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Continuing Training in an Aging German Economy

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Developments in Germany are of interest because of the country's size, location and history. We need to understand public policy in Germany because Germany is a key international partner and because German preferences will continue to be an important ingredient in the formulation of EU policy regimes. Sometimes German solutions to pressing policy concerns are important because they have a "model" character. This is not necessarily a matter of praise or emulation. Indeed, German solutions may be untransferable or undesirable. Nevertheless, the constellation of institutions and practices that makes up Germany's "social market economy" provides the researcher with an unparalleled real time laboratory in organized capitalism. Over a variety of policy issues, comparison with Germany illuminates advantages and disadvantages of options that would not easily come to mind if the German "case" did not exist. Industrial relations, financial institutions, health-care reform, pollution abatement, intergovernmental relations, immigration, and employment training are just a few of the sectors for which a German component might pay high dividends to policy analysis.

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C O N T E N T S

1. INTRODUCTION

Industrial economies are currently under siege on several fronts. The main challenges to be faced by business and government are external: rising competition within a new global economy, the collapse of the former communist states, an overall internationalization through enhanced tradability of goods and services, and the spread of new production concepts. Increased openness of economies and skill-based technological change both are contributing to the rising need of higher qualified people (Johnson 1997: 47ff.) Another more long-term problem is the aging of the populations of industrialized countries. In Germany the pace and volume of this change is expected to exceed the graying of most other advanced industrialized nations.

The state has already begun to deal with demographic issues through pension reform and the introduction of a long-term care insurance. At the firm level only the short-term problems have been recognized thus far. These have significantly contributed to the debate about the "*Standort Deutschland*" (German competitiveness). The discussion has largely focused on reducing labor costs (including social security contributions) and the need for further training of workers to sustain or even regain international competitiveness. Seniority-based wage systems and "aging" (depreciating) qualifications of older workers provide incentives for removing older workers from the labor market. Consequently, the strategy of workforce reductions leads to the withdrawal of more expensive and presumably less productive older workers. Thus a rising percentage of older workers retire early, avoiding the sometimes necessary and socially unacceptable layoffs, while offering opportunities for younger people to enter the (internal) labor market.

However, this externalization strategy will become less effective for two reasons:

1. The state has already codified a new pension law, which shifts most of the costs of early retirement from social security to employees and employers.

2. Germany already faces a visible mismatch on the labor market for qualified workers today that will thrive within the next twenty years when fewer and fewer younger people are entering the labor market. Relying on highly skilled workers from other EU-countries will not solve the problem, since the other countries in principle have to deal with the same issue.

In the past, structural change was mainly effected by simply exchanging older workers for younger ones; however, in the future this must be increasingly accomplished with middle-aged and older workers. Assuming that there is a future of (gainful) work in Germany, the competitiveness of industries and single companies will increasingly depend on the ability of workers to innovate: human capital will become the key factor for competitiveness (Reich 1991, Thurow 1996). The applicability of skills attained during the period of vocational training is declining over the life cycle, and faster technological change already causes it to

decline faster than in the past (Blechinger, and Pfeiffer 1996: 24). Therefore continuing (further)[1] training will become much more important than it is today.

Companies can prepare for this situation by developing and implementing schemes of lifelong learning/training for different groups of workers and long-term personnel planning. Continuing vocational training comprises every kind of training after initial vocational (apprenticeship) training or graduate trainee programs for new recruits. Preliminary research results of a survey we conducted with company personnel managers (see Schmähl, Gatter 1994 and Gatter, Hartmann 1995) indicate that demographic challenges are not on their agenda. Looking more closely at the work of researchers in the field of personnel or human resource management in Germany one has to conclude that this topic is not on their agenda either.[2] At the same time, businesses increasingly and successfully are focusing on older people, as consumers.

This paper mainly deals with the long-term demographic challenge for German competitiveness and assesses to what extent the existing training institutions are shaped to face future needs: to maintain Germany's high-skill/high-wage economy without admitting thriving inequality. After a short overview of demographic trends in Germany, the main focus will be on the relevant regulations (incentives, transaction costs) for providing or demanding further training and its effects on stratification. The final section will summarize the results and give some policy recommendations.

2. GERMANY'S DEMOGRAPHIC TIME BOMB

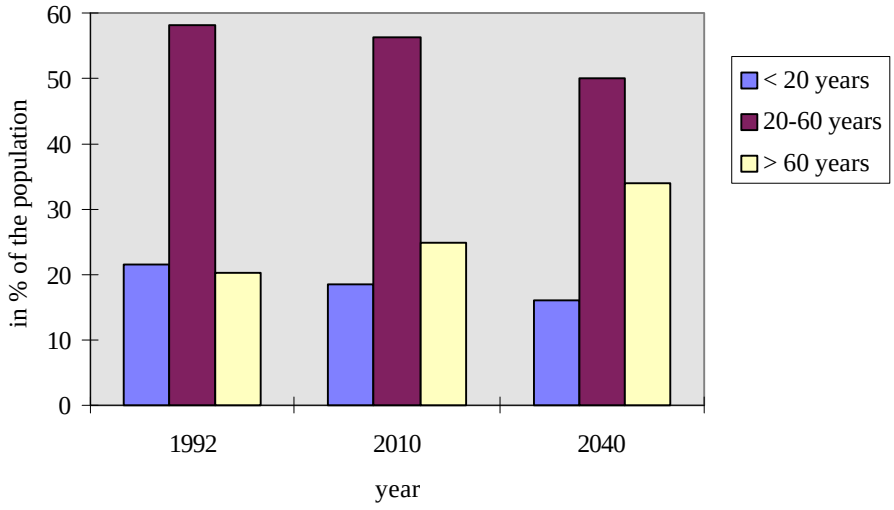
[1] The terms "continuing training" and "further training" are used interchangeably in this paper, as are the terms "vocational" and "occupational."

[2] An exception is Nienhüser 1989.

The causes and extent of demographic changes in Germany have already been discussed in detail elsewhere (e.g., Roloff 1996, Sommer 1994, summarizing *Deutscher Bundestag* 1994). The information given here will concentrate on main trends as a basis for understanding the rest of the paper. Germany is an aging society with a population that will continue to shrink over the long term. This is mainly due to low fertility rates and the rising life expectancy of older people. Although projections[3] show that this trend will be somewhat mitigated through the influx of new immigration and the unification of the former two German states, it is unlikely to be reversed this way. The German population is expected to rise from 80.8 million people (1992) to more than 83 million people in 2002. Afterwards it is projected to decline to about 72.4 million in 2040 (see Sommer 1994: 500).[4] More importantly, as the population declines the age structure of the population will change dramatically.

Figure 1 shows the development of the different age groups in the future.

Figure 1: Development of different age groups in the German population in the future



[3] A good overview of several projections in given in *Deutscher Bundestag* 1994.

[4] The cited figures are mainly drawn from the 8th coordinated population development account (*8. koordinierte Bevölkerungsvorausberechnung*). The population account covers the period from 1993 to 2040 and shows how population number and structure will develop under different assumptions concerning (im)migration numbers. Here, for simplicity, we refer only to the medium projection. For more details see Sommer (1994).

Source: Data from Sommer 1994: 501.

The aging process began decades ago, but it will pick up speed in the future. The percentage of people sixty and older will increase from 20.4 percent in 1992 to 24.9 percent in 2010 and even thirty-three percent in 2040, while the share of people under twenty is likely to decline from 21.5 percent in 1992 to 16.1 percent in 2040. The share of people of working age (twenty to sixty years) will decrease from 58.1 percent in 1992 to 56.5 percent in 2010, and to fifty percent in the year 2040 (Sommer 1994: 501, medium projection).

The rising proportion of older people in the population—who often draw a pension from age sixty onwards—is a major source of concern for the viability of the German pension and health care system. For the viability and international competitiveness of the German economy, the age structure of people in the working age group itself is of even greater importance.

Thon (1995) shows that the aging of the workforce has already begun, but the largest shifts still lie ahead of us: the share of younger people in the employable age group (under thirty) will decline from about thirty percent to twenty percent in the next fifteen years. The percentage of the thirty to forty-nine year-olds will first increase sharply (because of the baby boomers now entering this age bracket), which will create an increase of the fifty years and older category twenty years from now. From the year 2000 onwards, there will be more people over fifty than under thirty in the potential labor force.

In reality not all people in the relevant age group are in or seeking gainful employment. Moreover these trends do not necessarily indicate that the actual workforce in companies ages to the same extent. Figure 2 shows a comparison of the German population and the actual workforce for the year 1994.

Figure 2: The German population and the actual workforce in 1994

Source: Data from Statistisches Bundesamt (Federal Statistics Office), Fachserie 1: Population and gainful employment 1994.

The biggest change over time has occurred among younger and older men, who have much lower labor force participation rates than a generation ago, at the same time the labor force participation rate of (married) women has been continually increasing, although it still lags behind the participation rates of men. The low labor force participation of younger people is mainly due to the education system's expansion: more people stay in school until they get their *Abitur* or even go to university. Thus the overall education level has increased in the last twenty-five years. If one assumes that at least the same proportion of every class (*Jahrgang*) will go on to *Abitur* or university as today and that labor force participation of older people will rise compared to today, the aging of the workforce will be even more dramatic than indicated above.

To avoid skill shortages leading to a rising skills mismatch on the labor market, from a society's perspective three major options are available:

- **keeping people longer in the workforce than today,**
- **increasing the proportion of women in the workforce after they give birth to children, and**
- **bringing more immigrants into the workforce.[5]**

[5] **A single firm's perspective may also include the moving of jobs abroad.**

If Germany wants to maintain its "high skill equilibrium," a better integration of these relatively disadvantaged groups into the labor market is a necessary precondition. This must be accompanied by a higher degree of skill creation and skill updating through continuing training than one finds today.

3. THEORETICAL APPROACH

Researchers dealing with training issues usually stress the problem of market failures in creating human capital and point to the importance of the institutional setting in which skill creation occurs (e.g., Soskice 1994, Backes-Gellner 1996, Finegold et al. 1993). Human capital is different from other capital because it is embodied in the people obtaining it and is therefore mobile. Without external pressure on firms to invest in human capital, whether or not firms provide training for their employees depends solely on the expected rate of return of the investment. The usual assumption is that, from an individual point of view, the new skills acquired diminish over the working life cycle (which is also associated with the typical wage profile over the life cycle) (Mincer 1994: 116f.).

Becker (1964) introduced the distinction between general and firm-specific skills. Because general skills are transferable to other jobs,[6] usually the firm is not willing to pay for this kind of training, so it must be paid for by the employee. With firm-specific skills, the workers are reluctant to invest in their own training because they bear the risk of a layoff. Firms are also reluctant to pay for specific skills training because they face the risk that the worker will quit after completing the training. Because the "hold up"[7] problem exists for both sides, it seems reasonable that firms and employees share the costs of this sort of training since they share the returns afterwards. It is not easy to separate general and specific human capital acquired during a training period.[8] A working assumption is therefore usually made: all training acquired in firms contains some elements of firm-specific skills. General skills, on the other hand, have to be acquired at the individual's expense. It is obvious that job specific tasks determine continuing training needs. In this respect further training is merely the attempt to adapt the workforce to current or emerging requirements However, specific skill requirements are hard to predict because discontinuous innovations can result in quite different skills becoming important (Hardes, Schmitz 1991: 666). From a firm's strategic perspective, investing only in currently needed skills is short-sighted: skills may have benefits beyond immediate tasks, people usually do not stick to one job, and skills have to be broader to get a flexible workforce. As Streeck

[6] The mediation of transferable skills faces the typical collective good problem of free-riding, referred to as "poaching," of competitors. In sum, the trade-off between individual and collective rationality can lead to significant underinvestment in transferable skills. Institutions (see below) can help to heal this market failure.

[7] This neo-institutional term refers to ex-post enforcement problems (of contracts) due to relation-specific investments (sunk costs). For more details see Alchian, and Woodward 1988.

[8] Soskice (1994) offers an application for Germany's initial vocational (dual) training system.

(1992: 15f.) points out, polyvalent skills,[9] i.e., generalized, unspecified, non-dedicated, "redundant" capabilities that can be put to many different, previously unknown uses, enable organizations to respond quickly to unpredictable new demands without a loss of quality.

The expected rate of return to investments in skills is also highly dependent on two other factors: the quality of the provided training and the institutional framework in which these investments take place. I will briefly discuss the quality problem, before going into more details with the "institution matters" hypotheses.

[9] The best example is the so-called key qualification (*Schlüsselqualifikation).*

The quality standards of further training are a very important issue: not only the amount of training, but also its quality, are the key preconditions for a successful translation into business. No one would deny the fact that the better the provided training the more useful it will be for the person getting it.[10] How can someone assess in advance if the provided training suits his needs? Here we face a typical situation of asymmetric information between supply and demand. Training has characteristics of experience and credence goods. Something is labeled an experience good when the buyer only knows after consumption whether the quality matched his expectations or needs or not. Health service is a typical example for a credence good. Even after treatment, the patient never can be exactly sure, if this was really the best treatment for his illness (Tirole 1988: 106). The same holds for training issues: no one will ever know, whether he or she got the best quality of training available or not. For our purpose the experience good characteristic on its own is sufficient to produce market failures. For any demander the transaction costs in checking out several training options (search and change costs) by several providers are exclusive, which gives providers a strategic advantage: if they offer a certain quality (satisficing) not many consumers would bear the risk of a double investment with another provider (Tirole 1988: 294f.).

These short considerations lead directly to the importance of institutions. Regulations on different levels can mitigate market failures to some degree. According to North (1990: 3) "Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction." Putting it differently, institutions set certain property rights, which impose transaction costs for different actions, and set strong incentives to make particular choices. With the given technology, institutions determine the costs of the economy: transformation (production) costs and transaction costs (North 1990: 6). Transaction costs are the costs tied to economic exchange, i.e., to specifying and enforcing the contracts that underlie exchange. One can distinguish search and information costs, bargaining and decision costs, monitoring, and enforcement costs. Transaction costs arise not only on markets, but also in firms, e.g., with regard to labor contracts (Richter, Furubotn 1996: 49ff.). Institutions can provide incentives or disincentives for human capital investments: e.g., the state can pay for the training, impose levies on firms that do not train, provide tax relief to firms or individuals for skill investment. Labor market institutions like dismissal protection can facilitate individual investments in human capital, or hinder further training for older workers such as early exit options do. Institutions can set incentives for intermediate organizations, such as

[10] Also increasing the return on investment until the point where the marginal costs are equal to the marginal utility of the training.

employers' associations and unions, to cooperate (through centralized bargaining) and discourage poaching of workers with marketable skills (Soskice 1994: 46).

Institutions are made up of formal constraints (rules, laws and constitutions) and of informal constraints (e.g., norms of behavior, conventions, self-imposed codes of conduct) (North 1994a: 360). Institutions are important for economic performance because they offer a structure for many everyday transactions. Especially in today's fast changing economies, stable institutions can provide a high degree of reliability and reduce uncertainty about the future. Institutions reduce transaction costs, provide a credible commitment as a prerequisite for long-term relationships, and help to establish habits concerning special problems. In this respect, institutions are closely linked to the economic performance (competitiveness) of countries and their ability to adapt these institutions to new challenges. Hence, institutions should not be too rigid: they should be able to adapt and transform according to needs in the environment.

Whereas this paper focuses mainly on formal constraints, it is acknowledged that informal institutions are important complements to and not substitutes for the legal ones.[11] E.g. internal labor markets are institutions and closely related to human capital, because they create long-term relationships with mutual trust which are very important for German firms (especially larger firms where career advancement through several levels is possible). Internal labor markets set incentives for employees to stay with a firm after receiving further training because of deferred compensation such as occupational pensions, later career advancement, and so forth (Osterman 1994). The possibility of permanently screening employees helps to avoid poor investments in firm-specific qualifications (Hardes, Schmitz 1991: 664). At the entry level there is a minimum level of qualification which has to be met by potential employees to "signal" that they are the sorts of people who might be able to enter the internal labor market. Before getting access to career advancement there is the screening process followed by further training, a better job, further screening, and so forth. The long period one needs to advance in the firm hierarchy provides an opportunity to create mutual trust. Strategically oriented human resource management is a precondition for the functioning of internal labor markets (Hardes, Schmitz 1991: 664).

[11] " (...) and it is the complex interaction of formal rules and informal constraints, together with the way they are enforced, that shapes our daily lives (...)." (North 1990: 83).

In addition, compensatory further training targeted at neglected or discriminated groups like un- or semi-skilled workers can be justified in a longer-term (internal labor market) perspective: ongoing discrimination can lead to less motivation and identification with the firm, and hence to lower productivity.

In this paper I am not assessing how institutions change (see e.g., North 1990, 1993, 1994a, 1994b, Hall 1992, 1993 or Skocpol 1992 on that issue). My aim is different: I am focusing on existing institutions and asking how they provide incentives for coping with the rising need of further training in an aging workforce. Here one has to take into account that the existing institutions have evolved through history, i.e., institutional change is very path dependent (North 1993: 17). Once established, policies set incentives "to act in ways that lock in a particular path of policy development." (Pierson 1993: 606). People try to adapt to particular arrangements, they invest in human and financial capital—in short, they make commitments. These commitments may hinder the establishment of new policies, because they can vastly increase the costs of adopting (previously) possible alternatives (Pierson 1994: 44). Furthermore the cognitive limitations of people (bounded rationality, see Simon 1957)) often lead to certain patterns (routines, habits) of decision making which provided "satisficing solutions" in the past. Facing new problems individuals tend to apply the old routines. The search for new solutions is often simply due to failures of the old routines (March 1994: 29). Thus learning is adaptive, based more on past experience than on assumptions about the future. Seen in this way, institutional change is usually incremental and not revolutionary. In sum, the evolved institutions do not need to be the most efficient ones. A good example of locking in[12] previous decisions is given in Pierson (1993: 609): pension systems in many countries are financed on a pay as you go basis which includes an inter-generational contract, because current workers are financing the pensions of today's pensioners with their contributions. Once established, these systems are hard to change. The shift to a capital funded system would impose an unbearable burden for the current workforce, since they have to pay for the current pensions and save for their own retirement (the problem of double-payment). Consequently people involved in the decision process do not discuss such a shift at all (for the German system see Schmähl 1997).[13]

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[12] An often cited example for a technological lock-in is the QWERTY-keyboard (David 1985). Another one is the overwhelming success of Microsoft software. Despite the fact, that Apple had the better operating system in the 1980s, today Windows is the standard operating system. The main reasons for inefficient lock-ins are increasing returns and the existence of transaction costs in imperfect markets (North 1990: pp. 93).

[13] "Decision makers lean heavily on preexisting policy frameworks, adjusting only at the margins to accommodate

distinctive features of new situations." (Pierson 1993: 613).

Because history matters, one cannot assume that if a system in one country combines the right bundle of incentives for acquiring skills and knowledge, this system can simply be transferred to another country (Finegold et al. 1993). To be successful any response to common economic challenges has to fit into the institutional context of a country. This is to say that there is not only "one best way"; there are functional alternatives for different countries (e.g., Streeck 1992, Hollingsworth, and Boyer 1997). In other words: economies cannot change their directions overnight (North 1995: 30). Even when formal rules are changed, the informal rules often are not. This lesson has been reinforced, for example, by the experiences of the former communist countries and by the attempted transfer of the highly praised German vocational training system to countries like the U.S. These lessons also hold for the further training system.

4. FURTHER TRAINING IN LIGHT OF THE RELEVANT INSTITUTIONS

Looking at advanced industrialized societies, the relevant institutions for high skill provision are not primarily private property rights, but instead labor market institutions.[14] Thus, I am first describing the institutions referring to training, their incentives and shortcomings. I am starting with the initial vocational training system to show whether this system provides a solid basis for further training needs, or if it has created disincentives for further training issues. Then I will deal in more detail with the further training system itself (structure, incentives, empirical evidence). Afterwards I investigate to what extent the institutional framework given by social security and industrial relations provides incentives for firms to invest in further training for (older) workers.

4.1. The Vocational Training System as a Model for the Further Training System?

To date, Germany's high skill equilibrium was mainly based on the success of the dual system of vocational (initial) training. The vocational training act (*Berufsbildungsgesetz*) of 1969 is the legal basis for vocational (initial and further) training. The initial training system is much more tightly regulated through this law than the further training system.

[14] In a wide definition labor market institutions comprise not only labor law (individual and collective), but also pension systems and training regulations.

Initial vocational training in Germany is mostly conducted through apprenticeships in firms. The so-called dual system[15] combines practical on-the-job training with theoretical education in special public schools (*Berufsschulen*). Apprenticeships last between 2 and 3.5 years, resulting in certification after passing a final examination at the local chambers of industry and commerce or at the craft chambers.[16] This system has a long tradition in Germany, which predates the 1969 law, and it guarantees continuity and stability.

The states (*Länder*) are responsible for the schools, while the federal state is responsible for the in-firm parts of initial vocational training. The Federal Minister for Education and Science is officially responsible, but in practice the daily work is shifted to the BIBB (Federal Institute for Vocational Training), which falls under the authority of the Federal Minister.

[15] For more information about the dual system see Münch 1994, Hilbert et al. 1990 or Streeck et al. 1987.

[16] German employers are required to become a member in the respective chamber.

The training follows a codified curriculum (*Ausbildungsordnung*) for every occupation. Each curriculum sets minimum standards for the skills acquired through in-firm training, offers advice for structuring the training process, and provides information about the requirements of the final examination (Streeck et al. 1987: 16f.). New curricula or adjustments of older ones are discussed in the central body of the BIBB, the main committee (*Hauptausschuß*). Its members are delegates from the states, the unions, the employers' organizations and the federal state. Detailed work is done by sectoral experts which reduces conflicts, but also give these people a lot of power. New curricula are only enacted when all sides approve. According to Streeck et al. (1987: 17) it is usually a highly complicated and long process to create a new or revise an obsolete curriculum. The involvement of all the relevant actors facilitates long-term relationships and reliable outcomes for all sides (credible commitments).[17]

The dual system is usually described as highly standardized because the awarded certificates provide reliable information about the acquired qualifications (Allmendinger 1989). In this respect the certificates have an important "signaling" function which allows firms to avoid the transaction costs of a thorough "screening" process of newly hired people. For the apprentices this standardization also lowers transaction costs by reducing the asymmetric information problem about quality (the costly trial and error processes of finding the right provider), since people can rely on getting a minimum level of training quality. Also, the given system guaranteed a relatively high standard of qualification and the willingness of firms to train young people in the past (see Hilbert et al. 1990): Apprentices bear part of the training costs in accepting a low wage, and centralized bargaining for the wages reduces the poaching problem significantly. However, the involvement of unions and employers' associations leads to highly complex institutions and bargaining processes (Streeck et al. 1987: 14), which makes it very slow in adapting to new requirements.

[17] Fukuyama (1995: 90) labels Germany a high trust economy in terms of social capital especially through intermediate organizations.

One example is the curriculum of the bank clerk (*Bankkaufmann*) which is currently under review,[18] but has not been adjusted since 1979, a time when computer knowledge was rather low. To get changes started in this field, the Federal Minister of Education, Science, Research and Technology had to launch a special program in 1995 to create training regulations for new professions and to restructure obsolete regulations. More than eighty professions are affected.[19] Another often quoted example is the new regulation of occupations in the metal sector introduced in 1987. The process lasted about fifteen years and was a thorough revision of the forty year-old curriculum (Streeck et al. 1987: 75). It included a reduction of the number of occupations from forty-two to six (with sixteen specializations). The training period has been extended to 3.5 years, with the first year of training being the same for all occupations, while afterwards the training becomes more specialized in six-months steps (Streeck et al. 1987: 79). This reform acknowledged the need of facilitating more general, polyvalent skills (key qualifications) usable in a broader occupational field, but still the revision process lasted much too long.

[18] A lot of other rather old fashioned curricula are given in *Berufsbildungsbericht* 1996: 66f.

[19] The main aim of this initiative is to speed up the revision of old and the creation of new curricula (see Berufsbildungsbericht 1996: 67f. and 99). Since, the text of the agreement gives a lot of interpretation freedom, it remains to be seen if the goal will be achieved.

The consequences are twofold: either apprentices acquire already obsolete qualifications when trained according to curricula, or firms take curricula as minimum standards and use the leeway provided for facilitating more or higher level skills. The latter seems to be true especially for larger companies (Streeck et al. 1987: 21). In this respect, the dual system loses its signaling function. Workers with the same certification can no longer be assumed to have a uniform qualification level, since the company that provides the training becomes more important than the standardized examination. These facts provoke questions about the ability of the dual system to meet the skill demands of the future.[20] As Mahnkopf (1989: 78) puts it: "Completed (initial) vocational training will become the prerequisite for stable employment to an increasing degree (...), but the lasting willingness and ability to qualify will become even more important." (own translation). Seen in this way, the dual system remains important in two respects: in providing some basic occupational and transferable skills, and in mediating an attitude to work (learning how to learn) for a high share of young people.[21]

4.2. Continuing Vocational Training

4.2.1. Institutional Structure and Incentives

Before going into detail one should try to clarify what further vocational training really means. The definitions given in the literature are very broad and include nearly everything beyond initial training, such that it is difficult to distinguish among other kinds of further training. Further vocational training can include learning processes at the workplace itself, reading special literature at home, attending in-firm or

[20] This is not the only reason why the dual system is under siege right now. Another discussion is centered around the costs apprenticeships impose on employers (e.g., Wagner 1997). The capacities for vocational training have been cut by many companies during the last years. Combined with rising preferences for an academic education and other problems caused by the dual system (gender and ethnic segmentation) the prospects of the dual system of vocational training has been discussed controversial during the last years (for an overview of the main arguments e.g., see Schmid 1992 or Timmermann 1990).

[21] A study by the IAB (Institute for Employment and Occupational Research) in Nuremberg estimates that the labor demand for unqualified workers will drop from 20.2 percent of the workforce in 1991 to 10.1 percent in 2010. Whereas the need for people with certified vocational training will increase from 59.1 percent to about 63 percent in 2010 (Tessaring 1994: 12).

external courses, seminars, informational events, or an interruption of gainful employment to attend full-time courses, or training during periods of unemployment. A narrower definition would include only attending seminars and courses.

4.2.1.1. Regulations

The following list of regulations dealing with continuing vocational training is neither complete nor very detailed. This is due to the huge amount of existing regulations on several levels which nevertheless do not constitute a "system" of further training. One could even speak of a "jungle" of further training.

The employment promotion law of 1969, distinguishes between adaptive (*Anpassungs*), and career advancement (*Aufstiegs*) further training (Streeck et. al 1987: 38). Whereas adaptive further training is usually short-term, does not lead to standardized examinations, and often rarely yields certification of skills at all, career advancement further training is longer and usually leads to an acknowledged certificate. The best known example here is the master (*Meister*) training and its equivalent in the service sector, the *Fachwirt* training (Sadowski, and Decker 1993: 87f., or Finegold, and Keltner 1997).

Besides the already mentioned vocational training act (section 4.1) which is the legal basis for initial and further vocational training, there are several other important regulations. For publicly financed training, the employment promotion act (*Arbeitsförderungsgesetz*) of 1969 is relevant. For other kinds of further school or university training the education promotion act (*Berufsausbildungsgesetz, Bafög*), which was codified in 1971, is important. Ten states (*Länder*), including North Rhine-Westphalia and Bremen, also have so-called training vacation laws *(Bildungsurlaubsgesetze)*, which give everyone the right to receive up to five days of paid leave for general training courses per year (*Berichtssystem Weiterbildung VI* 1996: 357, further on Report System on Further Training, RSFT).

There are collective agreements on vocational further training that are relatively vague about the conditions under which an employee has access to certain kinds of training. Bispinck and Bahnmüller (1991) show that even when further training questions are addressed in collective agreements,[22] there are problems of implementation and enforcement at the regional and firm levels.

The formal rules for further vocational training are of only minor importance; the system is largely regulated through informal agreements with a diversity of financial arrangements between employers and employees (Sadowski, Decker 1993: 188). Official statements by the government also stress the market

[22] They investigate the enforcement of the collective wage agreement (*Lohn- und Gehaltstarifvertrag*) for North-Württemberg-Northbaden from 1988.

orientation and the subsidiary role of the state in further training issues in Germany (Sadowski, Decker 1993: 36). The same is true for managers who strenuously object to state intervention (Finegold, Keltner 1997).

4.2.1.2. Forms and Providers

Publicly financed continuing vocational training is mainly designed to reintegrate unemployed people into the labor market. It includes retraining (*Umschulung*) activities as well as continuing training courses for people who have already finished initial vocational training successfully and need an update of skills (e.g., women after a long period of family leave). This kind of training is part of the so called "active labor market policy" and is basically financed through contributions to the unemployment insurance. There is a trade-off between unemployment benefits and active labor market policy: since the budget of the unemployment insurance is limited, and in times of high unemployment revenues drop while the claims for unemployment benefits increase, the funds available for active labor market policy are declining. Not surprisingly, the former head of the Institute for Employment Research (*Institut für Arbeitsmarkt- und Berufsforschung*), Buttler (1991) concludes that publicly financed further training has only a supplementary function in Germany.

Universities are usually not involved in vocational further training, although they sometimes provide courses for teachers. Since German universities are carrying a huge overload of students, given that an increasing share of every class is going on to higher education, along with the ongoing programs of cutting expenses, a greater role for universities in this field is not on the agenda. Furthermore, the current regulations set major disincentives for universities (especially the professors) to engage in further vocational training (Finegold, and Keltner 1997). Universities and *Fachhochschulen* do play a crucial role in providing initial vocational training for future German managers. But even here inappropriate government regulation is seen as a major hindrance for innovation by company managers, resulting in a lack of involvement of universities in ongoing management development (Finegold, and Keltner 1997). *Fachhochschulen* are more vocationally-oriented, education is shorter, and professors usually have some work-experience in the industry, which sets *Fachhochschulen* in a comparatively favorable light with regard to future demands in further training.

The most standardized career advancement training *(Aufstiegsweiterbildung)* is the *Meister* further training. The courses are overseen by the Chambers of Industry and Commerce, which also carry out the final examination. The regulations for the crafts *Meister* are very old, but in 1977 the regulations for the increasingly important industry *Meister* were added. Some *Meister* exams can only be taken in specific chamber districts (Streeck et al. 1987: 43). This system guarantees equivalent standards for all masters in a field. Usually courses are taken in the evenings and weekends, and are paid for by the individuals.

Besides the *Meister*, there are several other forms of standardized career advancement training for people in business occupations, like accountants (Sadowski, Decker 1993: 87). People in these fields acquire a so called *Fachwirtausbildung*. The conditions are quite similar to the *Meisterausbildung*. One example

on the branch level is the public savings banks (*Sparkassen*), which run an inter-company training system, in which employees are prepared for a standardized examination that leads to the degree *Sparkassenbetriebswirt*. The full-time course lasts seven months, during which time full payment is provided by the employer. In addition, people can attend the central savings institution academy in Bonn. Graduates from there are treated like graduates from universities in the *Sparkassen* sector. The banking sector has a banking academy, which can be attended by employees on their own initiative in the evening (and weekends) and leads to some sort of academic degree.

4.2.1.3. Incentives and Failures

As already noted, the main emphasis for skill creation lies on firms and individuals. The informal setting generates several problems. If skill creation lies solely in the hands of individuals, this will lead to significant under- and/or disinvestments in skills. One problem is the asymmetric information between providers and the individual.[23] Search costs will be very high to find the right provider, and even then the individual cannot be sure of getting the most appropriate training (experience and credence good problem). Furthermore, if the required skills are more firm specific, the individual will not be willing to pay for this sort of training on her or his own. Therefore the sharing of the costs with the employer seems to be the proper solution. Employers are usually in a better position relative to providers, since they have more resources and are likely to bring a lot more people in for training, if they are pleased with one provider. Large employers can provide the training on their own, if it is very specific and/or enough people have to be trained the same way. Therefore we can expect a large number of employers training their own workers, and providers who try to "signal" their own competency, e.g., through cooperation with other providers and standardization attempts.

[23] Of course this analysis does not hold not for the standardized *Meister* and *Fachwirt* training, which are a positive example of overcoming the experience and credence good problem.

In comparison to their engagement in initial vocational training issues, unions and employers' associations are not very involved in further training. Since further training seems to be mainly a matter on the shopfloor level, the quasi-natural partner for managers on further training issues are the works councils as agents of the staff. Codetermination rights in this field are relatively weak, but works councils have codetermination rights about topics, content, methods and participants, if the firm is already engaged in any sort of further training (Sadowski et al. 1995: 499). In smaller companies works councils are not specialists on continuing training; therefore one should expect more activity in larger companies about topics, content, and methods. The works councils' influence about who is going to participate should be greater in smaller companies, because in large firms supervisors often make these decisions (Grass 1997: 150f.). If works councils are mostly the agents of union members, which are still predominantly full-time working male *Facharbeiter*, they should get more access to further training measures than other groups[24] (see the Insider-Outsider theory on that, e.g. Lindbeck/Snower 1988). Sadowski et al. (1995: 501) assume that there is no conflict between managers' and works councils' interest as to who gets access to further training, and works councils' activities should be limited to few cases. If the assumptions of the insider-outsider approach are correct, one should expect agreements about wage increases for further training participants. Indeed, some of the collective agreements about further training reward the participation with an increase in wages even if no job change happens afterwards (Mahnkopf 1989: 84f.).

4.2.2. Empirical Outcomes

4.2.2.1. General Remarks

[24] An exception has to be made for older workers, because works councils and (most) older workers are ein favor for an early retirement (see section 4.3).

In this section I will summarize results from empirical studies of German further vocational training. There is a large number of studies, each with a different focus.[25] Studies based on firm data cover questions like how much firms invest in further training measures, what kind of training they offer, if they conduct cost/benefit analysis, how activities are planned, and how important further training in the companies is. Surveys among individuals cover different issues. They are more reliable in answering questions such as, how many people really took part in further training (firm data usually show only participation cases), how much time a person spent on further training activities, and individual reasons for participating or not in further vocational training.

Before presenting some survey results, several problems tied to all available data should be mentioned. All training data are input oriented and show the level of time spent and the costs of further training activities. But all sets are poor indicators of the "outcome," or performance, achieved, both on the macro and on the micro level (Auer 1992: 28). In fact, one knows little about the quality of the training provided or its effectiveness using survey data (Auer 1992: 51). Evaluation of training activities is only available for publicly financed training in Germany.

All data show an increase in further training participation and spending over the last twenty years. Younger cohorts start out with a higher level of training and maintain a higher level over their working lives

[25] The most recent large scale studies from a firm perspective are the IW-survey (*Institut der Deutschen Wirtschaft*) with data from 1992 (Weiss 1994) and the European Training survey, initiated through the FORCE program, with data from 1993 (e.g., Grünwald, Moraal 1996). An overview and summary is given yearly by the *Berufsbildungsbericht* (1996). Smaller studies are documented in Knoll and Knoss (1995), Pawlowsky and Bäumer (1995), Sadowski and Decker (1993), Schömann and Becker (1992) for all groups or mid level workers, and Finegold and Keltner (1997), who focus on manager training. Pawlowsky and Bäumer (1993) draw on surveys among individuals in longitudinal view. The most recent *Berichtssystem Weiterbildung VI* with data for 1994 (Report System Further Training, RSFT), and Auer (1992) deal with both the firm and the individual perspectives.

than older cohorts (e.g., Schömann, Becker 1992 or Pawlowsky and Bäumer 1993, both with longitudinal data). This goes along with an increase in expenses, but not necessarily an increase in the amount of time spent on further vocational training. In sum, employers and employees acknowledge the rising importance of further training, but are also increasingly aware of the costs (e.g. Schmähl, and Gatter 1994).

To give a complete picture of the money spent on vocational further training in Germany, I start with an overview given in the *Berichtssystem Weiterbildung VI* (RSFT VI) with data from 1994 (RSFT VI 1996: 317).

Overall, the estimates about total continuing training expenses per year (including opportunity costs) lie between 101.9 and 120.4 billion Marks. Publicly financed further training (through the Federal Labor Office) amounted to 21 billion Deutschmarks, semi-public institutions (*Gebietskörperschaften*) spent about 10.3 billion, and individuals spent 45.9 billion (including 36.1 billion estimated opportunity costs for leisure time). Firms spent between 24.7 (Force) and 43.2 (IW) billion Marks. This is mainly due to different definitions of "occupational further training" in the two large firms surveys and the reluctance of the Force-Study to use estimated numbers. Weiss also adds an estimated sum of 6.7 billion for the sectors (farming, liberal professions, etc.) not included in the IW-survey.

Despite their differences, both studies show the important role firms play in further occupational training in Germany. Counting only real expenses, companies spend much more money on further training than any other institution. They also invest more money than they do in initial vocational training overall, but not per participant (firms spend roughly DM 30,000 on apprentices per year, see Wagner 1997).

According to the FORCE-study, firms spent DM 2957 per further training participant in 1993, while per employee the average amounts to DM 533 (Grünwald, Moraal 1995: 12f.). In the old *Länder* the costs per participant dropped from DM 2591 in 1987 to DM 2384 in 1992. Weiss (1994: 124) points out that this indicates a higher degree of economic awareness within firms. In my opinion these figures show the immense need for retraining and upskilling in the former GDR, and that a lot of firms targeted their further training activities to their employees in the new *Länder*. For all of Germany (including the new *Länder*), the costs per participant are even lower, only DM 2275, or DM 1924 per employee in 1992 (Weiß 1994: 115).

4.2.2.2. Firm Size

Both firm studies give evidence that larger companies in Germany (with more than 1000 employees)—as is the case in other OECD countries—spend a visibly higher amount than do smaller firms on further vocational training. Larger companies have an established system of strategic personnel planning in which further training is seen as essential part of personnel development, as a future investment in human capital. Finegold and Keltner (1997), however, claim[26] that "opportunities for sustained development are

[26] Based on their thirty-nine semi-structured interviews with the main providers of management development in Germany.

open to only a small and elite group of the managerial workforce in large firms," and that this is not an essential part of personnel development for a large proportion of employees. This accords with my assumption that in larger firms works councils have less influence on the selection of participants (since the concerns of elite groups are not an issue of works councils activities).

In smaller companies further vocational training is even more aimed at reacting to existing shortfalls of skills (Kuwan, Waschbüsch 1994: 14). The predominant forms of further training in these companies are "softer," i.e., less formalized and closer to the workplace (Kuwan, Waschbüsch 1994: 15).

Whereas twenty-five percent of those employed in small companies (with under 100 employees) take part in occupational further training, and twenty-eight percent in large companies (with over 1000 employees) take part, the most active people are to be found in middle size-companies with 100-999 employees: Thirty-one percent of them participate in further training (Kuwan, Waschbüsch 1994: 56). People in the new states are more active than people in the old states (Kuwan, Waschbüsch 1994: 57), which is mainly due to their need of upskilling in the transformation process.

The questionnaire asked also about structural components of the training activities: subject areas, the organization of time, and the relative importance of formal and informal further training. There is no information about the spread across different employee groups (Weiß 1994: 95). Off-the-job further training activities take place mostly during working hours with full payment (80.5 percent). This marks a decline compared to 1987, which can be interpreted either as a decrease in further training activities, or what seems more likely an higher density of activities with the employees carrying a higher share of costs or leisure-time.

The larger the company, the higher the percentage of training during working hours (Weiß 1994: 99). In the old Federal States, the average hours of training per participant dropped from 30 hours in 1987 to 26.2 hours. This indicates a move towards shorter training courses (Weiß 1994: 94). In times of lean management the need for further training still increases, but training activities increasingly have to prove their benefits to the objectives of companies. This includes a fair amount of decentralizing responsibilities for training activities, such as integrating employees into the planning and development process of training activities, to better meet the need of employees and departments (Weiß 1994: 13).

Further training activities increase not only in numbers, but also in range with the size of a company (Weiß 1994: 50f.) External seminars are more likely in smaller firms, while larger firms have a larger number of internal seminars (Weiß 1994: 60f). A lot of companies do not have exact statistics about the volume of further training activities; just over one third of the companies estimate the volume of all their training activities (Weiß 1994: 70f.) For the year 1992, the study shows 192,000 seminars and other courses, 1.2 million participants and 36.4 million hours (Weiß 1994: 73).

4.2.2.3. Sectors

The numbers also differ in different sectors. A lot more money is spent in the export-oriented engineering sector, in the banking and insurance businesses,[27] and in the energy sector per participant, than in other sectors like construction or retail. This follows the finding of Finegold and Keltner (1997) that the proportion of "high potential" employees (who are designated to receive more training) in these areas far exceeds the share in other sectors.

Striking differences are found between members of the chambers of industry commerce and of the crafts chambers. Whereas the former offer internal and external seminars to a large degree (63.4 percent and 67 percent), for the latter this is only true for 32.1 percent and 37.5 percent of companies (Weiß 1994: 49). Forty percent of those employed in the public sector take part in occupational further training, while only 24 percent of those in the craft sector and 30 percent of those in the retail and services sector do so.

4.2.2.4. Firm Rationales

Despite the fact that an increasing percentage of human resource managers stress the pivotal role of further training for competitiveness, they do not follow any strategic approach, as shown by several studies. Knoll and Knoss (1995) conducted a small scale survey in 330 companies with more than 1000 employees and a turnover of more than 100 million DM per year. They show that the most important reason (named by ninety percent) for firms to pay for any investment in human capital is an urgent need for the acquired skills in the firm.

[27] Human capital has always played a significant role in these branches.

Pawlowsky, and Bäumer (1995) asked about training practices in firms, given the broad leeway through the legal rules and the recognized needs in companies. Their small-scale survey of 109 firms engaged in further training shows that only eighteen percent of firms follow a proactive, potential-oriented policy, whereas sixty-five percent of the firms conduct a highly reactive human resource policy. Skill formation needs are simply the result of new technical or organizational requirements and not of an increasing awareness of human resources as a key factor for the viability of a company.[28]

Another relevant issue is the distribution of costs when creating general and firm-specific skills. My own research based on interviews with human resource managers in German insurance companies (Schmähl, Gatter 1994, Gatter, Hartmann 1995) is confirmed by case studies cited in Sadowski, Decker (1993: 184), in which about fifty percent of the interviewed firms are not afraid of employees' quitting after successfully completing further training. The reasons given in both studies focus mainly on the attractiveness of the company to employees, ranging from, "we do a lot for our employees" to "internal career ladders." In the study by Knoll and Knoss (1995) the danger of employees' quitting after finishing their training is not acknowledged by more than two of three firms, as most of them have safeguards in the form of implicit or explicit contracts.

In more than half of the companies surveyed, the employees make financial contributions to further training; in eighty percent of the firms, they contribute their time (Knoll and Knoss 1995). Most companies do not attempt to evaluate the effectiveness of further training, nor do they gather relevant data to do so. Thus, one does not know whether further training has any impact on productivity.

To summarize the findings here, despite the alleged priority human resource managers give to further vocational training, the reality is somewhat different. Initial further training is still the major source of skill creation in which firms invest, and personnel development in later career stages is only provided for a small share of employees. Moreover, any further training will fail in proving its benefits as long as no relevant data are gathered.

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[28] Similar results are documented in Weber et al. (1994: 150ff). They find evidence that the awareness of a need for further training often becomes acute only once investments in new technologies have already been made. Further training is often more reactive than proactive, and the decision whether or not to train is usually subordinated to the investment in technical equipment.

4.2.2.5. Individual Level

According to the RSFT VI, forty-two percent of all Germans between the ages of nineteen and sixty-four took part in some kind of further training in 1994. Compared to 1991 this is an increase of five percent points (RSFT 1996: 21). Everyone who took part in some sort of occupational related training course or seminar (incl. retraining) was counted as a further vocational training participant. There is also an increase in the participation rate compared to 1991: twenty-four percent versus twenty-one percent (RSFT 1996: 42). In absolute numbers, this makes about 11.2 million people compared to 9.8 million in 1991 (RSFT 1996: 44). The volume of time spent in continuing vocational training has not increased since 1991: it is about three percent of the working time of all people in gainful employment (RSFT 1996: 58). Of interest is the number of hours per participant: on average it is 19.7 hours per employee (Weiss 1994: 88). The numbers show an average of 29.6 hours per participant (Weiß 1994: 91).

Especially interesting is the number of hours several subgroups spent in further vocational training:

- Men spend more time in further vocational training activities than do women
- Younger people spend more time than older people
- People with a higher level of general educational attainment have higher participation rates than those with a lower educational level (RSFT 1996: 65).

Table 1 presents a summary of the participation rates of different socio-demographic groups.

Table 1: Further Training Participation Rates of Different Socio-demographic Groups

	Participation rates in %	Hours spent in further training	
		per participant	all people
All interviewed people	42	141	59
Sex			
Men	44	160	70
Women	40	119	48
Age			
19-34	49	194	95
35-49	47	121	56
50-64	28	68	19
School education			
9 years	29	102	29
Middle school	47	161	75
University entrance examination	60	156	94
Vocational Training			
None	19	64	12
Apprenticeship	39	154	60
Master	52	128	66
University degree	64	126	80

Source: RSFT 1996: 66

An interesting point here is that *Facharbeiter* and *Meister* spend more time in further vocational training than people with a university degree. The access to further training courses is mostly regulated through the immediate superior or another person from the upper levels of the hierarchy, which can prevent the participation of certain groups especially subject to discrimination. These findings need further disaggregation, but can also support the insider-outsider theory. Another hindrance for participation is the opacity of the further training market. Roughly fifty-eight percent of those interviewed consider themselves sufficiently informed about the further training market. Conversely stated, this means more than forty-two percent of all people between nineteen and sixty-four are not pleased with the transparency of the supply of further training measures. The lack of a further training system leads to a huge number of providers, which is more like a jungle for a lot of potential demanders. The opaque market makes it difficult to assess the quality of a single provider or seminar. Thus, a lot of people (especially when they have to pay as well as when they spend their spare time) are very reluctant to bear these high transaction costs. To get more transparency and standardization in the market, there are two trends in the quality management field: the joining of further training suppliers to so-called consortia for quality assurance (*Gütesiegelverbünde*) and certification according to DIN EN ISO 9000ff. (Kuwan/Waschbüsch 1996: 12). The *Gütesiegel* associations differ considerably in terms of their size and form of organization, but what they usually have in common are functions and goals (Kuwan/Waschbüsch 1996: 13). The main goal of these consortia is to play a signaling role, particularly for companies,[29] by guaranteeing that the association's members adhere to a minimum standard of quality. The point of the program is to create a greater market transparency which will eventually eliminate low quality providers (Kuwan/Waschbüsch 1996: 13ff.).

The reasons for providers to get certifications according to DIN EN ISO 9000ff. are similar. There are, though, some differences: certification providers do not fulfill any function of interest representation, and they also do not promote exchanges of training experiences between participating companies (Kuwan/Waschbüsch 1996: 19). Other reasons for certification are especially the demand of customers for standardization, as well as efficiency gains, through the control of internal procedures (Kuwan/Waschbüsch 1996: 20).

Both approaches to quality control have had problems. According to Kuwan and Waschbüsch (1996: 79f.) neither enhances transparency. *Gütesiegelverbünde* can provide some minimum standards, at least on the regional level, but they lack a continual evaluation. Certification according to ISO 9000ff. means only the certification of self-defined criteria for internal processes but not for products itself, and therefore does not lead to any standardization at all. A small scale survey by Homburg and Becker (1996) of forty firms of different sizes and different industrial sectors in Germany, Austria and Switzerland confirms skepticism about

[29] Private/individual demanders of training do not pay so much attention to this.

certification. Only thirty percent of the companies noticed an increase in their product quality. It remains to be seen if certification euphoria in Germany is not just one more fashionable management method.

In sum, an increasing share of people enhance their skills through different further vocational training activities, spending money and leisure time to invest in their qualifications. For the public part of further training, empirical data show that people who have already achieved a higher level of qualification are more likely to get another upgrade of skills. The human capital aspect (i.e., the expected rate of return) apparently plays an important role in the consideration of officials in deciding who will have access to publicly financed further training. On the firm side, it turns out that older workers, less qualified people, and women are receiving less skill investment; for women this is especially true when they work part-time. It is not the lack of formal regulations in this area that hinders the investment in human capital. Rather, it is likely that attitudes and other informal institutions, like the existence of internal labor markets, in combination with how people get access to further training, can and do result in (implicit) discrimination against certain groups, like part-time or older workers. However, different studies show that German investments in continuing vocational training lag far behind other countries (Backes-Gellner 1996, Finegold, Keltner 1997). The main emphasis is given to initial vocational training provided either through the dual system (apprenticeships), or universities and *Fachhochschulen* for higher positions. When starting a job, newly employed people are usually expected to bring their certificates, to prove their ability to handle the tasks of their job.

4.3. Industrial Relations and Social Security: Germany's Institution of Early Retirement

Industrial relations and social security regulations are not directly connected with the provision of initial or further vocational training. But since they can set strong incentives either for an early exit or for remaining in the workforce, they are of great importance for the expected rates of return on investments in human capital. In Germany, institutions like the pension regulations and the Employment Promotion Act (*Arbeitsförderungsgesetz*) have provided major incentives for an early exit from the workforce and early retirement.[30] In what follows I only present some core features of the system on different institutional levels.

The statutory pension system (*Gesetzliche Rentenversicherung*) exists nationwide for most employed people.[31] People pay contributions according to their income. The pension they draw later mainly depends

[30] Like educational systems, social security regulations structure life courses, but mostly at a later point in an individual's life (Allmendinger, Hinz 1997). For a thorough treatment on the history of the early retirement regulations see Gatter, Hartmann 1995 or Rosenow, Naschold 1995. Abridged English information is given in Schmähl, Gatter 1994 or Naschold et al. 1994. A complete overview would also have to take into account family law, because current institutions set strong incentives for women to exit the labor force after giving birth to children.

[31] Above a certain level of income and weekly hours worked. Civil servants have their own pension system which is financed through tax revenues.

on their former income level and the number of years during which they paid in.[32] Hence, the German statutory pension system preserves former income positions to a high degree. This work-centered system therefore provides a predictable and relatively high level of pensions for people with a long working life (compared to many other countries).[33]

[32] For some differences to the American pension system which seems quite similar on first sight, see Hinrichs 1993.

[33] Therefore women often draw low pensions, because they usually drop out of the workforce to raise children. However, women often draw two pensions (their own and a widow's pension). Therefore we cannot provide precise evidence on their real income positions.

The reference retirement age is sixty-five years, but there are several exemptions from this rule. Up to 1997 it was possible to claim a pension[34] at sixty-three (for long-term employed men) or at sixty (for unemployed people, longer-term employed women, or disabled people). People with an occupational disability (partial pension) or a general inability to work (full pension) are eligible for a pension at any age,[35] if certain minimum conditions regarding contribution payments are met.

In times of high unemployment these rules were adapted to relieve the labor market while not sending older workers into an uncertain autumn of one's life *(Lebensabend)*. To give an example: those eligible for an occupational disability pension are obliged to work part-time. Because most of these people cannot compete with healthy people in the present labor market, the Federal Constitutional Court *(Bundesverfassungsgericht)* decided that these people can draw a pension designed for people who are unable to work in general. This court ruling replaced property rights set by law and became a very important institution itself.

One governmental attempt to alleviate the unemployment problem was the "Early Retirement Act," which was in force from 1984-1989. It enabled workers from the age of fifty-eight onwards to withdraw from the labor market and bridged the period until the earliest possible receipt of a retirement pension with payments from their employer. The law had to be concretized at the sectoral level through collective agreements. The negotiated agreements covered only one third of the potentially eligible workforce, because most of the financial burden had to be carried by the employers.[36] However, in the sectors covered through collective agreement, about seventy percent who were entitled to take early retirement did so. Collective agreements on early retirement were still enforced through the mid-1990s, with the most recent being in the insurance sector.[37]

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[34] Without actuarial deductions for the longer period of drawing the pension (longitudinal view).

[35] Nota bene, the risk of becoming occupationally or generally disabled before the age of sixty, increases disproportionally from the age fifty onwards, reaching a peak between fifty-five and sixty (Hoffmann 1993: 314).

[36] The Federal Labor Office gave subsidies when certain conditions were met.

[37] In 1995 the collective agreement was prolonged until the end of 1997. The unions were much in favor of the agreement, whereas the employers did not want to prolong it because of the high cost. The bargaining result was:

prolongation of pre-retirement, but a flexibilization of weekly working hours (downwards and upwards to more than forty hours) for all employees.

Cheaper for companies and therefore more often used is the pension for the unemployed, in connection with the so called "59 rule": the maximum period of drawing unemployment insurance benefit has been extended for older people up to two years and eight months. Especially in companies which had to carry out staff cuts, older people were dismissed[38] at the ages of fifty-seven or fifty-eight, and their unemployment insurance benefit was supplemented by the employer. This was a very elegant way of getting rid of older workers in a socially accepted manner. During the early transition period in the former GDR several similar institutions were established to alleviate at least some of the huge transformation problems.

However, many older workers themselves wanted (and still want) an early exit from the labor force. As Kohli (1985) puts it: in Germany, retirement has become an established period of life within the course of life itself: an institution. Codetermination on the sectoral and firm level (dual system of workers representation) played a decisive role in institutionalizing early retirement for older workers. The long established system of codetermination[39] provided the needed credible commitment and trust for the bargaining processes between employers and employees. The "dismissal protection law" in combination with collective agreements in several sectors usually makes it impossible to dismiss older workers. Unions and works councils (who are often in favor for early retirement, because of high unemployment rates) used this pledge in negotiations about early retirement to get high severance packages for the older workers.

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[38] Formally, mostly mutual agreements to end the labor contract were signed, because in most sectors the shedding of older workers is nearly impossible, due to dismissal protection for people with longer tenure.

[39] It is codified in the "Co-Determination Law" (*Mitbestimmungsgesetz*) from 1976 (for the Montan-industries there is an older law from 1951). The codetermination on firm level is strictly regulated in the by the "Workplace Labor Relations Law" (*Betriebsverfassungsgesetz*).

The first serious governmental attempt to reverse the early retirement trend on social security expenses was the "Pension Reform Act of 1992." The main aim of this reform was to enhance the viability of the pension insurance due to the demographic changes to come. Thus, the "Pension Reform Act of 1992" introduced a partial pension for elderly people to induce them to postpone retirement and scheduled a rise in the minimum age a person could draw a pension without actuarial deductions[40] from 2001 onwards. Because of serious financial problems due to increasing unemployment rates in Germany, recent legislation moved forward this rise of the age to claim a pension without deductions to 1997, and complemented the highly unsuccessful partial pension scheme by the "Old Age Part-Time Work Law" *(Altersteilzeitgesetz)* which has been in force since August 1996.[41] The partial pension scheme could not stop the trend to an early and abrupt retirement. It is very complicated (thus, high transaction costs), the minimum age of eligibility is too high, older men are reluctant to work part-time and so forth (see Oswald et al. 1996: 345, for more details). These laws will provide a wider range of retirement options by combining part-time work with drawing part of the pension or getting subsidies from the Federal Labor Office (see Bäcker, and Naegele 1996).

In sum, we can conclude that to date, labor regulations set strong incentives for an early exit from the workforce, and strong disincentives for human capital investment in older workers. Recent legislation has changed these formal (especially retirement regulations) to a high degree.[42] The pull factors from the retirement side have vanished. Someone who wants to take early retirement now has to face severe financial deductions, because it is highly unlikely that companies will completely fill the income gap. The former success of unions and works councils in negotiating high severance payments for their clients could become a severe problem in the future, since many workers now see early retirement (with enough money) more as

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[40] Of 3.6 percent for every year drawing the pension before the age of sixty-five.

[41] In Hall's terms (1993: 278ff.) both reforms (1992 and 1997) can be labeled a "first order change." The goals of the policy (third order) and the basic instrument (pension insurance as second order) remained the same, whereas the concrete setting and level of the instruments were changed. But since a "goal enlargement" took place the incremental process of institutional change can lead to more profound (second or third order) changes in the long run.

[42] The necessary reform of the pensions for occupational disabled persons is still under review.

a reward for a long worklife. Hence, it remains to be seen whether any collective agreements will be signed and whether these enforce a prolongation of the working life and at whose expense.

5. CONCLUSION

Empirical findings suggest that both formal and informal institutions matter a lot with regard to skill formation processes. Appropriate and tight regulation in the initial vocational training system sets incentives to provide basic qualification for a broad range of young people, but it is too rigid to promote fast technological change. The highly fragmented German further vocational training system, on the other hand, is built in such a way as to be able to cope with rapid change. But it produces several types of discrimination that probably will probably lead to a stronger stratification of the workforce and also create the risk of rising mismatch on the future labor market. Furthermore, the further training efforts in other countries like France, which were established simply because of necessity (because of a defective initial vocational training system), could become a competitive advantage for these countries in the future (Backes-Gellner 1996: 315).

What seems even more important in this respect are informal institutions and attitudes, such as internal labor markets, seniority wages, and pre-retirement policies. Pre-retirement is often interpreted as a reward from a manager's point of view. Why should someone be bothered with continuing training after reaching fifty, when he or she is expecting to take pre-retirement at age fifty-eight? From the human capital point of view, the return on investment on older workers will not be sufficient if they retire early. Moreover, Germany still faces enormous unemployment rates. When older and less qualified workers get higher wages than younger ones, rejuvenating and upskilling the staff through pre-retirement has often been simply the cheapest and most socially accepted solution for companies.

These habits of dealing with problems within existing institutions evolved over a long period of time, and it will need some time to reverse them. The recent retirement legislation should speed up this process, because of the strong change in monetary incentives.

Another closely linked issue is the attitude of workers towards part-time work. In times of individualization and flexibilization, the majority of older male workers still thinks that part-time work is a stigma, and that an abrupt and early retirement is the only possible way to leave the labor force (Bäcker and Naegele 1993). When younger cohorts get used to flexible working hours, gradual retirements should be easier. A rising acceptance of part-time work would also ameliorate the access of women to firm-based further training measures.

Interesting in this respect are the reactions of companies to the recently changed pre-retirement options. To avoid part-time work of older workers, Volkswagen[43] will use the new old-age part-time law in

[43] Volkswagen is the first large company introducing an old-age part-time model. This is partly due to the fact that Volkswagen is not member of an employers' association, hence negotiations do not have to take into account interests of different firms in a sector. Moreover Volkswagen has introduced several creative (especially working

a creative way: officially, older workers between fifty-five and sixty years work half-time, but in reality they will work full-time for 2.5 years and then stop working entirely. VW will pay them eighty-five percent of their full-time wage during all five years. Furthermore VW will pay the full contributions to the pension system until the age of sixty. This seems a generous arrangement on first sight, but as pointed out in section 4.3, those who draw pensions from the age of 60 onwards will face severe financial deductions from now on.

From an economic point of view the German system is also too rigid with regard to wage flexibility. The so called *Flächentarifvertrag* (regional or national collective agreements) usually guarantees high levels of wages that are mostly linked to tenure and/or age, but not to productivity. Whereas the collective bargaining helps to solve the prisoner dilemma in the initial vocational training field (low wages for apprentices), it might be one reason for Germany's high unemployment rate. Unions still concentrate too much on their traditional members, the male *Facharbeiter*. Highly inflexible wage structures could result in a dualistic society along the lines of "two nations": a certain share of privileged employees in core jobs will join an increasing proportion of "outsiders" with unstable careers, low wages, and no access to social security. Recent examples of collective agreements confirm that German unions might find a way to more flexibility. The chemical sector just negotiated a new collective agreement that enables firms to pay up to ten percent less then the negotiated wage in certain circumstances.

Moreover, not all people are alike; indeed, individual differences deepen with rising age. There will be always people who are burned out and cannot work full-time until the age of sixty-five. They already have the possibility to work part-time without severe financial deductions. For people who want to work full-time and are less productive, a flattening of age-wage profiles should be considered. Currently this is under discussion for employees in the public sector (*Öffentlicher Dienst*) and should be considered for a larger share of employees. This is to avoid another possible road, involving a stronger shift within the individual life course: going along with a relative stable career until the age of fifty or maybe fifty-five, and after that a withdrawal from the career job (like in Japan) and a destabilizing of the life course, with low paid and low prestige jobs at the end of the working life. Indeed, the incentives for companies to shed older workers when their marginal productivity falls below their marginal wage are high.

For the further training system I identified three major obstacles for optimal performance: the transparency of the further training market, access of different socio-demographic groups, and the quality on offer. These market failures could be the starting-point for regulations on different levels (federal, states

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time) models during the last few years due to economic needs of cutting costs (see Hartz 1996).

or municipalities). To enhance the transparency of the further training market, publicly financed local consulting agencies could be established (Mahnkopf, Maier 1991: 243). The main task of these offices should be twofold: first to give an overview of all measures on offer, and second to provide advice to individuals or firms to find the right training for their purpose. To solve the discriminatory effect of the actual access, it is worth considering giving out vouchers for part-time working people to attend further training courses in their leisure time, and to offer child-care facilities. Search costs would decline considerably if the local agencies helped to find the right measure. The combination of vouchers and public agencies could also help to lower the threshold of taking part in further training for discriminated-against groups. Quality could be improved too, since quality evaluation (e.g., in collaboration with the *Gütesiegelverbünde*) would go along with more transparency, and help to sort out the "lemons" among the further training providers.

Another big issue is the pedagogical aptness of further training measures. Are the training activities on offer shaped according to the needs of the people demanding it? For example, do we need extra courses for older people, for women, for foreigners, etc.? Or is it just a matter of lifelong training, i.e., if someone is used to being trained and learning during the whole life cycle, it might be easier to learn even when one is older. I cannot address this issue here, but it also has to be considered in shaping reforms.

In sum, I see some development which can maintain Germany on the high skill road, but there are still some counterproductive elements (see the new VW-model). A closer investigation of the interplay between the different types of institutions and their possible outcomes remains a fruitful area for future research.

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