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**Long-Term Working-Time Accounts
and Life-Course Policies**
**Preliminary Results of a Representative
Company Survey***

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Abstract

The paper introduces the basic concept and functioning of long-term working-time accounts and discusses major trends, risks and opportunities with regard to life-course oriented working-time adjustments. It gives a detailed overview of the distribution and use of long-term working-time accounts in Germany. This overview is based on initial multivariate analyses of a representative company survey that was carried out in 2005. The main questions concern the individual options and opportunities offered by long-term working-time accounts and the characteristics of their distribution. We examine effects of firm size, sector, demand fluctuations, economic performance, personnel policy, industrial relations, and workforce composition. There is empirical evidence that the distribution and use of long-term working-time accounts is strongly influenced by company size and the presence of a works- or staff council in the company. Larger companies with works or staff councils have more frequently long-term working-time accounts and use them predominantly for early or progressive retirement options, even more when the share of male employees in the company is high. Yet, this form of utilization contradicts the idea of extended employment with working hours appropriate to the employee's life phase. Its consequence is an individualised form of financing early retirement. Smaller companies, in contrast, offer more often options for family leave or temporary part-time; they are also more likely to have a long-term working-time account when they have a high share of female employees. In this respect small- and medium-sized companies are a particularly interesting subject of future research and life-course policy.

Zusammenfassung

Der Artikel stellt das relativ neue Arbeitszeitinstrument betrieblicher Langzeitkonten vor und untersucht deren Entwicklung und Potenziale hinsichtlich einer lebensphasenorientierten Arbeitszeitgestaltung. Anhand multivariater Auswertungen wird die Verbreitung und Nutzung von Langzeitkonten in der Bundesrepublik Deutschland analysiert. Basis ist eine repräsentative Unternehmensbefragung, die im Herbst 2005 durchgeführt wurde. Leitend ist die Frage nach Unterschieden der Verbreitung von Langzeitkonten und den damit verbundenen Arbeitszeitoptionen für die Beschäftigten. Dabei werden grundlegende Betriebsmerkmale berücksichtigt, wie Größe, Marktsituation, Personalpolitik, industrielle Beziehungen und Beschäftigungsstruktur. Es zeigen sich deutliche Unterschiede nach der Betriebsgröße und dem Vorhandensein einer betrieblichen Interessenvertretung. Größere Unternehmen mit Betriebs- oder Personalrat verfügen häufiger über Langzeitkonten und nutzen diese vorrangig für den vorzeitigen oder gleitenden Ruhestand. Das ist besonders häufig dort der Fall, wo der Anteil männlicher Beschäftigter hoch ist. Diese Variante der Nutzung von Langzeitkonten widerspricht der Idee einer längeren Erwerbsdauer mit lebensphasengerechten Arbeitszeiten. Sie führt in ihrer Konsequenz zu einer individualisierten Form der Vorruhestandsfinanzierung. Anders als bei den Großunternehmen finden sich bei den kleineren und mittleren Unternehmen häufiger Op-

tionen für familienorientierte Freistellungen oder temporäre Teilzeit. Zugleich zeigt sich eine Korrelation von Langzeitkonten und einem hohen Anteil weiblicher Beschäftigter im Unternehmen. Kleinere und mittlere Unternehmen erweisen sich damit als ein vielversprechendes Forschungs- und Politikfeld der lebenslauforientierten Arbeitszeitgestaltung.

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Introduction

A constant increase in labour flexibility remains an essential competitive strategy of enterprises. One component of this process is the expansion of time volumes and the extension of time horizons with respect to the redistribution of individual working time. Such a development alters not only the day-to-day work-life balance, but also the entire life course of employees. Our paper presents preliminary results from an ongoing empirical research project at the WZB on the preconditions and practices of long-term working-time accounts in Germany¹. The main questions asked are how long-term working-time accounts change the dynamics of company working-time policy, and whether or not they help to stabilise discontinuous life courses. The paper first introduces the basic concept and functioning of long-term working-time accounts and discusses major trends and related risks and opportunities. We then present a preliminary overview of the distribution and use of long-term working-time accounts in Germany. This overview is based on initial analyses of a representative company survey that was carried out in 2005. The main questions concern the individual options and opportunities offered by long-term working-time accounts and the characteristics of their distribution. With regard to the latter aspect, we examine effects of firm size, sector, demand fluctuations, economic performance, personnel policy, industrial relations, and workforce composition.

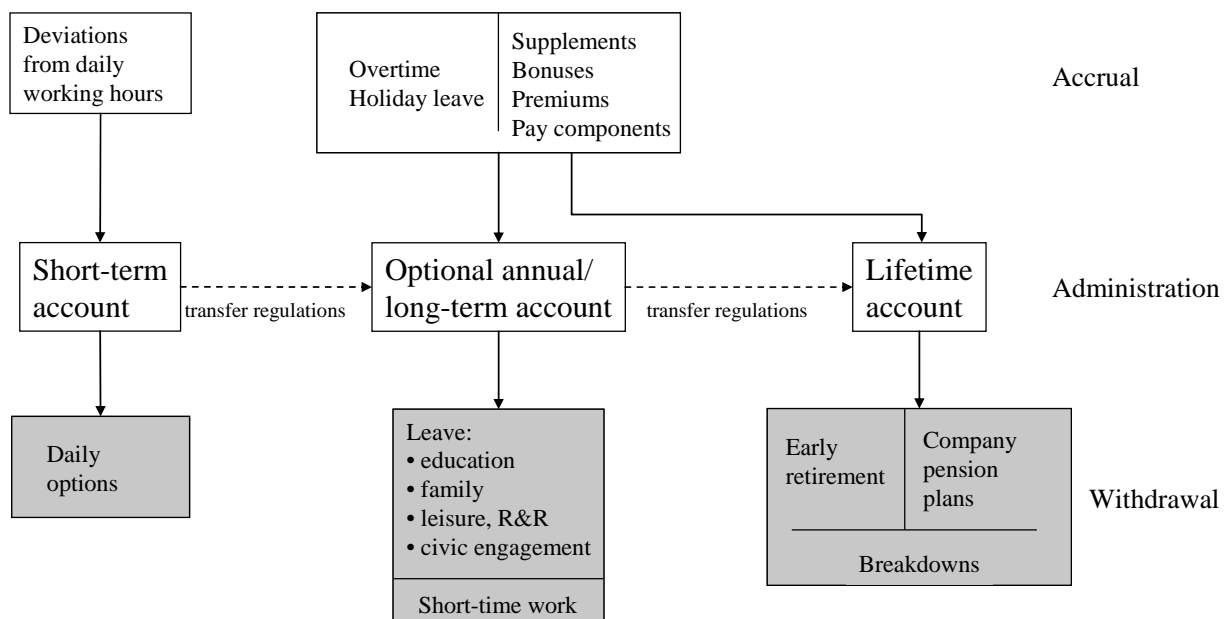
1 The project is funded by the Hans-Böckler-Foundation.

1. Long-term working-time accounts: rationale, characteristics and current trends

The basic aim of working-time accounts in companies is to enable employees to *re-distribute their working hours*. In other words, the purpose of working-time accounts is the regulation of deviations from normal working hours, which essentially amounts to the regularisation of flexible working time. To this end, the working hours (both plus and minus hours) that deviate from the company’s formal regulations are deposited in a working-time account that has specified limits as regards volumes and balancing periods. The procedures for depositing time credits (with respect to volumes and sources) and for withdrawing them (with respect to volumes, designated uses and withdrawal requests) are usually agreed at company level.

Working-time accounts are organised according to the *basic principle of compensatory time off*. They allow employees to temporarily work longer hours and (less commonly) to temporarily work shorter hours; the employee balances the account within a specified period of time and thus eventually works the total hours laid down in the relevant collective contract or works agreement. Depending on the length of the balancing period, we can distinguish between short-term, long-term and lifetime accounts, whereby as the duration of the balancing period is extended, so too is the potential volume of the account. What is unique about working-time accounts – unlike other instruments for increasing working-time flexibility, such as paid overtime or temporary part-time work – is that hours of work provided in advance or in excess of contractually agreed hours constitute eligibility for an equivalent number of hours of paid leave at a later point in time; in other words, the concept seeks to preserve time

Figure 1: Types of working-time accounts



over the life cycle under conditions of greater flexibility. Time for life, for recuperation, for family, education and leisure thus becomes a determining factor of company working-time policy.

Long-term working-time accounts have the following four characteristics:

1. The accounts remain open for at least one year and often for an employee's entire tenure with a company or for the full length of his/her working life (if he/she enters retirement from the company managing the account or if the account is transferable). There is usually no stipulated point in time at which an account must be emptied before being built up again.
2. Long-term accounts are built up on the basis of direct deposits in the form of time and money and, occasionally, on the basis of transfers from other, short-term accounts.
3. As regards withdrawals, two kinds of long-term accounts with qualitatively different characteristics can be distinguished. Optional long-term accounts are used during the course of the working life for withdrawals at selected points in time and for various personal purposes that can be determined by the employee but also by the company. Age-related long-term accounts, on the other hand, only mature at the end of the working life, either in the form of early retirement or semi-retirement, or as a supplementary pension provision. Some company models run the two types of account under the generic name of "long-term working-time account".
4. Unlike short-term accounts, a minimum volume is specified for time withdrawals (depending on the purpose of withdrawal).

The diffusion and the characteristic features of long-term working-time accounts are shaped by four current trends:

First, the economic environment has changed significantly for employees over the last decade. Trade union demands for compensatory time off in exchange for overtime hours arose within the context of the goal of increased humanisation of work and a more important role for leisure time and were intended, especially, to serve the aim of health protection. But this did nothing to change the fact that overtime pay remained an important income component for many workers, who were accustomed to using the additional earnings to cover extraordinary expenses. This preference for cash in lieu of time off was mitigated to some extent by a high level of employment stability and steady income growth. Over the last ten years, however, average real incomes from dependent employment have not risen and employment security has decreased. The majority of employees are now likely to react to this development by increasing their cash preference and by pushing for rapid disbursement of overtime pay.

Second, the fact that a share of an employee's due remuneration can be deposited in a working-time account enables allocation of a *combination of time and money values* – mainly in the form of deposits (e.g., of performance-related bonuses), but also in the form of withdrawals (in the event of company "breakdowns" or under company pension plans). This changes the original character of working-time accounts, as is expressed by the new term "time-value account". In addition to regulating com-

pensatory time off, the accounts now also function as a basis for financial compensation or savings mechanisms (e.g., deferred compensation under the company pension scheme). A consequence is that one of the aims of working-time accounts – to increase employees' sovereignty over their time – is thus curtailed. On the other hand, other motives for the use of the accounts, such as interest accrual and tax benefits, gain in significance. As far as employees are concerned, this shift in emphasis will reinforce their savings and security incentives, but it will also tend to slow down learning processes regarding time management in working life; the network of mutual interaction will become more complex.

Third, where working-time accounts have been implemented, there is currently a tendency to *extend both the volume of the account and the balancing period* until the end of the employee's working life. In addition to flexitime accounts and annual working-time accounts (which are both already widespread), we now also have long-term and lifetime working-time accounts (Seifert, 2005). Mechanisms are being created for transferring credits between the different types of accounts, which is leading to the dissolution of the boundaries between day-to-day flexibility and life-cycle flexibility. However, the configuration of the new boundaries is dealt with in a variety of different ways. At one extreme is the total separation of short-term flexibility and long-term saving; at the other is the greatest possible use of short-term savings processes for building up long-term accounts. The difference between long-term and lifetime accounts becomes more relevant in this context. Given that *age-related long-term accounts* only make sense if they permit the accumulation of a large volume of time (e.g., 3,000 hours as the equivalent of three years of work), their purpose inevitably ends up clashing with the aims of optional long-term accounts. Exacerbating the point, one could speak of a conflict between optional organisation of the career biography and retirement provision in the broader sense. When we talk about *long-term working-time accounts* in the following, we are referring both to optional and to age-related long-term accounts (known as "lifetime accounts").

Fourth, in close interrelation with the above developments, *reform strategies* have been set in motion at both national and European level that intervene directly and profoundly in both company personnel policy and the life planning of individuals (life-course policy as a multilevel policy). Possibilities for early retirement and semi-retirement have been restricted in order to raise employment rates, while the retirement age has been raised to 67 years in order to recapitalise pension insurance systems. Now that semi-retirement and early retirement schemes will shortly be expiring in Germany (2009), a growing number of large enterprises are endeavouring to establish equivalent arrangements at company level in the form of lifetime working-time accounts that conserve the life-course model of the "compressed work biography" (Behrens, 2004, p. 251; IQPC, 2005). This process is a good example of the interplay between policies at national and European level, on the one hand, and at company and individual level, on the other.

A change in two important parameters must also be taken into account when assessing the dynamics of diffusion of working-time accounts. The introduction of working-time accounts is fostered by the trend towards *decentralisation to the company level* ("*Verbetrieblichung*") of responsibility for the regulation of working conditions and especially of working times (see, e.g., Schmierl, 2001). Opening clauses and

supplementary collective agreements allow companies to define working-time “corridors” (the range of hours that may be worked between a maximum and a minimum limit) and to implement a variety of time-accounting systems (Bispinck, 2004). The spread of working-time accounts is being hindered, on the other hand, by the trend towards a *longer working week*, which is being pushed forward by company practices and by the revision of collective agreements (see Seifert, 2005). The longer are individual normal working hours, the less hours are available for overtime work in excess of stipulated working-time corridors, while the limits of human capacity and the reasonableness of demands become narrower. Short, collectively agreed working hours (e.g., the introduction or retention of the 35-hour week) are more favourable from the point of view of the potential benefits of working-time accounts and time sovereignty because the additional hours worked count as overtime that can be deposited in an account. This reflection has been taken into consideration in some works agreements that stipulate that a share of the extended working hours must obligatorily be deposited in a working-time account.

2. Actors' interests and areas of action

Working-time accounts affect the interests of the company and the interests of the individual employee in different ways. The stock of available knowledge on this question is very unevenly distributed in the sense that the surveys carried out to date have mainly concentrated on the complex set of interests of companies.

On the *company* side, the following objectives are decisive for the decision to introduce working-time accounts and for the type of accounting system used:

- systematic, short-term flexibilisation of working hours within a context of extended operating times (the idea of the “around-the-clock company”, especially in the area of personal services);
- medium-term flexibilisation of personnel capacity in accordance with seasonal and cyclical demand fluctuations (and an associated increase in employment stability);
- in the long term, facilitation at company level of early retirement in an era when semi-retirement options are expiring and lifelong working time is likely to be extended;
- cost reductions through the abolition of premiums for hours worked that deviate from normal working hours within a defined range;
- increased employee motivation and employee loyalty through the provision of new options for time and income disposal (in some cases restricted to specific groups of employees, especially top achievers);
- simplification of the regulation of flexitime through the definition of working-time “corridors”, within which time disposal can be organised in a rapid and uncomplicated manner.

Companies are also influenced by a range of relevant *parameters*, such as the costs deriving from regulations on the fiscal administration of working-time accounts (“deferred taxation”) and the associated social security contributions (deferment of and subjectivity to contributions in the event of company breakdowns; bankruptcy insurance), and those deriving from the administrative burden of communications, account management and bankruptcy insurance.

There is little knowledge available regarding the concrete interests of *employees* with respect to the introduction and implementation of working-time accounts. It must also be assumed that the preferences that employees express in surveys on working time will not always necessarily coincide with the way in which they actually deal with time when they have different options at their disposal (see, e.g., Bielenski, Bosch, and Wagner, 2002). In very general terms, it is assumed that employees have a basic interest in some degree of time sovereignty for balancing work and life (over the course of the day, the year and the entire life cycle). At the same time, there are substantial differences between individuals depending on their age, gender, family constellation, status within their company and lifestyle (Eberling, Hielscher, Hildebrandt &

Jürgens, 2004; Garhammer, 2005; Klenner & Pfahl, 2005; Wotschack & Wittek, 2007). However, what is probably decisive for employees who consent to the introduction of working-time accounts – which are generally justified as being necessary for the good of the company – is the expectation of improved employment security as a consequence of the fulfilment of the management's desire to increase working-time flexibility.

Figure 2: Interests regarding working-time accounts

Company	Employees
→ Longer operating times	→ Employment security
→ Short- and medium-term capacity adjustments	→ Daily and life-course time options <ul style="list-style-type: none">• health/leisure• family• education• civic engagement
→ Optimisation of personnel structure through early retirement	
→ Cost reductions	
→ Employee motivation and employee loyalty (human resource management)	→ Early retirement/old-age insurance

Future social resources
→ Health
→ Family
→ Education
→ Civil society
→ Inclusion

Source: Authors' compilation.

The pressure on companies to enhance flexibility has undoubtedly grown in recent years and it is increasingly being passed directly on to employees. The compliance of employees with the demands for flexibilisation certainly derives from their recognition that these market pressures do indeed exist, but perhaps it derives even more certainly from the power asymmetry prevailing within their companies. In addition, employees are motivated by their desire to provide good-quality work and satisfy their customers. Moreover, the pressures of persisting high unemployment and largely stagnant employment growth in companies also has an effect on the working-time behaviour of employees.

The regulation of working-time accounts appears straightforward at first glance because of the association with cash accounts. It is based on the employment contract, according to which willingness to provide qualified work is exchanged for pay.

But working-time accounts are also the basis for another exchange relationship – one that regulates deviations from normal working hours. The viability of the instrument of working-time accounts makes additional demands on the balance of interests between companies and employees, and this can be described using the term *reciprocity* (see, among others, Diewald, Brose & Goedicke, 2005, p. 226; Gouldner, 1984, p. 119; Struck & Köhler, 2004, pp. 288ff.). The employees help to fulfil the company's flexibility requirements, but may not suffer repercussions in their private lives as a consequence. In return, the company gives them back working time that they can use for longer periods of time off for holidays lasting several months, childcare, further education or early retirement. In the ideal case, reciprocity in the context of working-time accounts would consist of three elements representing three different areas:

1. An economic transaction based on time: Time deposited is equal to time withdrawn (irrespective of pay components that may have been deposited or paid out).
2. A social transaction based on equal opportunities for recuperation: The restrictions on individual lifestyle imposed by a flexible overtime regime are compensated for through equipollent withdrawals of recuperation time.
3. Voluntary interaction in the form of employee participation in company time management and equitable bargaining processes to this end (negotiated optionality and time sovereignty).

The actual design and negotiation of this additional exchange is likely to proceed slowly, however. First, because it is difficult to *predict* future flexibility requirements and their inherent risks for both enterprises and employees. Up to now, balancing periods of one month have been used for the performance–compensation exchange, while in some cases a balancing period of one year has been used for performance-linked pay components. These periods are easy to keep track of for both parties and are clearly structured by planning and accounting routines. Few companies have a tradition of regulating systems that cover periods of up to 40 years, however, with the exception of those with company pension plans.

Working-time accounts also entail a *basic conflict of interest* between different time regimes, and this poses a threat to the reciprocity model: the interest, on the one hand, of the company management in flexible adjustment of capacities by means of working-time accounts that are alternately filled and depleted (in accordance with the concept of the “breathing company”); and the interest, on the other hand, of the employees in sovereignty over their time – at least with respect to account withdrawals. Given that most companies want to also retain control over withdrawals from working-time accounts (which they believe should be made “with consideration for company interests”), employees' freedom to choose with respect to withdrawals is restricted – depending on the working-time culture reigning in the company – and so, therefore, is the relationship of reciprocity.

As a consequence, the *confidence of employees in the optionality of the arrangement*, that is, their freedom to withdraw time when they want and for the purposes they want, is a basic obstacle to their acceptance of working-time accounts (see, e.g., Haipeter & Lehndorff, 2004, p. 160). This confidence can only develop on the basis of company practice – i.e., the regulations governing time withdrawals and

the practical administration of withdrawal requests – and the time culture prevailing in the company, which is expressed by the way in which the employees' desire for time sovereignty and their need to achieve a satisfactory work-life balance are handled. To this end, processes of discourse and learning are necessary on both sides.

3. Distribution and utilisation of long-term working-time accounts

Long-term working-time accounts are a recent arrival to working-time policy. They are still in the developmental phase, their procedures of use are not yet fully established and their ancillary effects are as yet difficult to foresee. There is still a high degree of uncertainty concerning their distribution and, in particular, concerning the *dynamics* of their distribution. Thus, the sfs Dortmund research centre's recent company survey on working time and hours of operation (see Groß & Schwarz, 2006) represented an ideal opportunity to pose a set of questions related to long-term working-time accounts. The master sample of 9,700 establishments was drawn from the German Federal Labour Office's company data; in autumn 2005, 18% of establishments responded to the survey. The survey is based on standardised questionnaires, which were compiled independently by each company management and returned by post. The following data are extrapolated to all establishments from the net sample. In the following we will use the term 'companies' when we refer to the establishments as our reporting units. According to the results, a total of 6.8% of companies was using long-term working-time accounts when the survey was administered, while 0.9% intended to introduce them. Extrapolated to the employment structure, this means that around 18% of employees in Germany work in companies with long-term working-time accounts; 7.3% of all employees actually have a long-term working-time account.

The following section will present a first impression of the variations in distribution and utilisation of long-term working-time accounts depending on specific company characteristics. The main questions concern the individual options and opportunities offered by long-term working-time accounts and the characteristics of their distribution. With regard to the latter aspect, we first of all want to know to what extent long-term working-time accounts are introduced and used to increase the firm's flexibility and efficiency and to what extent they are (also) motivated by sustainable and employee-oriented human resource management strategies (working-time options over the life course). Proceeding from the current (rather meagre) state of research on the incorporation of such life-course- and reconciliation-oriented goals in company personnel policy (see European Foundation, 2003 and 2005) and the characteristics of long-term accounts described above, we will examine the following (groups of) factors:

1. Company size
2. Presence of works or staff councils
3. Flexibility needs of the company (economic setting)
4. Personnel policy (long-term perspective)
5. Workforce composition (share of male and female employees)

3.1 Expected influences

We identify the following factors concerning the firm context that in our view are likely to foster or inhibit the diffusion and utilisation of long-term working-time accounts:

We expect a higher distribution of long-term working-time accounts among: (1) *larger companies*, due to a generally higher presence and use of sophisticated and flexible working-time arrangements in these companies, greater availability of administrative, personnel and financial resources to introduce and manage them, and a generally higher level of long-term orientation with regard to personnel planning and risk prevention; (2) *companies with works or staff councils*, since we assume that works or staff councils have an interest in establishing opportunities for employees to save up and conserve overtime hours and to receive compensation in the form of extended paid leaves; (3) *companies with a greater need for flexibility* (considerable demand fluctuation) or for *prolonged periods of long working hours* (high labour demand); both factors create a need for substantial amounts of overtime and time savings, respectively; (4) *companies with a long-term personnel plan and that pay greater attention to future risks* (such as ageing of the workforce, recruitment problems, lack of skills and qualifications, diversity issues) that can be reduced by long-term working-time accounts; (5) *companies with a high share of male employees*, because they have a workforce that is more interested in (continuous) full-time employment, including overtime hours, than in alternative forms of flexibilisation, which would imply a loss of income and status.

With regard to the utilisation of long-term working-time accounts (the options offered by the company) we would expect that *options for early or progressive retirement* or for *training leave* are more frequently found among: (1) *larger companies*, since they can more easily link these options to existing (formalised) retirement and training schemes and have more administrative and financial resources to manage the huge amounts of time savings (over long periods) that are required for early or progressive retirement options; (2) *companies with works or staff councils*, since works or staff councils have a strong interest in implementing “closed” regulations given that these are highly predictable and controllable, avoid problems of individual negotiation with regard to replacement or interference with the ongoing work organisation, and meet employer and employee needs (low conflict potential); (3) *companies with a high share of male employees*, since male employees (due to the dominant gendered division of paid and unpaid work) have fewer care and family responsibilities than their female counterparts and are more interested than these in continuous full-time employment combined with options for earlier exit or vocational training. In contrast, we would expect that *family-oriented leave options* and *sabbaticals* are more frequently found among: (4) *smaller companies*, since the more informal character of work organisation, work culture and working-time arrangements in these companies leaves more room for individual negotiation and tailor-made solutions; moreover, small companies have fewer resources for administering huge amounts of time savings, as would be required in the case of long-term-oriented working-time options; (5) *companies with a high share of female employees*, since female employees (again due to the dominant gendered division of paid and unpaid work) face substantial care and family responsibilities and are thus more interested in options that allow a combination of work and care during their careers.

The following section investigates the impact of the outlined firm characteristics on the utilisation of long-term working-time accounts by discussing the empirical distribution (descriptive overview) and analysing the details of the influence of the various company features (logistic regression analyses).

3.2 Distribution of long-term working-time accounts

Our data indicate that differences due to *company size* are of particular importance for the distribution of long-term working-time accounts. The analyses (cf. Table 1) show a manifest higher incidence of long-term working-time accounts in larger-sized companies. The share of companies with long-term working-time accounts increases from 5% among small companies (1-9 employees) to 17% among large ones (250 or more employees).² Because of the importance of company size for the pattern of distribution of long-term working-time accounts, as well as for the characteristic institutional settings, our analyses are differentiated for the following four categories: small companies (1-9 employees), small to medium-sized companies (10-49 employees), medium-sized companies (50-249 employees) and large companies (250 or more employees) (the categories are similar to those used by the IAB Institute for Employment Research).

The distribution of long-term working-time accounts varies according to the characteristics of the *industrial relations* found in the companies we evaluated. Regarding the influence of the presence of works or staff councils in the company, we must bear in mind that small companies (1-9 employees) rarely have a works or staff council, while almost all large companies (250 or more employees) do. This typical pattern makes it difficult to extract the effect of the size and presence of a works or staff council. We thus refer to characteristic types of combinations of both characteristics. Our data indicate that long-term working-time accounts are less often found in very small companies without a works or staff council, are more frequently found in the intermediate categories without a works council, and are mostly found in large companies (250 or more employees) that have a works or staff council. Additional analyses (not reported in the tables) show that companies bound by collective agreements and with a works agreement or an internal alliance on working hours use long-term working-time accounts more often than do other companies. This suggests that the representation of employees' interests both inside and outside the company as well as the regulation of working hours by means of in-company agreements and alliances between the works council and management are important prerequisites for long-term working-time accounts. This relationship is particularly evident in the case of large companies.

2 Although 90% of all German companies are small companies (less than 20 employees), only 28% of German employees work in companies of this size. The majority of Germany's employees are employed in medium- and large-sized companies.

Table 1: “Utilisation of long-term working-time accounts”: Distribution of long-term working-time accounts (in %) by structural characteristics of companies

	<i>All companies</i>	<i>1-9 employees</i>	<i>10-49 employees</i>	<i>50-249 employees</i>	<i>250+ employees</i>
All	7	5	12	13	17
<i>Industrial relations</i>					
with works or staff council	14	(43)	4	11	17
without works or staff council	6	4	13	15	(13)
<i>Sector</i>					
manufacturing sector	8	4	18	13	15
service sector	6	5	9	13	18
<i>Demand fluctuations</i>					
considerable demand fluctuations	9	6	17	16	20
no considerable demand fluctuations	5	4	7	8	13
<i>Market situation</i>					
good economic performance	10	9	13	13	23
average economic performance	7	5	12	12	15
bad economic performance	5	4	13	13	17
<i>Personnel policy</i>					
with long-term personnel plan	9	6	13	14	19
without long-term personnel plan	5	5	10	9	11
<i>Workforce composition</i>					
high share of male employees	6	4	10	12	20
high share of female employees	8	6	15	14	12

Source: Authors’ analysis of sfs Dortmund company survey (2005).

The analyses show a higher incidence of long-term working-time accounts in companies with a greater *need for flexibility* (higher fluctuations in demand). With regard to *high labour demand* (good economic performance), small (1-9 employees) and large companies (250 and more employees) use long-term working time accounts more frequently when they are in a good economic situation. For the intermediate categories, we do not find a clear-cut relationship. Also with regard to *sector*, we find differences according to company size: Small and medium-sized companies (10-49 employees) in the manufacturing sector have long-term working-time accounts more often than do smaller companies in the service sector. By contrast, large companies

in the service sector use long-term working-time accounts more often than do large companies in the manufacturing sector.

With regard to differences in *personnel policy*, we had specified the existence of a long-term personnel plan as an important parameter. This assumption is confirmed by the results of the survey. Additional analysis (not reported in the tables) also confirmed the influence of the companies' social commitment. Companies that are socially active are much more likely to have long-term working-time accounts than those that responded negatively to this item.

Finally, the distribution of long-term working-time accounts changes with the *workforce composition of the company*. The pattern differs between smaller and larger firms. Long-term working-time accounts are more often found among smaller companies (less than 250 employees) with a *high share of female employees* (50% or more) and among larger companies (250 employees or more) with a *high share of male employees* (51% or more).

3.3 Distribution of possible uses and impediments

The different ways in which working-time accounts can be used by employees are of central importance for our strategic question as to their optionality. We should keep in mind that the following data refer to possible uses offered by the companies (as they were reported by the company managers); they do not give us any information on the factual use by the employees. Our analysis of representative data shows that, in general, the range of possible uses is relatively limited. In the large majority of companies with long-term working-time accounts, only one (50%) or two (33%) options are offered at the same time, although large companies generally offer three options. Specifically, the possible designated uses are distributed as follows among companies of different sizes (Table 2).

In large-sized companies, there is evident predominant use of working-time accounts for the purposes of semi-retirement, early retirement and further education, while in small and medium-sized companies, family leave and temporary part-time work are the most frequent purposes of use. As company size increases, so does (rapidly) the possibility of using the accounts for semi-retirement, early retirement and further education. Because a substantial share of employees works in large companies, it can be assumed that working-time accounts are used to a significant extent for age-related arrangements.

Moreover, long-term working-time accounts play a considerable role in the compensation of market and demand fluctuations. A considerable share of companies in our sample reports to use time savings on working-time accounts to 'bridge' phases of underemployment in times of low market demand. This form of utilization increases the firm's flexibility and can at the same time increase (in the short run) the employment security of the employees. At the same time it runs the risk to compete with established, more regulated measures (like short-term work) and to shift market risks and costs from the firm to the employee level.

Table 2: Possible uses of long-term working-time accounts (in %) by company size

	<i>All companies</i>	<i>1-9 employees</i>	<i>10-49 employees</i>	<i>50-249 employees</i>	<i>250+ employees</i>
Further education	17	17	12	27	50
Sabbatical	6	2	9	17	27
Family leave	27	17	39	42	26
Temporary part-time work	30	17	45	47	28
Semi-retirement	7	6	1	23	69
Early retirement	6	6	1	20	54
Other	64	64	70	51	34
Underemployment ³	42	35	50	56	46

Firms responding that they use long-term working-time accounts (n=204); multiple answers permitted.

Source: Authors' analysis of sfs Dortmund company survey (2005).

Finally, we also asked about difficulties with implementation and other barriers related to long-term working-time accounts. Surprisingly, only 8% of the companies with long-term accounts said that they encountered difficulties with them. Large companies (15%) reported difficulties more often than did medium-sized (8%), small to medium-sized (10%), and small (6%) companies. Given the novelty and the complexity of this instrument, this share is lower than we had expected. The most frequent difficulty mentioned was managers' and employees' lack of experience in dealing with large volumes of time credits. This result confirmed our assumption that using a system of time accrual in order to maintain resources requires long-term and far-reaching learning processes.

Overall, the data indicate differentiated patterns of distribution and use of long-term working-time accounts in German companies. There is a substantially higher incidence of long-term working-time accounts in larger companies, while the influence of other firm characteristics also differs with company size. Moreover, there is empirical evidence of a limited choice of designated uses (particularly in small and medium-sized companies) and an evident predominance of uses for semi-retirement and early retirement purposes, especially in large companies. The following analysis will explore and clarify these heterogeneous patterns with regard to the expectations we formulated at the beginning of this section.

3 Firms responding that they use time savings on working-time accounts (not necessarily long-term working-time accounts) to 'bridge' phases of underemployment.

3.4 Multivariate Analysis

Building on the previous (descriptive) section, we distinguish four major (sets of) influences that are likely to affect the distribution and utilisation of long-term working-time accounts. Since firm size and the presence of works or staff councils in the company are highly correlated (almost 95% of the large firms – 250 employees and more – have a works or staff council) we distinguish four characteristic types of companies according to size and presence or absence of a works or staff council. The following factors are included in the analysis:

(1) Firm types with regard to size and presence of works or staff councils

- (a) large firms (250 or more employees) with works or staff council
- (b) large firms (250 or more employees) without works or staff council
- (c) smaller firms (1-249 employees) with works or staff council
- (d) smaller firms (1-249 employees) without works or staff council

(2) Economic setting of the firm

- (a) sector: manufacturing or service sector
- (b) considerable demand fluctuations over the year: no or yes
- (c) economic performance during the last two years: bad, average or good

(3) Type of personnel policy

- (a) long-term personnel plan
- (b) no long-term personnel plan

(4) Workforce composition of the firm with regard to gender

- (a) high share of female employees (50% or more)
- (b) high share of male employees (51% or more)

In order to examine the impact of the influences described here on the utilisation of long-term working-time accounts, we use separate logistic regression analyses with the following two dependent variables: (1) utilisation of long-term working-time accounts (Table 3, column 1); and (2) utilisation of long-term working-time accounts for defined purposes (Table 3, column 2). We report the odd ratios for the different influences.⁴

4 A value above 1.0 means that the probability of having long-term working-time accounts is higher (compared to the reference category); a value below 1.0 indicates a lower probability of having long-term working-time accounts (compared to the reference category).

Table 3: Logistic regression analyses with (a) utilisation of long-term working-time accounts, and (b) utilisation of long-term working-time accounts for defined purposes as dependent variable (odd ratios)

	<i>Utilisation of long-term working-time accounts⁵</i>	<i>for clearly defined purposes⁶</i>
Type of company		
large company with works/staff council	2.137**	3.937**
large company, no works/staff council	(.950)	(.888)
Small company with works/staff council	1.025	1.038
Small company, no works/staff council	<i>reference</i>	<i>reference</i>
Flexibility demand		
service sector	1.166	1.924**
Manufacturing	<i>reference</i>	<i>reference</i>
considerable demand fluctuations	1.670**	1.560*
no considerable demand fluctuations	<i>reference</i>	<i>reference</i>
good economic performance	1.238*	1.267
Workforce composition		
share of female employees: 50% and more	.849	.549*
share of male employees: 51% and more	<i>reference</i>	<i>reference</i>
Personnel policy		
long-term personnel plan	1.594**	1.832*
no long-term personnel plan	<i>reference</i>	<i>reference</i>
N	1710	1615
Nagelkerkes' R²	.070	.137

(*) significant at 10% level; * significant at 5% level; ** significant at 1% level

Our multivariate analysis confirms a large number of the expected effects: The probability of having a long-term working-time account is higher in (1) large companies with a works or staff council, (2) companies with higher demand fluctuations, (3) companies with a stronger economic performance, and (4) companies with a long-term-oriented personnel plan. In particular, the combination of large size and the presence of a works or staff council favour the introduction of long-term working-time accounts.

We do not find effects for sector or workforce composition. The overall explained variance remains low (7%), indicating that the factors included in the analysis do not

5 Of the 1,710 companies in the sample, 204 reported that they used long-term working-time accounts.

6 Companies that reported utilisation of long-term working-time accounts for the unspecified category "other" are excluded from this analysis. This leaves 112 companies that reported utilisation of long-term working-time accounts for clearly defined purposes.

account for much of the given distribution of long-term working-time accounts. This might be due to the fact that the instrument is quite new and still in the developmental phase. Consequently, the definitive user group is still in the process of formation and is not yet fully established. This explanation is supported by the fact that while many companies in our sample use long-term working-time accounts, there is not yet a definitive and “closed” set of options for use offered by the companies. We would presume that long-term working-time accounts in these companies emerge more as a response to high labour demand and “overflowing” (annual) working-time accounts than on the basis of strategic considerations. When we exclude these companies from the sample (see Table 1, Column 2) and consider only companies that use long-term working-time accounts for clearly defined purposes (n=112), the effects of the firm context become stronger (Table 1, Column 2). The combination of large size and presence of a works or staff council now has a particularly strong impact. Moreover – and in line with our expectations – the firm’s presence in the service sector and a high share of male employees (workforce composition) increase the likelihood that a firm will make use of long-term working-time accounts. At the same time, former effects related to high labour demand (considerable demand fluctuations) decrease or even vanish (good economic performance). The explained variance increases to 14%. This pattern clearly supports our explanation above: Many companies with long-term working-time accounts do not yet have a definite plan for their utilisation, but those that do are much more sensitive to the explanatory factors suggested by us.

Since firm size is of major importance for the utilisation of long-term working-time accounts, and is also related to heterogeneous variations based on other influences (see previous sections), we run separate logistic regression analyses for smaller (1-249 employees) and larger (250 and more employees) companies (Table 4).

The analysis provides evidence of specific influences in smaller (1-249 employees) and larger (250 or more employees) companies. We assumed (see Section 3.1) that larger companies would use sophisticated flexible working-time arrangements to a greater extent, would have more resources available to implement and administer long-term working-time accounts, and would have a generally higher level of long-term-oriented personnel planning and risk prevention. Small companies, by contrast, are characterised by more informal working-time arrangements and work culture, fewer resources and less long-term-oriented policies. These contextual differences are of crucial importance for the role and impact of other influences related to the firm setting on the utilisation of long-term working-time accounts.

Smaller companies are influenced by a large set of factors concerning the firm setting, ranging from sector, market fluctuations and labour demand to workforce composition and personnel policy. They are more likely to use long-term working-time accounts when they belong to the manufacturing sector, face high flexibility demand (considerable demand fluctuations) and labour demand (good economic performance), have a high share of female employees, and have long-term-oriented personnel planning. These effects are in line with our expectations, with the exception of the impact of the workforce composition. The fact that a high share of female employees increases the likelihood of smaller companies using long-term working-time accounts

Table 4: Small and large firms: Logistic regression analysis with *utilisation of long-term working-time accounts* as dependent variable (odd ratios)

	Small companies (1-249 employees) <i>utilisation of long-term working-time accounts</i>	Large companies (250+ employees) <i>utilisation of long-term working-time accounts</i>
<i>Works or staff council</i>		
with works or staff council	1.035	(2.110)
no works or staff council	<i>reference</i>	<i>reference</i>
<i>Flexibility demand</i>		
service sector	.625*	2.460**
manufacturing	<i>reference</i>	<i>reference</i>
considerable demand fluctuations	2.127**	1.343
no considerable demand fluctuations	<i>reference</i>	<i>reference</i>
good economic performance	1.439*	1.061
<i>Workforce composition</i>		
share of female employees: 50% and more	1.579*	.323**
share of male employees: 51% and more	<i>reference</i>	<i>reference</i>
<i>Personnel policy</i>		
long-term personnel plan	1.723*	1.341
no long-term personnel plan	<i>reference</i>	<i>reference</i>
<i>N</i>	1200	510
<i>Nagelkerkes' R²</i>	.058	.073

(*) significant at 10% level; * significant at 5% level; ** significant at 1% level

might be due to a greater need for working-time options in smaller firms that favour reconciliation between working and family life.

In contrast to smaller companies, large companies are prone to fewer influences. The likelihood of using long-term working-time accounts is generally higher in these companies and increases only with the influence of sector (service sector) and a high share of male employees (workforce composition). Both effects are in line with our expectations: Belonging to the service sector is related to a higher dependency on human resources, that is, to their optimal adjustment to customer demands. Male employees are usually more interested in full-time work with opportunities for over-time. At the same time, the time preferences and job design of male employees do not leave much room for a reduction of contractual working hours. This renders long-term working-time accounts an instrument that particularly suits the typical “male” working-time arrangement across the life course: steadily working long hours and saving up these hours until the end of the career (early exit).

Finally, we now seek to explain variations in the types of options offered by the different types of company (Table 5). Only companies with long-term working-time accounts (n=204) are included in this analysis. Four categories of possible uses are distinguished: (1) *retirement* (early or progressive retirement), (2) *family* (family leave or temporary part-time work), (3) *training* (vocational training), and (4) *sabbaticals*.

Table 5: Companies with long-term working-time accounts (n=204): Separate logistic regression analyses with *four different possible usages* (offered by the company) as dependent variables (odd ratios)

	<i>retirement</i>	<i>family</i>	<i>training</i>	<i>sabbatical</i>
<i>Type of company</i> ⁷				
large company with works/ staff council	55.326**	.401**	3.967**	6.497**
small company with works/ staff council	12.523**	.506	.637	2.381
small company, no works/ staff council	<i>reference</i>	<i>reference</i>	<i>reference</i>	<i>reference</i>
<i>Flexibility demand</i>				
service sector	1.505	1.975*	2.881**	2.179(*)
manufacturing	<i>reference</i>	<i>reference</i>	<i>reference</i>	<i>reference</i>
considerable demand fluc- tuations	2.529*	.713	1.623	1.199
no considerable demand fluctuations	<i>reference</i>	<i>reference</i>	<i>reference</i>	<i>reference</i>
good economic performance	1.138	1.056	1.140	2.193*
<i>Workforce composition</i>				
share of female employees: 50% and more	.341*	.761	.806	.571
share of male employees: 51% and more	<i>reference</i>	<i>reference</i>	<i>reference</i>	<i>reference</i>
<i>Personnel policy</i>				
long-term personnel plan	.816	1.470	1.791	1.052
no long-term personnel plan	<i>reference</i>	<i>reference</i>	<i>reference</i>	<i>reference</i>
<i>N</i>	204	204	204	204
<i>Nagelkerkes' R²</i>	.590	.070	.259	.236

(*) significant at 10% level; * significant at 5% level; ** significant at 1% level

7 The number of large companies without a works or staff council was minimal (n=3), so these were excluded from the analysis.

The analysis indicates (see Table 5) that the distribution of *retirement options* (*early or progressive retirement*) strongly depends on company size and the presence or absence of a works or staff council. It is first and foremost large companies with a works or staff council and, in second place, smaller companies with a works or staff council that offer these options. Moreover, the likelihood of retirement options is higher in companies with a high share of male employees (51% or more) and in companies with considerable flexibility demand. These effects are in line with our expectations and explain almost 60% of the observed variance. They confirm our assumption that large firms and firms with a works or staff council have a stronger interest in and the necessary resources to implement options for early or progressive retirement. And at the same time, early or progressive retirement options suit the working-time preferences of male-dominated workforces.

The likelihood of *family-oriented leave options* (*family leave or temporary part-time work*) is significantly lower in large firms with works or staff councils; it is stronger in smaller companies without works or staff councils and in companies in the service sector. It appears that issues concerning the reconciliation of work and care have a stronger impact on the more informal working-time arrangements and work cultures of smaller firms without works or staff councils. The difference between larger and smaller companies might also be caused by the availability or absence of alternative work-life balance policies. Large companies generally have more scope for introducing such policies. The need to use the long-term working-time account for family-oriented options will thus be less pronounced in larger companies.

In line with our expectations, options for *training leaves* are found to a greater extent among large companies with works or staff councils. Moreover, they are more likely to be found in companies in the service sector. In contrast to our expectations, *sabbaticals* are more frequently offered by large companies with a works or staff council, by companies in the service sector (though this is only significant at the 10% level) and by companies in a good economic situation.

Summing up, the analysis of the representative company survey confirms the influence of most of the firm characteristics in the ways that we expected. Particularly, the combination of large size and presence of a works or staff council is an important factor in the distribution and utilisation of long-term working-time accounts.

4. Conclusions

Working-time accounts are steadily gaining in importance as a means of regulating the redistribution of working time over the life course. As their range of uses is extended, however, the accounts are also changing their character. Earlier forms such as flexitime accounts emerged from the mutual need for daily adjustment of working hours and were designed according to the principle of short-term compensatory time off. Accumulation of credits through hours worked in advance or through overtime work was a consequence of acute market or project needs on the part of companies, while withdrawals were determined by personal employee needs that necessitated deviations from the normal rhythms of daily life (Seifert, 2005). Now the expansion of the accounts in terms of both time and volume is extending the range of designated uses. Optional long-term working-time accounts, for example, can be used for extended parental leave, for lifelong learning, for interim health measures, for sabbaticals or for periods of increased voluntary work.

Our analysis of a preliminary representative company survey carried out by sfs Dortmund (2005) gives us a first impression of the current distribution and utilisation of long-term working-time accounts depending on principal company characteristics. It provides some initial information on the influence of organisational characteristics, the flexibility needs of the firm, industrial relations, differences in human resource management and workforce composition. So far, we can draw the following conclusions.

First, a clear user group has not yet become established. The instrument is rather new – it was first introduced in the mid-1990s – and so experience with and knowledge of the utilisation, potentials and difficulties posed by these accounts are still limited. A considerable share of companies still lacks a definitive set of possible usages. It is likely that long-term working-time accounts have emerged in these companies more as a response to longer phases of high labour demand and “overflowing” (annual) working-time accounts than on the basis of strategic considerations. Consequently, basic firm characteristics (such as size, sector, or presence of works or staff councils) do not account for much of the given variation in the distribution of long-term working-time accounts.

The wider distribution of long-term working-time accounts among large firms (250 and more employees) indicates at the same time that the instrument is becoming a typical new element within the broad set of highly sophisticated, formalized working-time systems in large-sized firms. Variations in flexibility demands or differences in human resource management or workforce composition are of additional but minor importance. The existence of works or staff councils in large companies is an important factor of influence. Works or staff councils are usually interested in measures that regulate and compensate hours of overtime; moreover, their active involvement facilitates the introduction and acceptance of long-term working-time accounts in the company.

Second, there is evidence for a strong tendency to use long-term working-time accounts for early or progressive retirement. At the same time a large share of companies reports to use working-time accounts as a measure to ‘bridge’ phases of underemployment due to weak market demand. Large companies predominantly use long-term working-time accounts for early or progressive retirement, followed by options for vocational training; they can easily combine these options with existing retirement and training schemes and also have the necessary financial and personnel resources to handle large amounts of time savings over prolonged periods. This policy is at least supported (when not actually actively promoted) by works or staff councils, which are present in almost all large companies and usually have a strong interest in establishing “closed” regulations that meet employer and employee interests and avoid problems of individual negotiation or replacement.

From a long-term and life-course perspective the utilization of long-term working-time accounts for early retirement or flexibility demands runs the risk to counteract political goals aiming at working-time adjustments *over* the life course, the reconciliation of work and family life, life-long learning, active aging, and higher labor market participation of women and older workers (see for Germany Rürup & Gruescu, 2005; BMFSFJ, 2007). It contradicts the idea of extended employment with working hours appropriate to the employee's life phase, supports an individualised form of financing early retirement and implies a shift of risks and costs from the state and firm level to the employee level.

Third, we find characteristic differences based on company size. In contrast to large companies, the distribution of long-term working-time accounts among smaller companies is prone to a large set of factors that range from the economic setting through the type of human resource management to the workforce composition. The possible uses for working-time accounts offered by the company also differ strongly in relation to company size. While large companies predominantly use long-term working-time accounts for early or progressive retirement, small- and medium-sized companies (10-249 employees) more often offer family-oriented working-time options, particularly when they do not have a works or staff council. This might be due to the higher interdependency and more informal nature of working-time arrangements and time negotiations found in smaller firms, the fact that the latter offer less alternative work-life balance measures than larger companies, and the fact that they also have fewer resources for administering the huge amounts of time savings that are required for early retirement options.

Fourth, the usage of the accounts in companies is influenced by gender differences in the workforce composition. Long-term working-time accounts are more often found in large companies with a high share of male employees. In this respect, there is a fair degree of evidence that long-term working-time accounts are an instrument that particularly suits the typical “male” working-time arrangement over the life course in terms of full income, continuous full-time employment (with overtime hours) and early exit. By using long-term working-time accounts large firms can increase the scope of flexibility of their (mostly) full-time employed male workforce without changing the remuneration or the type of employment relationship. Large companies with works or staff councils use their long-term working-time accounts more frequently for early or progressive retirement when the company has a high share of male employ-

ees. A high share of female employees in large-size companies does not lead to usages that would accommodate the interests of female employees (like family leave). Interestingly enough, such options are more often found among small and medium-sized firms, particularly when these do not have a works or staff council. Moreover, and in contrast to large-sized firms, the likelihood to have a long-term working-time account increases in small and medium-sized companies when the share of female employees is high. These patterns make small- and medium-sized companies a particularly interesting subject of future research in the field of working-time options and life-course policies.

The data we have presented only provide information on the distribution of long-term working-time accounts among companies and the possible usages offered by them. They neither inform us about the factual use of these options, nor do they provide details of the proportions, groups, motives or objections of employees. This information will be provided by a number of detailed firm-level case studies and employee surveys, which are currently conducted in our project. The broader range of possible uses brings with it the risk of creating excessive expectations in relation to working-time accounts, however. Because of the necessarily limited volume of the accounts, employees must decide between the different designated uses, which in some sense stand in competition with each other. The extension of the range of options so as to now also include company early-retirement and semi-retirement schemes and old-age insurance (through “lifetime” working-time accounts) further exacerbates the competition between different uses. For if an employee wishes to accumulate enough credit to reduce the duration of working life by any substantial amount – three years, for example – he/she will be required to work overtime on a regular basis for a minimum of 20 years. These accumulation needs have led to the tendency to also allow the possibility of depositing income components (in so-called time-value accounts) and to make saving mandatory (e.g., within the framework of shift regulations and company insurance agreements). The introduction of monetary savings processes reduces the importance of the mechanism of compensatory time off and the possibilities for reciprocity, while at the same time strengthening the orientation towards financial old-age insurance, savings models and interest terms.

Long-term working-time accounts can function as a framework for stabilising and further developing both long-term company personnel policy and employees’ individual life planning under conditions of growing discontinuity and increasingly rapid change (Hildebrandt, 2007). The market-oriented strategies of company managements towards increased flexibility are also leading, however, to a tendency to administer withdrawal processes from long-term accounts in accordance with company needs, which is undermining employee confidence in the optionality of the accounts. However, this confidence is an essential prerequisite for the acceptance and the successful functioning of the long-term exchange relationships represented by long-term working-time accounts. In order to create reciprocity in the building up and depletion of accounts – not only in a quantitative sense but also as regards the quality of the designated uses – the time requirements of employees must be made explicit in the interpretation and daily use of long-term accounts. In this way a culture of time could develop in which long-term accounts become the backbone of new, flexible life courses (Groot & Breedveld, 2004).

The current increase in social risks and the reduction of welfare-state guarantees and company responsibilities are at odds with the idea of a redistribution of time over the life course and a reorganisation of work-life patterns. A candid discourse about long-term working-time accounts – alongside other resource-based measures – could initiate important learning processes on both sides, which could become a building block for a new, concerted life-course policy.

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