, p. 36). Many companies using these schemes could, however, claim an exemption on the grounds that they were in economic distress (Abraham and Houseman, 1993, p. 27).

Short-time work schemes also continued to be used during this period to minimise layoffs; in 1984, for example, 27 per cent of the paid hours in the German steel industry were not worked (Houseman, 1991, p. 36). Early retirement on disability pensions also became more prevalent in response to a broadening of the eligibility criteria. In the early 1990s, more than 40 per cent of retired blue-collar workers received a disability pension; their average retirement age was about 52 years (Schmähl, 1993, p. 45).

From the early 1980s, however, there were growing concerns within the German labour movement about the continued reliance on these schemes. The use of early retirement as an employment adjustment measure was becoming more difficult in industries in which the workforce had been contracting for some time like steel, shipbuilding, coalmining and consumer electronics because the pool of eligible workers had diminished. There were also concerns that the government was going to tighten the eligibility requirements for these schemes and make them more expensive for individual companies. Employers also seemed less and less willing to use temporary measures such as short-time work because they increasingly regarded the challenges that German enterprises confronted as structural problems (Bosch, 1990, pp. 35-6). Moreover, with unemployment on the rise from the early 1980s it was clear that to generate broad-based prosperity much more was required than a preservation of existing jobs; new jobs had to be created.

Led by IG Metall, the German trade unions responded to this situation by launching a major campaign for shorter weekly working hours; they demanded the introduction of a thirty-five hour week without any reduction in pay. When negotiations over working time between the employers' organisation and the union broke down, IG Metall struck for shorter hours. The 1984 strike was the worst in the history of the FRG. It lasted for nine weeks and involved about 455,000 workers (Baethge and Wolf, 1995, p. 240).⁴ The strike was concluded when the employers agreed to reduce average working hours to 38.5 a week.

From the unions' perspective, however, an important unintended consequence of the 1984 strike was the decentralisation of negotiations over the allocation of working time to the plant level;⁵ in return for shorter hours employers were allowed to meet the 38.5 hour target only for the average worker in an enterprise. The growing importance of works councils in negotiating working time was complementary to a more general increase in the relative importance of the works council in the bargaining process induced by the ongoing reorganisation of German enterprises (Katz, 1993).

The Works Constitution Act of 1972 gave works councils information, but not codetermination, rights with respect to rationalisation measures undertaken by employers. The councils could, however, use their codetermination rights in other areas to exert an indirect influence on the process of technological change (Müller-Jentsch, 1995; Thelen, 1991, p. 184). In practice, works councils displayed varying capacities to deal with the growing complexity of their tasks and, in particular, with the process of technological change. In many cases, worker representatives'

⁴ 58,000 workers were officially on strike, 147,000 were locked out, and 250,000 were out of work due to a lack of supplies (Baethge and Wolf, 1995, p. 240).

⁵ Another unintended consequence was the change in regulations on social insurance payments made during strikes which made it much more costly for a union to take industrial action (Silvia, 1988).

involvement was limited to negotiating with management about plans that had already been developed for the organisation of work (Altmann, 1992, pp. 368-70, 377-8). Works councils, especially in small- and medium-sized enterprises, often found themselves overwhelmed by the increasing demands placed on their capacities and resources. Not only did they lack the basis on which to resist employers' demands, they also lacked strong incentives because of the concerns among works councillors that such resistance would lead to a loss of jobs for themselves and the workers whom they represented (Müller-Jentsch, 1995)

German unions were worried that the growing "plant egotism" that emerged in the 1980s would further segment the workforce and undermine union solidarity. Initially, they were on the defensive in these matters. The German unions had, in the postwar decades, generally deferred to management on technological initiatives.⁶ The humanisation of work movement in 1970s, sponsored by the SPD and the government, was an attempt to change this. Although it lost its momentum because of declining government support and employer resistance, it did have some influence on the expectations of union leaders and works councillors and, as a result, on the issues that they were prepared to address in negotiations with management (Turner, 1991). In general, however, to the extent that the unions had attempted to shift the bargaining terrain from bread and butter concerns like wages to more qualitative issues such as work design they had limited success. Even when they succeeded in writing in provisions in collective bargaining agreements, they took the form of minimum standards that were then supplemented through negotiations at the plant level between management and works councils (Müller-Jentsch, 1986).

In the 1980s the unions began to take a more critical stance on technological change. In its annual report for 1982 IG Metall made the following statement:

The economic boom in the Federal Republic in the first twenty-five years of its existence was founded on a fundamental consensus between the unions, employers, and the government. The unions did not fundamentally challenge rationalization and new technology; through their collective bargaining and worker protection policy they were able to reap for their members the fruits of productivity gains in the form of wage increases, working time reduction, and job and health protection. Developments in recent years make this social consensus more and more fragile... Rationalization in recent years has been at the expense of workers, in the growth of mass unemployment and worsening working conditions (IG Metall, Geschäftsbericht, 1980-82, p. 413, quoted in Thelen, 1991, p. 193).

As unemployment rose in the 1980s, such concerns increased and qualitative issues attracted more and more attention in the labour movement. These concerns were heightened by the fact that plant-level negotiations between employers and works councils to adapt industry-level contracts to local conditions led to uneven benefits across the workforce as skilled workers were kept on for longer hours at the expense of shorter hours for the less skilled (Thelen, 1991). There were also fears in the labour movement that managerial technological initiatives, or more precisely, their organisational ramifications, would undermine the basis for labour representation (Turner, 1991, p. 113).

The unions initially tried to influence the evolving interaction between technology and organisation in an indirect way. They supported a "training offensive" to promote increased training and retraining for workers. They also facilitated an overhaul of the structure and content of traditional apprenticeship programmes to take account of recent technological developments (Baethge and Wolf, 1995, p.

⁶ For a history of IG Metall's technology policy, see Thelen, 1991, chapter 8, pp. 180-200.

247). In pushing for high levels of training throughout the 1980s the unions hoped that the availability of qualified workers would convince employers to reorganise work in a way that would allow them to use their skills (Streeck, 1989). The federal government and the state governments also increased their support for apprenticeship training during this period. Combined with appeals by the government to take on apprentices, and an implicit threat to mandate such training vacancies by law otherwise, employers made more training places available (Winkelmann, 1996, p. 663); whereas the number of apprenticeships available had been 5 per cent below the demand for these places in 1984, by 1989/90 there was a surplus of 11 per cent (Casey, 1991, p. 206).

One example of the unions' more aggressive approach to training were their promotion of employment plans to replace the traditional social plans. The latter had dealt with mass redundancies in a way that was "largely defensive or reactive; they do not intervene directly in the mechanisms of the labour market in the event of redundancies, but have mainly been focused on promoting external mobility, which at most cushions the negative effects." In contrast, employment plans were intended "by means of training and diversification measures, to act on the 'root of the evil' and remove the need for redundancies" (Bosch, p. 37). In practice, these plans were to prove far less successful than their originators had hoped, primarily because of an absence of serious employer commitment (Bosch, 1990; Thelen, 1991, p. 139).

More general problems for the unions' training initiatives also emerged. The ongoing changes in production technologies and the difficulties for the dual system to keep abreast of them, as evidenced by shortages of production workers with requisite computer skills, meant that investments in further training have become increasingly important as the basis for the competitive advantage of German enterprises (Mahnkopf, 1991, p. 68). In contrast to initial vocational training, which is heavily regulated and relies on extensive worker involvement through unions' role in governing the system and works councils' participation in the implementation of training within enterprises, further training is almost entirely at the discretion of employers. The trend toward increased further training means that:

...the *public* control of initial training is losing its formative function for the occupational biography of the participants. In the future, further training measures organized at plant level, i.e. by *private* economic interest, will decide the distribution of social status, incomes, social privileges and social recognition. Thus, private firms can determine, on the basis of profitability considerations, which groups of employees will receive additional qualifications and who must obtain them during or outside working hours by way of a 'voluntary' commitment (Mahnkopf, 1991, p. 77).

These trends posed a formidable challenge to the unions' "skill-oriented" strategies (Mahnkopf, 1991). To be in a position to do more than merely ratify managerial decisions about investments in skill formation, they had to go beyond their traditional channels of representation. As the 1980s unfolded the unions campaigned for a more direct role for labour in governing the evolving interaction between organisation and technology in German workplaces. In 1984 the DGB launched a "Codetermination Initiative" which had as its goal the direct participation of employees in the design of their work in a humane manner (Altmann, p. 378; Fricke, 1986). IG Metall took the lead in formulating a position on labour participation in decisions about the development and utilisation of technology. It organises the automobile, steel, electronics and machinery industries, and is Germany's most powerful union. Its activities have tended to set the pattern for German labour at large. In 1984 it established an action programme on "Work and Technology".

IG Metall's strategy emphasised the importance of local involvement, and it relied heavily dependent for its implementation on the cooperation of works councils. The role of the union was seen as providing works councillors with training and materials on issues relevant to technological change based on real-world experiences in selected model plants. The programme was also designed to educate works councils about the range of economically viable forms of work organisation to encourage them to take a more proactive stance on these issues with employers. By the late 1980s, IG Metall had developed a coherent and practicable vision of work organisation called *Gruppenarbeit* or "group work" (Thelen, 1991, chap. 8; Turner, 1991).

These initiatives met with some limited success in the late 1980s but in general during the 1980s the majority of employers displayed little interest in group work and were resistant to extending workers' codetermination rights over the development and utilisation of technology. In 1989 when the Works Constitution Act was amended to specify more clearly the consultation and information rights of workers with respect to the introduction of new technology, the main employers' organisation, the BDA, complained that West German works councils already had more rights to information, consultation, and codetermination than anywhere else in the world and to extend them would interfere unduly with management decision-making. The amendment did not, however, provide workers with codetermination rights over the introduction of new technology and for that reason was criticised by the unions.

One can certainly find examples of German companies that took an "anthropocentric" approach to technological change during the 1980s but the predominant approach during this period seems to have been a technocentric one (Altmann, 1992, p. 367; Altmann et al, 1992). The main objective of restructuring efforts in German companies during the 1980s was the development of factory automation. By the end of the decade a widespread diffusion of the components of computer integrated manufacturing systems had occurred in German enterprises although they had not been integrated into anything approaching the technocratic dream of a "factory of the future" (Köhler and Schmierl, 1992; Jürgens et al, 1993).

The appetite of German employers for technological rather than organisational strategies to deal with the Japanese competitive threat is reminiscent of the responses of leading American managers in the 1980s. Arguably, German managers, who are much more likely than their American counterparts to be technically trained, were even more likely to try to confront organisational challenges with technological "solutions". The common technology fetish among German managers was also reflected in the popularity of "technology-based" diversification strategies during this period. The attempt by Daimler-Benz to become an "integrated technology concern" by diversifying its operations into aerospace, aircraft and other sectors that were deemed to be "technologically related" to its traditional businesses in automobiles and trucks is a well-known example and it bears a striking resemblance to the strategy pursued by GM under Roger Smith around the same time. But Daimler-Benz was only one among a number of German companies that tried this route. The steel producers -- Mannesmann, Thyssen and Krupp -- were among those who found the "*Technologie-Konzerne*" model attractive (Herrigel, 1995, pp. 248-251).

In addition to their interest in technology as a competitive solution, German employers also displayed increasing concerns about the costs of production, and, in particular, the labour costs associated with doing business in Germany as evidenced by the escalation of the perennial debate about *Industriestandort Deutschland* or "Germany as an industrial location". German employers claimed that the high wages,

shorter working hours, tight labour market regulations and high taxes that prevailed in Germany had undermined the international competitive position of German industry. The unions have traditionally countered the employers' arguments by pointing to the highly skilled German workforce and the export market success of German industry. In 1993, however, the *Standort* debate became unprecedentedly hostile as Germany entered its worst recession in postwar history.

Employers argued that the deterioration in the economic performance of German industry was the result of an underlying "cost crisis" facing German industry. They warned that German companies would be forced to relocate production abroad if drastic action was not taken. Their primary concern was with labour costs. In the words of Hans-Peter Stihl, chairman of the German Chambers of Commerce, and the owner of Andreas Stihl, a chainsaw manufacturer near Stuttgart: "We have a cost crisis that has caused something of a structural crisis. Either German unions will accept substantial reductions in incomes and wages or we will lose more jobs. We also have the possibility of moving more jobs abroad (NYT, February 13, 1996)."

The recent trends in foreign direct investment (FDI) into and out of Germany have been taken as evidence by many commentators that companies have been voting with their feet on the declining attractiveness of Germany as a place to do business. FDI by German companies has been rising rapidly since the 1980s; from 1984 to 1995 the direct investment of German enterprises abroad rose at an average annual rate of 17.5 per cent from US\$50 billion to \$300 billion. Inward FDI, according to the German balance of payments, was much lower; during the period from 1984 to 1995 total inward investment amounted to just over US\$36 billion (Deutsche Bundesbank, August 1997, pp. 64, 71).

It is, however, unlikely that the cost of German labour is the main reason for these trends in FDI.⁷ The regional distribution of the stock of German enterprises' FDI, and, in particular, the fact that it is almost identical to that of German exports, suggests that German companies are investing abroad to secure market access. That is, in fact, what has been reported as the main reason for investing abroad in surveys of German employers (Deutsche Bundesbank, August 1997, p. 66, fn. 5). Despite increases in the US and South East Asia, German FDI continues to be heavily concentrated in European countries which have somewhat lower labour costs than in Germany but can hardly be classified as low-wage countries (Heiduk and Hodges, 1992).

The changing of the guard in Eastern Europe has, however, created lower-wage location possibilities closer to home for German enterprises than heretofore. However, in 1995 Germany's direct investment in central and eastern European countries amounted to DM 4.2 billion which, although increasing, constitutes just over 7 per cent of German FDI as a whole and is also being driven by market access considerations. The expansion of trade with these countries has already provided German-based exporters with lucrative export opportunities especially in mechanical and engineering products, road vehicles, and chemical products (Deutsche Bundesbank Monthly Report, July 1996).

German companies have also been investing abroad to gain access to foreign research capabilities. This is particularly true for the German chemicals industry, which accounts for a substantial proportion of Germany's foreign direct investment (Dörrenbacher and Wortmann, 1991). Moreover, the ongoing process of European integration has convinced many German companies, and in particular financial enterprises like banks and insurance companies, of the value of acquisition strategies designed to build up a pan-European presence.

⁷ For an expression of this view by Heinrich von Pierer, the chairman of Siemens, see *Financial Times*, 16 February 1996, p. 17.

The sustained appreciation of the DM has made all of these FDI strategies relatively cheap for German enterprises. The strength of the DM is undoubtedly also part of the explanation for the relatively low level of inward FDI. Statistical discrepancies are another. In contrast to the figure of US\$36 billion reported in the German balance of payments as the cumulative total of direct investment imports in 1984-95, a comparable figure of US\$118.9 billion is reported by the balance of payments of investor countries. On the basis of these revised figures, as the Deutsche Bundesbank put it, "Germany's position as a recipient country of international direct investment appears in a much more favourable light" (Deutsche Bundesbank, August 1997, p. 72; Financial Times, 14 July 1997, p. 7).

On balance there is little support in the evidence on foreign direct investment that high costs have been driving companies out of, or keeping them away from, Germany. Whatever the real reasons for their international strategies, however, many German employers used the fact of a deficit in FDI and other arguments about declining German cost competitiveness to take a much harder line on labour costs at home. In December 1993, Gesamtmetall, the metalworking employers' association, took the unprecedented action of cancelling their collective agreement with IG Metall. The action was largely symbolic because the agreement lasted only until the end of 1993 but it was widely interpreted as a signal of a shift by employers to a more aggressive stance toward labour (Baethge and Oberbeck, 1995).

Employers have railed against collectively bargained wage increases and called instead for plant-level agreements. There had, in fact, already been a strong trend in that direction before the early 1990s (Katz, 1993), but it rapidly gained momentum when the recession began. By 1994, for example, in the metalworking industry which was badly hit, pay determined at the plant rather than the industry level had become widespread. In general, the recession has prompted a process of concession bargaining at the plant or company level (Sadowski, Schneider and Wagner, 1994, p. 534). *Standortsicherungs* (location guaranteeing) agreements have become widespread at the plant and enterprise levels; their common feature is the concession of a reduction in labour costs by the works council or union in return for a guarantee of employment security. These agreements differ substantially, however, with respect to their details. Some are focussed primarily on cost cutting; others include more proactive measures to improve competitiveness (Jürgens, 1997). The *Standortsicherungs* agreements have not, however, stopped the unprecedented wave of corporate layoffs that began in Germany in 1991 and in some cases have included measures to facilitate that process in a "socially acceptable" manner through, for example, the use of early retirement schemes (Jürgens, 1997). The Kiel Institute estimated that 1.3 million jobs, or 15 per cent of Germany's manufacturing employment, were lost in the period from 1991 to 1996 (NYT, July 13, 1996).

Employers claim that they cannot afford to keep high-cost German workers employed given the intense competition that they face on international product markets. According to a survey conducted by the Institut der deutschen Wirtschaft of average hourly labour costs in manufacturing in the world's leading economies, West Germany is leading the pack. Wage increases, however, play a smaller role in Germany's relative position than one would imagine from employers' rhetoric. During the period from 1970 to 1994, the country with the lowest wage increases was the US; Switzerland and Germany were the countries with the second lowest growth of pay! One reason for the growth in hourly labour costs was a rise in indirect labour costs, mostly due to increased social security contributions; in absolute terms West Germany had the highest indirect costs of all of the countries surveyed. But the relative increase was also substantially attributable to the appreciation in the value of

the DM rather than an increase in domestic costs as such (EIRR, 259, August 1995, pp. 13).

In and of themselves international labour cost comparisons do not say anything definitive about the competitiveness of a country, a region, or a nation. German companies have in the past paid relatively high wages and still managed to be competitive on international markets. Bringing productivity into the picture to calculate unit labour costs is one way of getting a more accurate reading of competitiveness. A 1993 report by the DIW research institute contended that only twice in the last 25 years -- in 1970-1 and in 1992 -- did unit labour costs rise faster than the average for other industrialised countries. For the remainder of that period, the increase in German unit labour costs was below that of its competitors (EIRR 241). Employers, in contrast, argue that productivity no longer compensates for high German labour costs. According to a survey by the employers' IW research institute in the period 1985-1992, unit labour costs -- calculated on the basis of exchange rates against the DM -- rose by 30.2% in Germany, or more rapidly than in almost any other of the major trading nations included in the survey. The IW did acknowledge that the relative increase had more to do with the growing strength of the DM than with an increase in domestic costs but, whatever the reason, it argued that the most important fact is that Germany had the highest unit labour costs of any major industrial nation (EIRR 241).

Studies conducted at the industry level generally support the view that the symptom of the competitive challenge facing German industry is found in productivity rather than cost differences. In the automobile industry, for example, average gross value added per employee was 92,000 DM per year in Germany during the period from 1981 to 1990 compared with 131,000 DM in Japan (Roth, 1997, p. 123). As Table 4 above shows, similar differentials can be seen in the machine tool industry. Productivity differences do not however explain competitive problems; they are symptoms of it. Moreover, productivity is a useful concept in understanding competitiveness only when it is studied over the long term. Once companies move away from traditional ways of doing business, once they start transforming technologies and organisations, productivity measures become muddy, and sometimes quite inaccurate, measures of potential competitive strength. If companies are pursuing developmental strategies, short-term productivity generally has to be sacrificed in the expectation of achieving long-term gains. Thus if productivity measures look good in the short term that can be consistent with, and even symptomatic of, a failure to undertake innovative strategies.

To really get at the nature of the competitive challenges that German enterprises confront, necessitates studying the bases on which companies compete with each other on international product markets. Shorter working hours in Germany compared with Japan explain some of the productivity differences between German and Japanese companies (Roth, p. 124; Finegold et al, 1994, p.23). But what all of the detailed comparative analyses of international competition show is that the key competitive challenge facing German industry is an organisational one. Thus, although wage restraint and increased working hours may well be elements of a creative response by German enterprises to this challenge, they will not be enough to lay the foundations for sustainable prosperity in the German economy.

It is an open question whether those with powerful interests in the extant system of governance have the requisite abilities and incentives to bring about organisational transformation in the German economy. As Herrigel points out, such change would have to involve "the collective reconsideration of the institutional mechanisms that both define and regulation relations between all parties in labour and product markets (Herrigel, 1996, p. 35)". Certainly there is no consensus on how

organised labour should proceed. The stronger unions, like IG Metall, have always expressed concerns that, left to their own devices, works councils would contribute to a segmentation of the workforce by consolidating the interests of insiders. But the unions face a similar dilemma themselves. The question that Norbert Altmann asked with respect to the unions' technology initiatives have more general relevance: "Are the unions in danger of increasing the process of polarisation by fighting for a humane design of work which primarily benefits those already employed (Altmann, 1992, p. 384)?" Birgit Mahnkopf casts the current situation facing the unions in pessimistic terms. On the one hand, they run the risk of being denounced as barriers to progress if they obstruct employer strategies. On the other hand, a "skill-oriented" modernisation strategy" risks strengthening social inequalities further by entering into "an ideological alliance between the 'hard-working' and 'successful' against the 'indolent' and 'incapable' (Mahnkopf, 1991, p. 77)." As unemployment grows and cuts into union membership, however, even the most powerful unions are displaying a defensive pragmatism in response to employer strategies.

German employers have certainly shown that they are willing to tackle what they consider to be the excessive wages and insufficient working hours of German workers even when it involves confrontation with the unions as happened, for example, in 1996 over the issue of sick pay. What is not clear, however, is whether they have the abilities and incentives to recognise and confront the organisational foundations of German industry's competitive problems. Indeed, to focus on technology and labour costs, as many German managers have been wont to do, is to obscure the nature of the problem.

In recent years, however, there seems to have been growing recognition among employers of the need for organisational transformation. In the automobile industry, in particular, "the lean production revolution" which got underway in Germany in 1991 forced a recognition of the importance of organisational issues to enterprise performance. Progress in confronting these issues has, however, been patchy. Jürgens recently gave the following evaluation of the progress of teamwork in the automobile industry:

In the more than five years since the adoption of lean production by German companies, major differences in the degree of emphasis on teamwork have become evident. Some manufacturers have achieved almost full integration of their workforces into teams, while others... are in a pilot stage. The differences cannot be explained by blockades and controversies in the industrial relations arena, however. Rather, operations managers often hesitate to introduce far-reaching changes, while top-level managers have other priorities (Jürgens 1997, p. 111).

If the German system of governance faced only productive challenges, serious as they are, one could have some confidence that consensus could be achieved to promote the social transformation necessary to regenerate the organisational foundations of innovation in German enterprises. The confluence of productive and financial challenges, however, makes the achievement of this outcome much less likely. It provides the scope for those with interests in financial liquidity to use their growing power to live off what has been accumulated in the productive economy in the past rather than to restrain their claims to permit the allocation of resources to develop the organisations required to rebuild an innovative dynamic in the German economy.

Responses to the Financial Challenges

To date the initiatives undertaken by the government to improve the funding situation in the state pension scheme have focussed on making adjustments within the framework of the postwar pension system. The most important legislative initiative to date is the Pension Reform Act of 1989 (which took effect in 1992). It was motivated by the expectation, based primarily on projections of demographic ageing, that contribution rates would have to rise to unsustainable levels in the early decades of the next century to support the extant pension system. The act was intended to make early retirement more difficult in the future. The statutory retirement age was to be raised to 65 by 2001. If workers wished to retire earlier they would have to take a reduction in their pension of 3.5 per cent per annum (compared with a reduction of 6.6 per cent per annum in the US) but from 2001 the earliest age at which they can retire will be set at 62 years. In another attempt to reduce pension obligations, the act also mandated that pension benefits would be adjusted on the basis of average net earnings rather than average gross earnings as they were in the past. It also increased the federal grant to the pension system to take some pressure off the contribution rate necessary to support a given level of benefits. Finally, a partial pension scheme was also introduced which allows certain proportions of the full statutory pension to be combined with earnings from employment up to certain specified limits (Schmähl, 1993).

The effectiveness of the 1992 reform of the pension system was dependent on enterprises' employment strategies and conditions in the labour market more generally. In the absence of a serious commitment to keep older workers employed, the pressures on early retirement could not be controlled. The major workforce reductions that began in 1992 and continued unabated until the time of writing, as well as the ongoing process of restructuring in East Germany, increased the demands for pension benefits as claims for early retirement due to unemployment continued to rise. Rising unemployment also reduced the number of contributors to the system. Notwithstanding the reform, therefore, the contribution rate thus had to be increased to make up the shortfall.

It was in this context that new legislation, to deal explicitly with early retirement, was introduced in August 1996. The law aimed to raise the minimum early retirement age for men in steps from 60 to 63 over the period from 1997 to 1999. Employees who want to retire before 63 years of age will have to accept an annual cut of 6.3 per cent in their pension for every year taken before that age. Men aged 55 years and more by February 1996 were exempted from the provisions of law as were women, employees with disabilities, and employees in the iron and steel industry under certain circumstances. The reform also introduced measures to encourage employees over the age of 55 to work on a part-time basis prior to retirement; workers can halve their working hours and receive 70 per cent of their incomes. Employers are required to pay only for the hours worked; the unemployment insurance fund makes up the difference if the employer hires another employee to work the half job made available (EIRR 272).

The contribution rate to finance the statutory pension scheme was increased again in 1997 and the government presented a draft for a new Pension Reform Bill which was originally slated for 1999 but is now being considered for introduction in 1998. The draft includes a proposal to eliminate the early retirement pension for unemployed workers and for women in 2012. Instead, the right to early retirement will only be granted to those who have paid contributions for at least 35 years, the option will only be available from the age of 62, and a reduction in pension benefits of 3.6 per annum will have to be borne by the retiree. The draft also proposes a reduction in the contribution rate by increasing the Federal grant and a substantial

tightening of the eligibility requirements for disability pensions (Deutsche Bundesbank Monthly Report, pp. 42-46).

The trend of pension reform in Germany is clearly toward harsher measures but as yet the changes do not constitute a major rethinking of the pension system. Proposals for a fundamental overhaul of the German pension system -- for example, the replacement of the existing statutory pensions by a flat-rate minimum pension and/ or a change from the pay-as-you go system to a funded pension scheme -- were mooted in Germany around the time of the legislative reform. They were, however, put forward primarily by academics and were not taken seriously by mainstream parties in the political debate. All of the political parties, except the Green Party, supported the reform, as did the trade union and employer organisations (Schmähl, 1993, p. 42).

The pressures are, however, increasing not so much because of the financing problems *per se*, although these are serious and worsening, but also because of the direct relationship between these problems and the *Standort* debate. The government is certainly concerned about the *Standort* issue; in September 1993 it published a report called "Securing Germany's future as an economic base" in which Chancellor Kohl warned of the consequences of rising labour costs, falling working hours, and longer holiday entitlement on Germany's international competitiveness (EIRR 241). Since 1982, Kohl's governments have undertaken various legislative initiatives, such as the Employment Promotion Act of 1985, in a concerted attempt to deregulate the labour market. On issues of labour market policy in general, the government has lined up with employers.

The politics of pensions and the welfare state as a whole are, however, potentially even more explosive than these labour market reforms have been. To pursue a political agenda to rollback the welfare state in Germany would likely be political dynamite, especially in the year before an election. But if unemployment continues to rise, and if the financing situation in the pension scheme continues to deteriorate, the hand of this government or its successor may be forced to introduce more radical measures. It is not just conservative elements in German society that are calling for a rethinking of the welfare state in general and pensions in particular. The Greens have also made it a central element in their political programme.

The likelihood of radical measures being introduced is being given an added impetus by policy initiatives in the European Union. In its attempts to promote the mobility of capital and labour across European borders, the EU has identified retirement provision as one of the key obstacles to achieving this objective (Mortenson, 1992, p. 6). With a view to removing this obstacle, it has been developing policy proposals that, if introduced, will make private pension provision much more attractive than heretofore as is evidenced by the recent proposal for an EU pensions directive. It was unsuccessful but it seems only a matter of time until some version of it is passed given the relatively neoliberal climate on issues of banking and finance in the EU.

Whatever their source, significant changes in the German pension system would undoubtedly entail some move to funding and/ or increased private pension provision, whatever the merits of these strategies for equitable retirement provision. The effects for the financial system, and in particular for pressures for financial liquidity, could be enormous. According to Josef Wertschulte, a director of Bayerische Hypotheken- und Wechsel-Bank, "[p]ension funds could total between DM1,600 bn and DM2,000bn in 10 years if the right legal and tax conditions were created. This would double the size of the present equity market (Financial Times, February 17, 1997, p.20)."

There are key players in the German economy who have significant incentives to support these pressures for greater financial liquidity. Of particular importance are the interests of major financial enterprises operating in Germany. All three sectors of the banking industry -- the savings banks, the cooperative banks, and the private banks (incl. the big banks) -- have been active participants in "the battle over the piggy bank" that has been underway in Germany in recent decades (Oberbeck and Baethge, p. 287). Indeed, Germany has one of most extensive banking networks in the world and in recent decades the competition among banks has rapidly intensified. By the end of the 1970s the major insurance companies had also become formidable competitors for the savings of German people. Competing for savings has provided these financial enterprises with strong incentives to promote liquidity in the German economy.

Arguably, the large private banks -- Deutsche Bank, Dresdner and Commerzbank -- the alleged "patient capitalists" of the German economy have particularly strong incentives to support higher returns on financial assets. They have less to lose than the savings and cooperative banks (with a combined total of 80 percent of savings deposits) through the disintermediation that has already and will continue to result from the widespread introduction of market-based savings instruments (Deutsche Bundesbank, 1991). Moreover, with their access to high-income Germans through their retail networks, and their experience in securities markets at home and abroad, they are well positioned to exploit the profit potential of this business. Reflecting these incentives they have already been very active in the introduction of these new savings instruments and in attempting to promote an "equity culture" in Germany. A recent article entitled "From Savers to Investors" in the Deutsche Bank Research Bulletin gives some sense of the business opportunities that the banks see if Germans can be persuaded to move in the direction of greater liquidity:

A prerequisite for the building of a tradition of equity culture ... is the existence of "fertile ground" -- a change must take place in the mentality of private households. The current turnover of generations may be a catalyst for such a change. Up to the year 2000, assets valued at approximately DEM 200 bn will be transferred annually to the so-called inheritance generation. It is the first time in this century that wealth is being passed on to a generation which has experienced neither a world war, nor hyper inflation and currency reform, and which does not have to slowly and painfully build up wealth from scratch. The new investors therefore tend to be more open to riskier investments which offer higher returns, criteria which are met by stocks (Deutsche Bank Bulletin, January 9, 1995, p. 10)

German insurance giants like Allianz have also been eyeing the increased business opportunities in asset management that would be available to them if there is a greater trend toward financial liquidity in the German economy. Allianz has substantial holdings in other financial enterprises -- for example, it owns 22 per cent of Dresdner Bank and 26 per cent of Munich Re -- and so its increased interest in asset management will be highly significant for the future of the German financial sector (Euromoney, January 1997, pp. 41-48).

The incentives of these financial enterprises to stimulate demands for higher financial returns in Germany are reinforced by similar trends towards heightened competition in other segments of their business. In issuing, for example, Deutsche Bank dominated the market as the syndicate leader for new issues in the postwar period. From the early 1980s, however, more banks won access to the stock exchange as dealers, and competed successfully for such a role (Deeg, 1991, p. 201). The intensification of competition in this segment of the banking business was

seen in the rush to float the shares of medium-sized enterprises during a boom in the German stock market in the late 1980s. The boom was fuelled by the success of these companies and the excitement about the prospects of reunification for German industry. So vigorous was the competition among German financial institutions for this initial public offering business that when the market slumped in the early 1990s and a number of companies encountered substantial difficulties, the banks were charged with floating companies that were not "borsenfähig" (ready for the stock market) (Institutional Investor, November 1993).

The overhaul of the regulatory framework of the German financial markets that has occurred in recent years has facilitated the intensification of competition in the German financial sector. These legal changes have been largely supported by the major financial enterprises and actively promoted by them in certain spheres. To characterise these companies as "patient capitalists" seems particularly misguided in the 1990s. Indeed, it has arguably long been a misnomer. The big banks, for example, have never been shy about advancing their profit interests and have done well from their postwar acquiescence in a system that provided German enterprise with financial commitment largely because of restrictions on competition, both among savings instruments and in the securities markets. As Germans have grown wealthier and competition for their savings has intensified, however, the banks increasingly see their interests as being better achieved by promoting financial liquidity rather than financial commitment.

A symptom of this change seems to be the weakening of bank-industry linkages over the last two decades. The private banking sector as a whole has reduced its seats on the supervisory boards of the 100 largest AGs from 162 in 1974 to 104 in 1989. They have also reduced their direct shareholdings; the number of companies in which banks held at least ten per cent of the shares (directly or indirectly) fell from 129 in 1976 to 86 in 1986 and the number on which they controlled a blocking minority of more than 25 percent fell from 86 to 45 (Deeg, 1991, p. 201). The big banks' involvement in the hostile takeover bid launched by Krupp for Thyssen in March 1997 is also suggestive of a shift in their orientation. The head of Krupp, Gerhard Cromme, had already made history in 1991 as the first German businessman to successfully conclude a major hostile takeover when his company bought out the Hoesch steel enterprise (Economist, March 22, 1997, p. 80). As The Economist described him, Cromme is "much liked by western investment bankers in Frankfurt, who see him as a champion of new-style Germany, committed to shareholder value and transparent accounts -- as well as a future filled with juicy fees for them (Economist, November 8, 1997)." Deutsche Morgan Grenfell and Dresdner Kleinwort Benson were Cromme's advisers and reputedly provided Krupp with a credit line of DM18 billion through their parent banks, Deutsche Bank and Dresdner Bank respectively. That the banks were also involved with Thyssen, not least because of the proxy votes that they hold in this widely held company, got them into some hot water. In general, the bid was denounced by Thyssen management, the unions, and local politicians. Krupp was persuaded to drop its bid although the companies agreed to merge their carbon steel businesses. In November 1997, Thyssen dropped its objections and the two companies agreed to a friendly merger (Economist, November 8, 1997, pp. 69-70; Der Spiegel, 48, 1997, pp. 124-125).

To date, notwithstanding the concerted efforts by financial enterprises to promote demands for higher yields among broad sections of the German population, they have had limited although growing success. The stock market is already highly liquid but largely because of the influential role played by foreign investors, some of which are, in fact, Germans recycling their money through international financial markets to avoid domestic taxes. The market is not, however, very deep.

Notwithstanding changes in the structure of German savings in recent decades, equity holdings as a percentage of private financial assets remain low in international comparison; in the early 1990s about 5.4 per cent of Germans owned stocks compared with 21.1 per cent in the US, 21 per cent in the UK, and 16 per cent in Japan (Deutsche Bank Bulletin, January 9, 1995, p. 9). The appetite of German households for equities has, however, been rapidly increasing in recent years. The proportion of Germans owning shares increased to 7.6 per cent in 1995 and then again to 8.8 per cent in 1997 (Economist, December 6, 1997).

If the trend toward financial liquidity continues, and particularly if it gains a major boost from changes in the pension system, German financial enterprises may well find willing allies in the country's corporate managers attracted by the possibilities to enrich themselves through living off the past rather than the challenges of the difficult organisational transformations that are necessary to recreate the foundations for sustained innovation. Far from being vilified for such behaviour they may well find themselves praised for their initiative in breaking through "distributional coalitions" and "social rigidities" which, at least in the conservative mind, are the root of Germany's current economic problems.⁸ Indeed, now that it has become clear that a transformation of some description is required in the productive sphere "tough" strategies such as downsizing which are, at least in isolation, adaptive strategies, have already attracted strong support in certain quarters of German society. Similarly, the awarding of stock options to senior executives, and other moves that associate the success of major companies with the actions of a handful of administrators, or the perception of such, have been heralded by those who claim that Germany's lack of innovative success vis-à-vis the United States is rooted in a relative absence of entrepreneurial initiative.

A striking example of a senior German manager who has in recent years marketed himself as an exemplar of a new breed of tough and entrepreneurial German executives is the chairman of Daimler-Benz, Jürgen Schrempp. Until recently, Daimler-Benz was pursuing a grand strategy to become an integrated technology concern under the leadership of its previous chairman, Edzard Reuter, and with the support of Deutsche Bank, the company's leading shareholder. In 1995 Reuter was replaced by Schrempp following the announcement of an enormous loss of DM 5.7 billion, the largest sustained by a German company in the postwar period. Schrempp's stated objective as chairman is to transform the company to make shareholder interests the number one priority. Among the changes that have been justified as "maximising shareholder value" was the transfer of work valued at DM 1 billion to suppliers in Asia to eliminate 8,800 jobs at Daimler-Benz Aerospace (Dasa), the dismantlement of the loss-making AEG industrial goods subsidiary, and the withdrawal of financial support for Fokker, Daimler's Dutch aircraft subsidiary (Financial Times, April 11, 1996, p. 11; Economist, March 16, 1996).

In April 1996 the company announced the introduction of a share option incentive scheme for 170 of its senior executives to ensure that their personal financial interests coincide with those of its shareholders (Financial Times, April 2, 1996; Ibid., April 24, 1996). The company's works councils apparently supported the plan but the employee representatives on the supervisory board, with one exception, objected to it. In explanation for their stance, one member of the board, Bernhard Wurl, a senior official of IG Metall, said that they were afraid that the company's share price would assume overriding significance if the executives had options and that job losses would be increased in attempts to get profits up. But the plan brought

⁸ The concepts of distribution coalitions and social rigidities are developed in Olson, 1982. For a critique of Olson's argument as applied to the FRG after the war, see Giersch et al, 1992, pp. 73-75.

kudos from the Anglo-American business press as exemplified by an article in the Financial Times:

... the case for seeking to establish a closer alignment between the interests of owners and management is not difficult to make here. One of the disadvantages of a bank-dominated corporate system is that banks may have a greater interest in promoting size rather than profitability. It is certainly striking that Deutsche Bank, the biggest shareholder in Daimler-Benz, was intimately involved in the disastrous conglomerate strategy pursued by Mr Schrempp's predecessor, Mr Edzard Reuter (Financial Times, April 9, 1996).

The statement omits to mention that not only was Deutsche Bank a supporter of Daimler's "disastrous conglomerate strategy", so too was Jürgen Schrempp! Nor does it recognise that the incentives of Deutsche Bank and other financial enterprises in Germany have changed considerably in recent decades. They have now much greater interests in rediscovering "the interests of owners" and better aligning their interests with shareholders by making themselves owners than ever before. Indeed, the Deutsche Bank had pipped Daimler-Benz to the post by a week when it announced the first large-scale executive share-option scheme in the German corporate economy (Financial Times, April 24, 1996).⁹

It is too early to identify the significance for the company's strategy and performance of the new managerial rhetoric at Daimler-Benz. Moreover, the experience of Daimler-Benz under Schrempp is just one case. Many Germans, and Continental Europeans in general, are sanguine about the possibilities of these types of behaviour taking hold among German managers. Nevertheless it is dangerous to dismiss it on the grounds that it is an unfinished and isolated story. Any evidence of a shift in the outlook of German managers, and in particular of their commitment to strategies that build innovative organisations, must of necessity be anecdotal. To the extent that a significant change is underway, it is in its formative stages.

One of the most important lessons that the history of American corporate governance teaches us, is that in the face of unprecedented productive and financial challenges, "organisation men" can be trained to be ardent proponents of shareholder value or any other mantra that justifies them lining their pockets. In Germany, as in Japan, organisational control has, as yet, proven to be more stable than in the United States. In contrast to their Japanese counterparts, however, German labour and German finance have pursued their interests through organisations that have had more autonomy from the strategies and structures of industrial enterprises. The biggest risk that the German system of corporate governance now faces, given the productive and financial challenges that it confronts, is that German labour and finance will insist on pursuing their own independent strategies to extract returns from industrial enterprises. If this were to happen German corporate governance would dissipate into a "stakeholder economy" that undermines the foundations of organisational control.

⁹ Continental, the tyre company, and BHF-Bank have run small-scale option schemes for some time.

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