

# HR manager's opportunities regarding the demographic effects

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## Kurzfassung

Das Personalmanagement ist einer der Schlüsselbereiche in einer wissensintensiven Organisation, der die Produktivität, das Wachstum und den Wert derselben beeinflusst. Zukünftig umso mehr, denn das Schrumpfen der Bevölkerung industrialisierter Länder, in denen gleichzeitig die Bevölkerung altert, wird die Struktur des Erwerbspersonenpotentials und damit auch die Belegschaftsstruktur von Unternehmen in den nächsten 10 bis 15 Jahren dramatisch beeinflussen. Zunehmend beschäftigen sich die Personalverantwortlichen mit diesen Herausforderungen und entwickeln entsprechende Strategien zur Bewältigung. Bis jetzt allerdings gibt es nur sehr selten langfristig effektive Konzepte. Wenn überhaupt werden kurzfristig wirksame Entscheidungen getroffen, die zum Beispiel das Personalmarketing und den Personalbestand betreffen. Das ist erschreckend. Die Autoren dieses Beitrags veranschaulichen die zukünftige Situation zunächst mit ausgewählten Fakten und entwickeln strategische Ansätze für das Human Resource Management, insbesondere in den Aktivitätsfeldern der Personalplanung, der Personalbeschaffung sowie der Personalentwicklung.

## Abstract

Human resource management is one of the key factors in the productivity, growth and value of companies in which knowledge plays a key role. However, especially the shrinking of industrialized societies, and in which the population is ageing rapidly, will dramatically influence the structure of the labour force in the next 10 to 15 years. Fortunately, decision-makers and human resource managers are increasingly responding to these challenges and drawing up strategies for managing the futures of their corporations. But up to now not many long-term concepts have been developed. Instead, short term activities focusing on recruiting and advertising are given more attention. This is alarming. The authors of this working paper will exemplify the development of the German population and labour force and devise approaches to human resource management in times of change. Several long term strategies will be presented and the effects especially on headcount and qualifications will be discussed from a personnel economics point of view.

## 1 Short survey

There has been widespread discussion about demographic changes, and managers can hardly fail to be confronted by the issue. It is not only a problem specific to Germany, but a challenge for all countries. And it is a process unique in history (FLEISCH, 2002). To show the dimension of the demographic change we reproduce some special data:

Today there are about 6.2 billion people on the planet. The world's population is currently growing at a rate of 77 million people per year. At the end of the 1980s this figure was 80 million. A study has showed that population growth is limited to the developing countries because of their pyramid-shaped age structure (FLEISCH, 2002). The proportion of young people, and thus the rising number of potential parents, is significantly higher in developing countries than in industrialized countries. Therefore the proportion of people living in developing countries is increasing and the demographic weight of industrialized countries is declining. For instance, Europe's share of the world population is going to fall from 12 percent in 2000 to about 7.3 percent in 2050. In real terms, this signifies a decrease of about 70 million people in the next four decades.

In the same period, Germany's population will fall from about 82.5 million to slightly more than 75 million in 2050, which is the same level as it was 1963 (FEDERAL STATISTICAL OFFICE GERMANY, 2003; The results refer to the „middle variant“ which is based on the following assumptions: constant birth rate of 1.4 children per woman on average, increase in life expectancy of an infant male to 81.1 years and of an infant female to 86.6 years by 2050, and annual net migration of about 200,000 people). The country is highly likely to face an increasing shortage of skilled labour and therefore fierce competition amongst companies for talented people. Thus, the once abstract issue of demographic development is becoming increasingly relevant to organizations. But the German optimism for recruiting foreign qualified labour in response to the demographic challenges does not seem justified. This is due to demographic developments in industrialized countries in general. For example in Germany, total annual net migration has been steadily decreasing since the 1990s.

As calculations by the FEDERAL STATISTICAL OFFICE GERMANY (2005) showed, net migration was about 142,700 people in 2003. The relevance of these data with regard to the labour force potential has recently been investigated by FUCHS and DÖRFLER (2005). Their projections demonstrate that Germany requires net immigration of at

least 400,000 people per year to keep the labour force at the level it was in 2004. In this unlikely scenario there would be about 43 million people in the labour force in 2050 (FUCHS, 2005). But the more realistic net migration of between 100,000 and 200,000 people per year would not offset the demographic effect. This means that the labour force would decline to between 31.5 million and 35.5 million people in 2050 (FUCHS and DÖRFLER, 2005).

In short, we are facing a unique phenomenon. There is no experience or detailed knowledge to fall back on in order to deal with it. Therefore, we will identify main pitfalls companies should avoid in particular when discussing demographic effects. Based on this we have developed a catalogue of possible countermeasures for strategic human resource management. The conclusion contains a short review of the main issue and summarizes the core strategies discussed.

## 2 Main pitfalls

Awareness of these data seems to be the first step in seizing opportunities here. It is important to realize and to evaluate the development and also to recognize its relevance for the company. The second step has to be the analysis of the **company-specific situation**. The adoption of ready-made solutions in the guise of managerial wisdom could be risky because a strategy's success depends on internal and external factors that may differ from company to company.

Secondly, we should realize that change does not automatically imply negative consequences. Managers have to be aware of the opportunities changes offer. The current demographic process and the aging of societies create **room for development and progress**. Here the „silver consumer generation“ could play a key role – a concept which offers a significant potential for economic growth and thus profit (CONRAD and GERLING, 2005) as well as for company's reputation and further for the relation between employer and employees.

Thirdly, early retirement programmes and downsizing through layoffs should be avoided. They make sense economically only in the short run. Many companies have used these strategies to get rid of more highly paid older employees or to manage the **size and composition of their workforce** (HEDGE et al., 2006). But the long term consequences of these measures are the loss of the people with the greatest experience and organizational know-how and thus lower levels of productivity (SHEA, 1991; HEDGE et al., 2006). This seems to be an irrational act knowing the future shortage of qualified junior staff and simultaneously the „war for talents“. Furthermore there is the risk of adverse selection (AKERLOF, 1970) so that especially qualified and highly productive employees choose the exit option because they are aware of their qualifications and employability (LAZEAR, 1998). The company thus is forced to keep those people it would prefer to see leave. Therefore, above all, small and medium-sized companies should be particularly careful when reducing staff. They are inferior in the competition amongst companies for talented human resources (MÜHLBRADT and GRUMBACH, 2005), because of their often traditional and standard recruiting methods and their local staff search.

In addition to the third fact the capability of meeting the demand for personnel is becoming a central factor. For small and large firms, for companies in economically declining and prospering regions this means that a long-term human resource strategy based on reliable analysis of their staff as well as **unique and targeted recruiting** could provide them with a competitive advantage.

The current demographic change offers another opportunity: it might dispel the prejudice that the performance of workers deteriorates with age. There are a lot of surveys about the performance decline due to illness. In the case of chronic diseases there is indeed a correlation between age and performance, but it also depends on the profession and kind of job (MÜHLBRADT and GRUMBACH, 2005). With respect to the more general question of the causal link between **age and performance**, no clear findings have been made yet. As BÖRSCH-SUPAN et al. (2005) noted this is a very complex question. For example, they assumed a positive relationship between age and experience and between age and a calm working atmosphere, a negative correlation between age and physical ability, and age and mental ability. Moreover they supposed, the higher the value of these four parameters – as well as the level of education, the higher the productivity (BÖRSCH-SUPAN et al., 2005). Other studies on aging have also emphasised that age-related performance reductions could be offset by incentives and targeted training programmes (BALTES, 1987). At the same time, it is important to **bind and retain highly qualified employees**. Therefore, personnel development seems to be the second key factor in maintaining and increasing productivity and motivation.

Of course, there are further key factors. But we are focusing on the main demographic effects on human resource management, which create the following challenges:

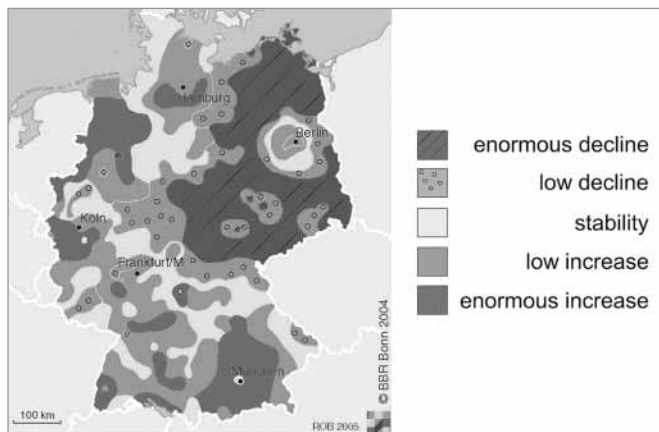
- enhancing responsible managerial behaviour with respect to a company's age structure through long term personnel planning, which influences both recruitment and personnel development
- offsetting the shortage of skilled personnel through innovative recruiting
- offsetting the supply and demand of labour through training and in the long run through higher productivity

In the next chapter we will present concrete recommendations.

### 3 HRM strategies in times of change

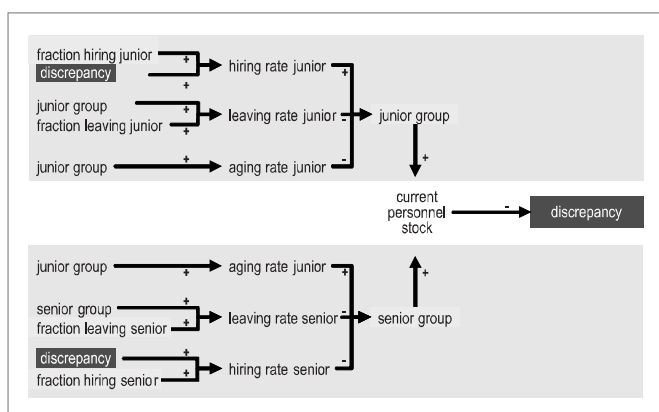
#### 3.1 Personnel planning

The sharpest decline of the labour force is expected between 2015 and 2020 (NAEGELE and REICHERT, 2005).



**Figure 1:** Change of labour force potential between 2002 and 2020 in Germany (source: BBR, 2005).

It is assumed (Fig. 1) that East Germany will be particularly affected by the decline of labour force (BBR, 2005). Particularly, East German firms will have a great demand for skilled employees, because in the same period we expect a wave of retirement in the current group of employees aged 50 to 55. In contrast, many West German companies in economically well-off regions will probably not face a shortage of labour. But the age structure, and thus all advantages and disadvantages, could be similar in all regions. Therefore, before designing any recruiting strategies, it is at first essential to analyse the age structure of the current workforce and the stock influencing variables. But this is a very complex and dynamic system, because each parameter of this workforce system requires considering interdependencies, feedbacks and delays, otherwise unintended side-effects could counteract a personnel manager's plan.



**Figure 2:** Interdependency patterns with regard to current workforce (source: author's illustration).

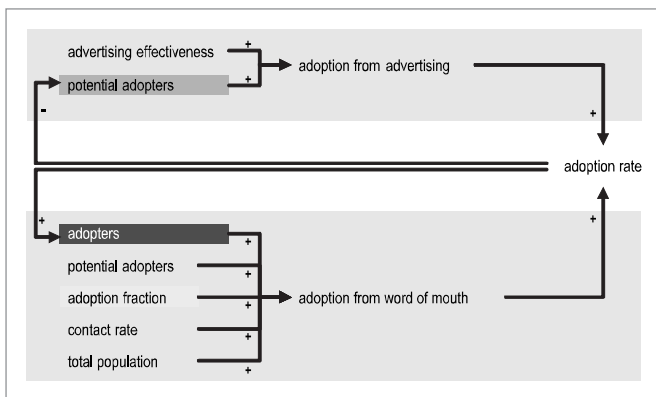
Fig. 2 shows a very simplified but still complicated structure of how the total stock of employees results from several variables. Let us assume we were able to break down a company's workforce into two different age groups: a junior group, including, for example, employees aged 15 to 40, and a more senior one, comprised of employees aged 41 and over. The size of each group is affected by a specific hiring rate, a specific leaving rate, and a pre-determined aging (or transition) rate. This aging rate indicates the transition of employees from one age group to the next and influences both the previous grouping through outflow and the next cohort through inflow. The current workforce is the sum of all personnel in both groups. The discrepancy is the difference between the current workforce and the desired level of staff, and affects the hiring rate in the next period. The hiring rate in turn influences the size of each group. If relevant for future hiring strategies, each cohort could be subdivided into different hierarchical levels, for example. The closer the model represents reality, the more complex it becomes, and the more effective the measures are.

As can be seen, the relationship between the parameters is not a simple cause-and-effect chain, but an endogenous reiterative process influencing the total stock. Thus, simply updating the age structure of current employees to determine a company's age structure 10 years from now does not reflect the complexity and is definitely not sufficient (WEBER and SCHWARZ, 2006). However, if any, this kind of extrapolation is the current practice within companies. Managers need a dynamic projection and a computer-based modelling of workforce development (SCHWARZ, 2006), which is a very innovative procedure in human resource management for small and medium-sized enterprises as well as large companies.

#### 3.2 Personnel recruitment

Another important aspect is the recruiting method, whether it is passive, active, internal or external. Many companies use active external strategies to hire the best people. For example, they organize company contact fairs, offer internships, initiate co-operations with universities to recruit specialized students, etc. This is especially widely used in larger firms. Although internal recruitment provides several advantages for both employee and employer, it is not a very innovative approach. Assuming that the decline of the workforce is equalled by the decline in the population, internal recruitment is no solution for the gap between the desired and current workforce. So what about passive recruitment?

Passive external recruitment means recruiting through word of mouth. When discussing positive staff feedback and network effects we have to look at diffusion models. Diffusion models are widely used, for example, to analyse the spread of infectious diseases and computer viruses, the growth of the market for new products, and many other things. BASS developed a model for the spread of innovations that has become one of the most popular models for new product growth, and is broadly applicable to a wide range of diffusion and growth phenomena (STERMAN, 2000). But this is the first assumption with respect to recruitment and has to be verified in further research.



**Figure 3:**  
Interdependency patterns in BASS's diffusion model (source: author's illustration).

In BASS's diffusion model there are on the one hand potential adopters, who adopt an innovation or a new idea independently of the decision of other individuals in a social system. They are defined as innovators. On the other hand, there are later adopters, who are influenced by the pressures of the social system; this increases with the number of previous adopters. These adopters are defined as imitators (BASS, 1969). Fig. 3 illustrates again the dynamics of the process and the interactions of innovators and imitators. The adoption rate is influenced by two different effects: the external sources of awareness and adoption are usually interpreted as the effect of advertising, and positive feedback is usually interpreted as the effect of word of mouth (STERMAN, 2000). The adoption rate in turn influences the number of potential adopters (it decreases their numbers), and simultaneously the number of adopters (it increases their numbers). The importance of innovators is greater at first but will diminish continuously over time, while the rising number of adopters increases the network effect and thus again the number of imitators.

Applied to our case of advertising jobs by word of mouth we assume that the first employees (innovators), who were influenced by advertising, in turn influence potential employees (imitators) through word of mouth. This assumption could prove a very effective and efficient method in addition to active recruitment in times when competition for talented staff is fierce. Indeed, passive recruitment requires an incentive system for employees, but there are obvious advantages:

- Employees try to convince others to apply for a job at their company, if they have good human relations. This positively affects the working atmosphere.
- Simultaneously, employees should receive the agreed incentive not until the new employee has satisfied minimum requirements, like a successful probation period. Because of these specific requirements employees will not just recommend anyone. Thus, the risk of adverse selection is reduced (SCHOLZ, 2000).
- Furthermore, if an employee only recommends people who do not fit into the company, he damages his own reputation. Presumably, employees are motivated to attract desired and sufficiently qualified workers.

- Recruiting through word of mouth could also reduce employee turnover, because of the loyalty between recruiting employee and new employee. A low turnover rate avoids additional costs (LAZEAR, 1998).
- It can also be assumed that word of mouth reaches more people than conventional advertising because of the world-shrinking effects of social networks. MILGRAM (1967) conducted a small-world experiment and explored the premise that everyone in the world is connected to everyone else in the world by a chain of only six acquaintances.
- Moreover, employees are actually involved in their company's development. Managers encourage employees to provide input to the firm by making them officially part of the company (LAZEAR, 1998).

All in all, there are good reasons to seriously consider passive recruitment more. For the method to be successful a company needs to have a good reputation and satisfied employees, and then the chances of attracting high potentials could be excellent.

### 3.3 Personnel development and retention

As already mentioned, the third relevant field of managerial activity is a long term plan for staff retention and training.

Strategic personnel development (see SCHOLZ, 2000) includes three fields of development: organisational, team, and individual development. These fields are influenced by a company's corporate strategy, its corporate culture, the internal and external situations, and learning aptitude within an organisation. In turn SCHOLZ noted that personnel development affects the corporate performance. Because of these links and again dynamic processes personnel development has to be geared to these interactions. In this regard, SCHOLZ outlined four main aims of strategic personnel development:

- initiating strategic thinking across the company
- initiating lateral thinking to make people aware of the complexity of corporations and interdependencies with external systems
- initiating thinking which is geared to individuals with regard to leadership and communication
- emphasising corporate culture to positively influence employees' identification with the company and their motivation

These aims stress the need for lifelong constant learning and concerns not only the young and middle-aged employees but also today's older colleagues. A study commissioned by the Australian government focused on conditions under which the number of older people in gainful employment could be improved. The investigation identified five key aspects that ensure success for adult learners and help people towards active learning:

- an initial education experience in a safe, non-threatening environment,
- negotiation with learners about the content, format and timing of educational experiences,

- the use of social cohesion and a focus on learner interests to motivate learners,
- a learner focused approach to learning, and
- organisational innovation and flexibility (GELAIDE et al., 2003).

Assuming that companies have to rely on the labour force potential of older employees to satisfy their labour demand – in particular in East Germany – managers should be aware of these results. Because apart from capital, know-how is the most important factor influencing growth and labour productivity. Investments in human capital, i.e. increasing productivity, could counteract the decline of the labour force (BASTIAN, 2006). Moreover, lifelong learning could be one solution for health-related and qualification problems, which should not be taken lightly (BOSCH and SCHIEF, 2005). Increasing psychological stress is putting strains on absenteeism. A representative study has shown that 18.4 percent of men over 45 and 21.6 percent of women in that age group have chronic health problems (ILLMARINEN, 1999), which is one indication of the need for both individual and organisational development at the same time. Scandinavian countries set a good example, because they have shown themselves to be the most committed to humanising the workplace (BOSCH and SCHIEF, 2005). This includes, for example, a long term employment plan. Assigning tasks on the basis of short term economic criteria could produce a mismatch between employee's qualifications and the work assignments and reduce individuals' flexibility as well as their qualification for other jobs (MORSCHHÄUSER, 2005). Therefore, managers and employees have to negotiate individual career pathways.

But educational programmes have to be combined with staff retention strategies. Otherwise investments in a company's human capital would be inefficient and useless. Therefore we assume that innovative methods of incentive pay will increasingly be used because of two main effects: rise in productivity and retention of scarce skilled labour. In this context another important factor in employees' satisfaction and personnel retention is the offer of flexible working hours. This could be a very good incentive for convincing highly-qualified older workers to stay in companies longer and to ensure the knowledge transfer from older to younger workers. An Australian study confirmed that „[p]art-time or reduced hours in the transition to retirement may also provide workers with more recovery time from physically demanding or stressful jobs“ (QUEENSLAND GOVERNMENT, 2004).

## 4 Conclusion

Efficiency and effectiveness are the most significant indicators of organizations' success. It is therefore of vital importance for companies to think about their future activities. More or less all industrialised countries are confronted with demographic change and the decline of the population and skilled workforce potential. Governments, society and companies have to actively meet these challenges. On the one hand, these challenges create risks for firms, for example uncertainty about the dimension of the demographic effect on the company's workforce as well as uncertainty about additional expenses to recruit talents, develop and bind staff. On the other hand, it generates

numerous opportunities, if companies start with their analysis and implementation of strategies in good time and as early as possible. In Chapter 3 we discussed selected strategies human resource manager should take into account. We considered strategies in the field of personnel planning, personnel recruitment as well as personnel development and retention. It became apparent that managers do not act in a system of simple cause-and-effect chains but within a very dynamic system. One decision influences multifarious areas.

Apart from devising strategies heeding the dynamics it is important to stress that every firm has to develop its own strategy based on its own specific situation. We pointed out that there are definitely regional differences in labour force potential between East and West Germany, thus there are required e.g. different recruitment measures depending on labour supply. In the same way internal structures differ from organisation to organisation, and hence every company has the chance with unique strategies to create a sustainable competitive advantage in the intense competition for talent.

To conclude, ad hoc decisions and simply reacting to changes could cause enormous losses because such acts underestimate the dynamics and complexity of the expected changes. Therefore, long term dynamic planning is required as results take time to manifest themselves.

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