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WORKING PAPERS

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The Case of the Automotive Industry

Gudrun Biffl

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Age Management – a Coping Strategy for Employers: The Case of the Automotive Industry

Gudrun Biffl

Abstract

Globalisation and the ageing of the work force represent a dual challenge for enterprises. The first exerts pressure on production costs in order to stay competitive, the second raises production costs as the productivity of workers tends to decline after a certain age, particularly for un- and semiskilled workers involved in heavy physical work and where seniority-pay regimes apply. This paper looks at coping strategies of an enterprise in the automotive industry in Austria. It shows to what extent innovative and flexible organisation of work may ensure the survival of the production site in a highly developed economy, and what role public institutions play, in particular wage policy, retirement regulations and labour market policies, to keep older workers in employment. Austrian car manufacturing is a particularly interesting case as the option of outsourcing challenges the viability of Austrian production sites.

The challenge of globalisation for the automotive industry in the EU15 and Austria

Cars are amongst the most highly globalised consumer goods and so are the production sites. Car manufacturers pursue foreign activities not only with a view towards lowering production costs but also to gain access to markets/consumers. This dual purpose of multi-nationalisation of production shows up in the regional investment patterns of car manufacturing. In the case of the EU, the largest automotive production region in the world (34 percent of world production)[1], labour-intensive operations are increasingly re-located into countries where wages are lower, e.g., to Central and Eastern European Countries, China and South-East Asia in order to decrease costs. The other powerful reason for investment and re-location is the access to substantial and growing markets. Formal and informal barriers to trade as well as high transport costs may act as additional incentives to develop offshore operations.

During the 1990s, global restructuring of the industry and competition intensified particularly through global mergers and acquisitions. The acquisition/merger policy did not only raise the scale of production but allowed also the combination and/or access to strategic intangible assets – such as management skills, technical know-how and related assets – to be used more intensely. This underlines the importance of the contribution of human resources to firm performance – which include the knowledge, skills and abilities of systems engineers, programmers and researchers. The latter was an important factor in the take-over of a major Austrian car manufacturer, our case study, by a leading global supplier of technologically-advanced automotive systems, components and complete vehicle engineering and assembly in 2001.

Such global restructuring has generally tended to boost firm efficiency and has helped to spur innovation by facilitating the diffusion of technology and production, managerial and marketing expertise. This explains the logic of firms in their pursuit of global restructuring. It may, however, not always correspond with national interests, particularly when restructuring involves the closure of facilities or transfer of key functions to other countries. One fear is that it may entail a loss of strategic activities such as research and development which may jeopardise future economic development. Another major concern for national policy makers is the adverse effects that restructuring can have on workers and communities affected by plant closures.

In the EU15, the direct employment by the automotive industry stands at about 2 million employees, which is slightly more than 1 percent of total employment. In Austria, the

[1] For a detailed account see EC- MEMO/05/7 : Key indicators on the competitiveness of the EU's automotive industry, http://ec.europa.eu/enterprise/automotive/pagesbackground/sectoralanalysis/index.htm; the data is taken from the European Competitiveness Report 2004.

automotive industry has a comparable weight in total employment. However, it is not only the size of the industry which explains its crucial importance for the European and Austrian economy, but also its key role in advancing technology (R&D). This explains the concern of trade unions, governments and business to develop policies and practices that will ensure the international competitiveness of the local production site.

However, the Western European automotive industry is coming under increased competitive pressure, as its productivity is below that of the USA and Japan. Labour costs relative to the major competitors are in particular a source of concern. While one hour of labour costs US$ 12.9 in South Korea, $ 29 in Japan and $ 33.8 in the USA, the EU-15 average is $ 32.7, with Germany topping the list at $ 36.8. In this environment, competition from plants in Central and Eastern Europe is putting increasing pressure on traditional manufacturing locations in Western Europe.

The relative situation of production costs is exacerbated by the impact of an ageing workforce on labour productivity. The automotive industry in Austria does not only employ a large number of highly skilled engineers but also a disproportionate number of un- and semiskilled workers and tradesmen, whose productivity tends to decline after a certain age partly because of physical demands. To address the challenge of increased competition, enterprises have to strive for greater efficiency in their production processes, improvements in technology and organisational change. However, there are limits to improving the cost effectiveness of production from such actions depending on the institutional environment of the enterprise, in particular the flexibility of the labour market.

Governments and social partners can assist in the development of more efficient labour markets so as to facilitate the contraction, expansion and alteration of business activities. They can also strengthen social safety nets to allow industrial restructuring and minimise social disruptions. Moreover, they can provide assistance for training and retraining, job search and mobility, and promote the portability of pensions and benefits.

The need to strengthen framework conditions for such adjustments, was underscored in 2001 when the European Parliament adopted a resolution on the social consequences of industrial restructuring (*European Parliament,* 2001). In addition to addressing the immediate financial implications for workers and communities, there are associated, longer-term issues and costs related to promoting economic stability in affected areas and providing workers with the means and/or incentives to find new employment through, for example, training, financial support, and related assistance. The challenge for governments, employers and workers is thus to identify ways that the economic and social costs associated with adjustment can be minimised.

Age management as a coping strategy of a major car manufacturing plant in Austria

In Austria, car manufacturing is fragmented in the sense that a cluster of highly specialised suppliers provide components which are assembled in plants of the kind analysed in this case study. The cars are of the highest quality/standard catering for the upper income consumers in Europe. The plant is a partner of various original equipment manufacturers (OEMs), a term used in the automotive industry for companies like DaimlerChrysler (Mercedes-Benz), General Motors, BMW, etc. which bring cars onto the market under the company brand name even though parts of the cars are not exclusively produced in their own production sites.

The plant we analyse is a subsidiary of one of the major multinational partners of the above OEMs. It supplies complete vehicle engineering and assembles the components obtained from supplier firms in that plant. Only 15 percent of the components in value/cost terms are produced by and bought from the OEMs. The plant has a dual purpose as a partner in that it specialises in research and development on the one hand, and production and assembly on the other. Assembly work is quite complex in those circumstances as components of various suppliers have to be brought together for various brands of cars, implying great specialty knowledge and trade skills. The internationally acknowledged expertise of the original Austrian manufacturer was in four wheel drive technology. The engineers are venturing into new areas of equipment technology and development, e.g., special parts of robot systems, electronics and aerospace technology, in order to ensure the continued viability of the production site.

The character of work shows up in the bipolar skill structure of the workforce, i.e., an above average proportion of engineers and computer specialists on the one hand and an even higher proportion of manufacturing workers, many of them skilled tradesmen (metal workers).

In the year 2005 on average 9,200 workers were employed in the plant under consideration, of which more than 70 percent were blue collar workers. The great majority of the blue collar workers are highly skilled metal workers and other tradesmen – only one third are un- and semi-skilled workers.

88 percent of the workforce are men. The proportion of women is particularly low amongst blue collar workers (10 percent) – they are to a large extent un- and semiskilled. Amongst white collar workers the female share is somewhat higher. They are in the main in medium to higher level administration, but increasingly also in engineering and computing. Of the white collar workers, more than one third are engineers.

The average age of the work force is below the average of the industry and the average in Austria. In view of the reforms of the Austrian retirement scheme and the closing down of the various early exit routes from the labour market, in particular early retirement and disability

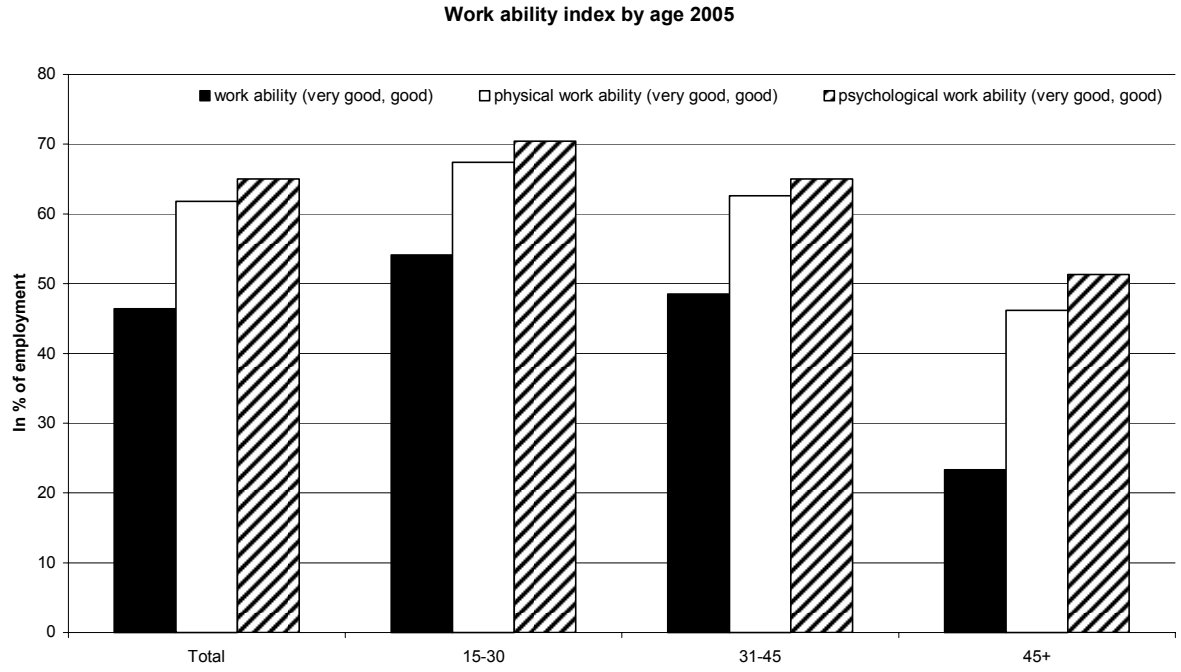
pensions[2], the plant has started to rethink its human resource policy (*OECD,* 2005). It has embarked upon implementing age management, i.e., measures which promote the employability of the workforce well into the mature age, while at the same time experimenting with various instruments which raise the numerical responsiveness of employment to cyclical and other demand fluctuations.

Before embarking upon the implementation of special human resource policies, an enquiry into the aspects of work which reduce the employability of workers as they grow older has been undertaken by an external research institution. A work-ability/coping index has been constructed on the basis of a questionnaire, which covered all employees and the various aspects of working life as well as the balance between work and life (family, friends, sports, hobbies, spare time). It could be shown that the capacity to cope with the various aspects of work declines with age, whereby physical strain and psychological demands are the most important reasons. Older workers (45+) suffer more than young ones and persons in their main working age from heavy work, lifting heavy pieces, noise and dust. The psychological stress results basically from two factors, the speed of the production line and the great demands on the adaptability to tasks. The tasks change on the one hand as a result of job rotation, which is to reduce the monotony of tasks. The other reason is a significant amount of mobility of workers within the plant, i.e., movement from one brand to another according to demand development (Graph 1).

The substantial internal relocation of workers is a result of demand fluctuations for various types of cars. As various manufacturing plants in Europe compete for batches of production for the various OEMs, demand fluctuations for the various brands may be substantial, requiring workers to adapt to new project demands and engineers to reroute and re-programme work processes and rotation plans of workers within and between teams.

[2] Austria has one of the highest rates of disability of older workers due to own-occupation assessment (Berufsschutz), meaning that one may claim disability benefits from the age of 55 onwards if the capacity to continue to work in one's normal occupation is not any longer possible. In contrast, most other countries grant disability in case of general incapacitation.

Graph 1: Work ability index by age in the case plant: 2005



S:move-ment.at, car manufacturing plant

The role of health and safety measures to promote the employability of workers

Top management responded to the results by analysing the various jobs/tasks and the environmental factors as well as working hours (shift schedules); while it is not possible to change the production technology, the ergonomic aspects of the jobs and the general environment may be improved. As a first step, physiotherapists were brought into the plant, showing workers how to better manage the physical work requirements as well as how to handle stress. In addition, shift workers are informed about the best way to cope with night-shifts, whereby the timing and spacing of food intake and the type of food[3] could be identified as important factors for the wellbeing of the workers, as well as physical exercises to loosen up. In addition, actions are set to instil awareness about the importance of health conscious behaviour (nutrition, sports etc).

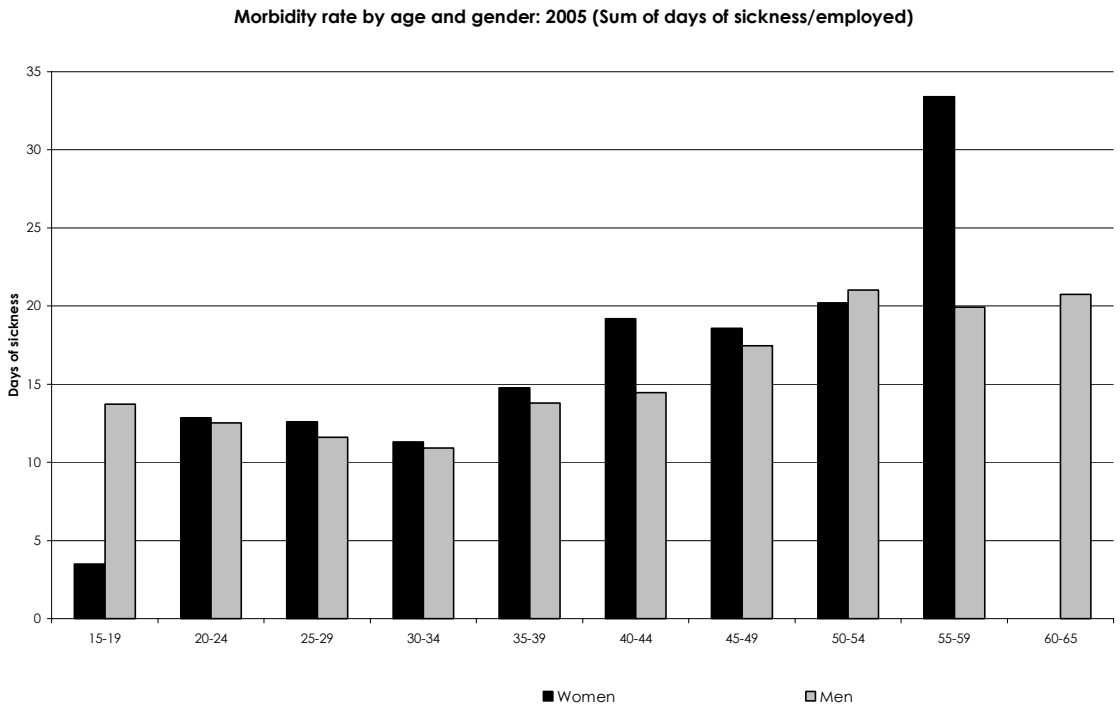
In addition, health and safety has a high priority. Currently the accident rate is below the Austrian average of metal industries with 5.2 accidents per 100 employees compared to the Austrian average in metal processing of 6.2. There is a distinct rise of accidents with age, which is, however, partly a result of less automated work processes in those sectors with a high concentration of older workers.

[3] For example one warm meal in the middle of the night shift reduces stomach troubles.

What is on the agenda is health monitoring which is to provide information on health hazards of the various tasks and a documentation of types of diseases of the work force which may be linked to the work environment.

Currently the average morbidity rate of the workers at the plant corresponds to the national average, i.e., 4 percent of working hours are lost due to sickness. The morbidity rate is a great deal higher for blue collar workers than for white collar workers (4.7 percent versus 2.3 percent in 2005).

Graph 2: Morbidity rate by age and gender in the case plant: 2005 (sum of days of sickness/employed)



S: WIFO-car manufacturing plant

The morbidity rate by age is slightly u-shaped, i.e., 20-24 year olds have somewhat higher rates than 30-34 year olds, the age group with the lowest sickness rates (11 days). Thereafter, the number of days of sickness rises with age until the mid 50s. Thereafter, the morbidity rate of men declines as older labourers with health problems may opt out of work (disability or early retirement). As there is only a small number of older women in the plant and hardly any 15-19 year old girls, their high morbidity rates cannot be seen as representative of women of these age groups. The low morbidity rate of men 60-65 can also be interpreted as a selection effect, meaning that those who remain at work until that age tend to be in top management positions, thus highly skilled, well paid and healthy. As to gender one can see that women tend to have somewhat higher morbidity rates than men.

The fact that the morbidity rate of workers rises with age is a matter of concern when wanting to promote the employment of older workers without imposing undue cost pressure on the enterprise. This is one of the reasons for adopting age management programmes at the work place as discussed below. The workforce in its turn, acknowledges the commitment of top management to improve the working conditions and its concern for the preservation of the health of the workforce.

The role of education and training for retaining the employability of workers:

Another aspect whereby the employability of workers may be preserved is by raising the skill level through education and training. Not only can it promote the health status of workers as they age, but it raises also the functional flexibility, i.e., the adaptive capacity of workers.

As far as health is concerned, an inverse relationship between the morbidity rate and the educational attainment level is typical. The mechanism by which education may influence health is the life style, i.e., an awareness of individuals of the role of nutrition, smoking, physical exercise, frequency of getting medical advice for one's health. Another factor which may link the morbidity rate with the educational attainment level is the type of work open to people with different educational background and thus work related stress and diseases[4]. Another aspect may be access to information about the impact of the lifestyle, in particular food intake, regular health checks and the like, on health – it can be expected to be less accessible for people who are not engaged in continued learning and education.

As far as the plant is concerned, it has a tradition in investing in education and training, on the one hand, by offering apprenticeships to youth (30 percent of all 15-22 year olds in the company), and on the other, by providing and/or financing further education. While the numbers of persons engaging in further education, in particular short and longer cycle higher education (particularly in technical vocational colleges and universities of applied science) are not insignificant, the majority is not involved. In the main, the personal development is a move from unskilled and semi-skilled labourer to skilled or highly skilled tradesman, largely through education and training on the job.

Neither management nor mature workers see much sense in further education and training for older workers as the company has invested in their skills and competences until they have reached their peak, i.e., the maximum they could achieve in the company context, given the types of jobs and tasks available. The problem is not only making the workers more attractive to employ, it is also a matter of making the jobs on offer more attractive to them.

The more high quality jobs there are available, the greater the demand for skill and the more training that will be in offer. Though some of it will be specific to the plant, much of it is likely to be transferable, even in the absence of government intervention to deal with possible

[4] For details about the relationship see Chapter 2, The social dimension of health in *European Commission* (2003), also *Biffl* (2005).

externalities. While further education may not increase their employability in the company, as lateral careers are few and far between, it may contribute to finding a less physically and stressful job in the local labour market. This would entail changing the job, however, with a period of unemployment of uncertain length between jobs. Given the difficulty encountered by the labour market in placing unemployed older workers, indicated by the long duration of unemployment spells and limited re-employment rates of older workers, this is a high risk option for a mature worker who would like to slow down.

When asked about their own preferences, the workers representatives (works council) would prefer a reduction of the work pressure by either reducing working hours or the speed of the production line. The reduction of the speed of the production, e.g., by adding another person to a team on a work block or reducing the speed of the work chain, reduces the output per head and raises the labour cost per output. However, this cost increase may partly be offset by reductions in the morbidity rate and even the accident rate of mature workers.

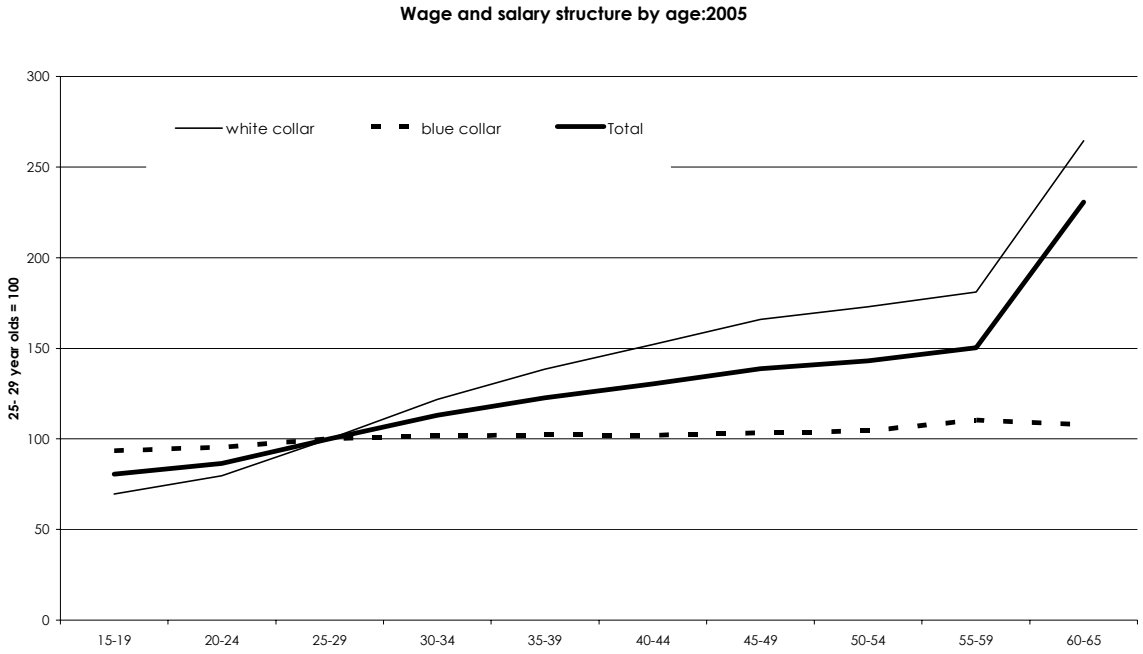
The role of seniority wages for the employability of mature workers

For employment retention and/or chances of re-employment to be promoted, the age-earnings profile of older workers should, at least in theory, largely match the age-productivity profile, i.e., the cost of employing older workers should match their contribution to the value added of the firm. However, in practice while the costs of workers to the firm are fairly easily established, their contribution to the firm's revenue is not always clear. In our automotive plant this may be the case for white collar workers, not, however, for blue collar workers.

Productivity has at least two dimensions, one where physical fitness is the source of productivity and the other where experience and/or mental endurance and innovative capacity is the source. In the automotive plant, the productivity for blue collar workers, i.e., output per person, is more or less predetermined by the technology and production process. The speed of the production line is targeted at the capacity of 35-40 year old healthy persons. Younger persons are usually less challenged by that speed, in contrast to older workers. Thus, productivity is an increasing function of age until a certain point, which for labourers is around the age of 45-50. Experience may prolong productivity especially if the worker has received further education and training, e.g., to the level of a skilled tradesman. But even then productivity stabilises or even falls between 50 and 55 (Graph 1).

As far as the age-earnings profile of blue collar workers is concerned, little of the seniority factor applies, i.e., wages at the age of 55-59 are only 10 percent higher than for 25-29 year old workers. Thus wages of older workers do not appear to be much out of line with their productivity. However, salaries for white collar workers rise steeply with age, a result of the automatic biennial wage rises laid down in collective agreements. Consequently, 55-59 year olds earn almost twice as much as their 25-29 year old counterparts. Whether the extent of this salary increase is justified by productivity increases is an open question.

Graph 3: Wage and salary structure by age in the case plant: 2005



S: WIFO-car manufacturing plant

In international comparison, Austria has very steep age-earnings profiles, very similar to France, particularly in the case of men[5]. In contrast, Sweden has a very compressed earnings structure by age. Prima facie, this would suggest that wages of older workers are on average out of line with their productivity in Austria and France compared to Sweden. But such a conclusion could be misleading because Swedish unions have over the years been able to apply a solidaristic wage policy which has narrowed differentials for skill, and in so doing tampered with the wage-productivity nexus. It is also well established that the more highly centralised wage fixing systems are associated with more compressed wage structures (*OECD,* 2004A: 166) In addition, the age earnings profile of workers in Austria and France is wider relative to Sweden, because Austrian and French older employees work 45 hours and more per week to a much greater extent than older Swedes – 24 percent in Austria and 33 percent in France compared to 11 percent in Sweden[6].

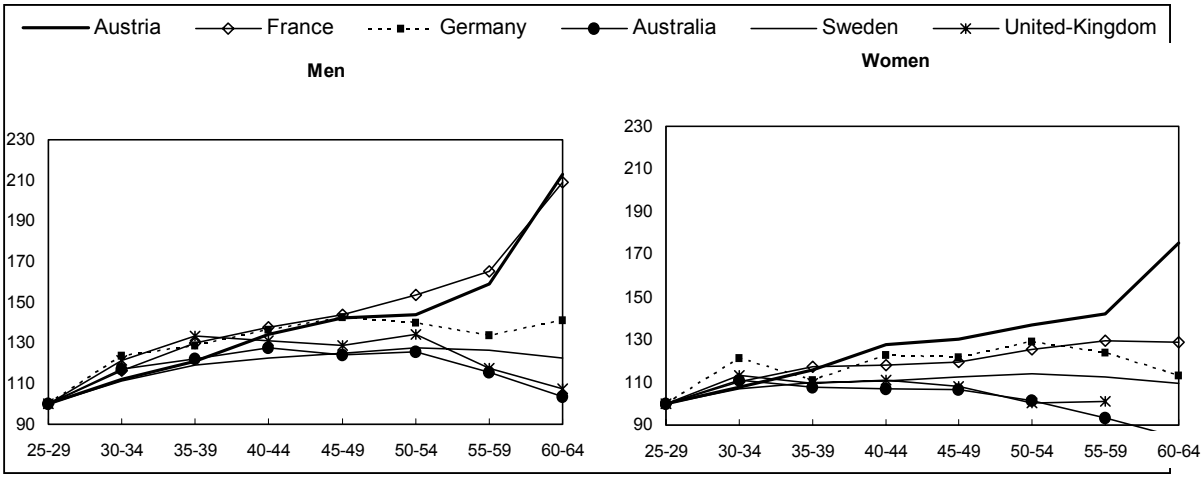
It is arguable that the low employment rate of older workers in Austria may be partly attributed to the divergence of productivity and wages at older ages, which is a strong incentive factor for employers to discharge older workers. This raises the question to what extent seniority rules account for the asymmetry between productivity and age-wage relationships. Practically all collective agreements include age and length of employment

[5] For an international overview of age-earnings profiles see *Johnson – Neumark* (1996).

[6] This data is taken from the European Survey on Working Conditions 2000 (see *Jolivet and Lee,* 2004).

within a firm as factors to be taken into account in wage rises. Proper wage ladders, i.e., a linkage of (minimum)[7] wage rises with tenure (time with the firm) is the rule in white collar occupations and in some blue collar occupations in large scale industry[8].

Graph 4: Age-earnings profiles in Austria and selected OECD countries, 2000[a]
Index: Earnings of 25-29 year olds = 100



Source: Austria: Microcensus and "Wage Tax Statistics" (MZ Lst Data); France DADS; Germany: German socio-economic panel; Netherlands: Statistics Netherlands; Sweden: Statistics Sweden; United Kingdom: Labour Force Survey. – [a]) 2001 for Austria.

The comparatively high wages of mature workers have two consequences. On the one hand, they may provide an incentive for the employer to sack them, on the other hand, they are a major reason for the low re-employment rate of unemployed older workers. In addition, and that is the focus of the political debate in Austria in terms of age discrimination, that young workers experience wage discrimination while older workers face employment discrimination.

Increasing the numerical flexibility through temporary workers

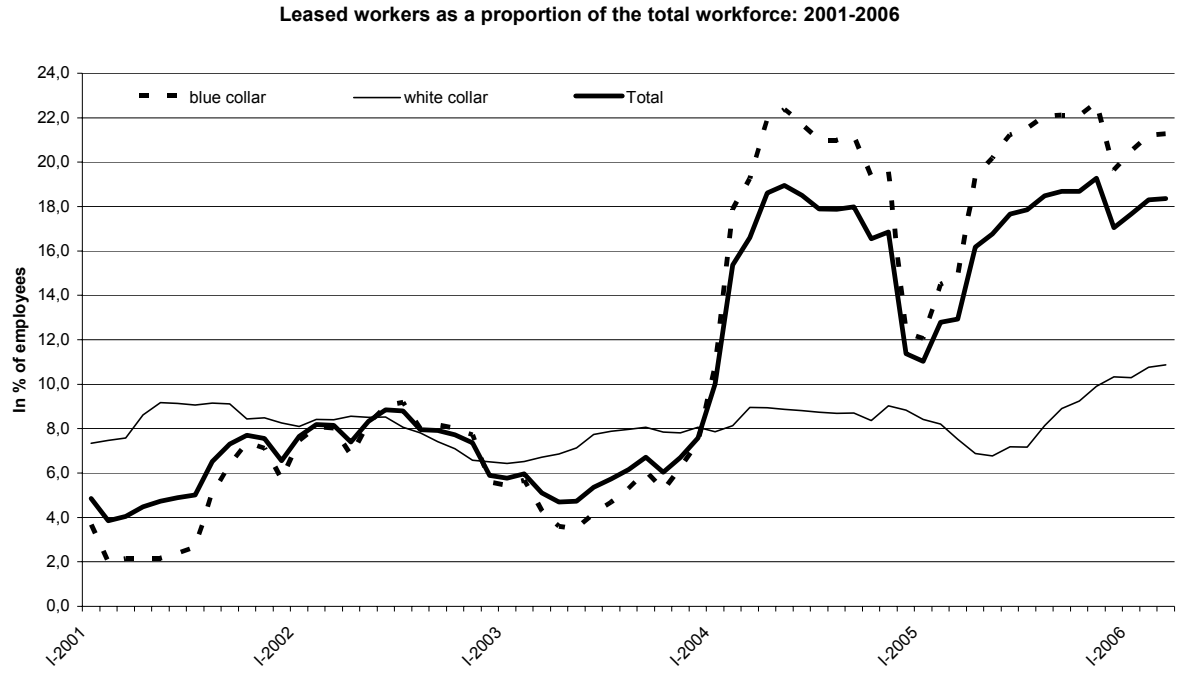
Apart from large internal mobility of labour, the numerical flexibility is high; as hiring and firing is costly in Austria, the plant is cooperating with a cluster of manpower leasing firms, in order to obtain external numerical flexibility of labour. In 2005 on average 16.5 percent of the employees were leased full-time workers, 20 percent of the blue collar workers and 8 percent of white collar workers, largely engineers. One can tell from Graph 4 that leasing is becoming an increasingly important recruitment instrument. Temporary workers allow a rapid

[7] Of course, every employer is free to add performance based elements to the pay schedule.

[8] For more about the age-productivity nexus see *Charness* (1985) and *Becker* (1964).

adjustment to cyclical and structural demand fluctuations. Core workers are increasingly substituted by temporary workers in using natural attrition of core workers as a means to reduce their numbers. The numerical flexibility of the work force is thus increasingly borne by temporary workers, the majority of them young people. The supply of young and middle aged skilled and highly skilled workers is in the short and medium term large, particularly in view of the increased inflow of migrants from Central and Eastern European Countries.

Graph 5: Leased workers as a proportion of the total workforce in the case plant: 2001-2006



S:WIFO - case study in car manufacturing.

The role of the labour market and public policy to promote employment and income security of mature workers

Public policy has to be cognizant of the economic environment of the manufacturing industry in general and the automotive industry in particular in Austria. In the 1990s, industry restructuring gained momentum, whereby primarily low to medium skill labour-intensive production lines were relocated to Central and Eastern European countries (CEECs). The driving force behind outsourcing and off-shoring was the objective of reducing wage costs, thereby promoting the price competitiveness of industrial output. For the same reason, the production site of our case study is coming under pressure.

The re-location of manufacturing did not jeopardise national economic growth per se as high-skill labour-intensive and capital intensive production was extended in Austria, often

feeding outsourced/off-shored suppliers into the national value added chain. Thus, the higher end of value added production tended to remain in Austria, thereby promoting economic and productivity growth (*Egger et al.,* 2001, *Arndt – Kierzkowski,* 2001). The downside of this development was that un- and semiskilled workers as well as skilled tradesmen lost their jobs more than proportionately, particularly older workers. Thus, the employment retention rate of older workers, which had been higher than that of persons in the main working age by 6.5 percentage points (95 percent versus 88 percent) in the early 1990s, had fallen below the rate for persons of main working age by the end of the 1990s (87 percent versus 89 percent) (*OECD,* 2005:117).

The limited employment creation at the lower end of the skill level is, however, not only due to technical change of an unskilled labour saving kind and outsourcing, but also due to increased bankruptcies of small and medium sized enterprises (SMEs) which provide jobs for older workers more than proportionately; in the current increasingly competitive environment it is only the most efficient supplier firms that can survive[9]. This is problematic not only from a short run perspective but also from a longer run one, as unskilled labour supply continues to be fed by immigration.

While there is considerable uncertainty about future migratory flows, the dynamics of and the driving forces behind immigration are such that Austria can expect to have substantial immigration for at least another 10-15 years. Thus, scarcity, especially of less skilled labour, will not occur for some time to come – the revised population forecasts suggest that there may be a stabilisation of population size by 2025. Labour supply may continue to increase, however, in the main through higher activity rates of older workers as the reforms of the retirement system of the late 1990s and 2003 will start to grip by then (*Statistics Austria,* 2005).

Supporting employers to retain and to hire older workers

The situation of the case plant in relation to older workers is somewhat different from what is anticipated for the national economy where the problem in the future may well be how to discourage older workers from dropping out of the workforce before their normal time of retirement and indeed to stay in the workforce beyond that time. This is a particular challenge for Austria as it is amongst the OECD countries with the lowest employment rates of older workers.

With a current employment rate of the 55-64 year olds of some 29 percent, it will not be possible for Austria to reach the EU-policy target of 50 percent by 2010. In order to better understand the reasons for the low employment rate of older workers, it is necessary to distinguish between supply-side and demand-side effects, as well as the role of institutions and policy measures. To begin with, one of the critical issues in this connection is the attitude of employers towards older workers. Clearly, it is not sufficient to increase work incentives and

[9] In Austria the number of bankruptcies of firms more than doubled between 1990 and 2004, reaching a bankruptcy rate of close to 2 percent (bankruptcies in percent of active enterprises), double the EU average rate (*KSV,* 2005).

to penalise workers or impose barriers on their exit from the labour market before the statutory retirement age, if employers have little or no interest in retaining or re-employing older workers. It is, therefore, important to shed light on employers' views on older workers and the practices adopted in relation to them.

Unfortunately, Austria has not undertaken employer surveys to establish the basis of employer attitudes and practices; thus, no statistically representative picture of the major barriers to the employment of older workers in the various industries is available. However, the disproportionate retrenchment of workers over 50 in Austria, the low propensity to invest in further education and training of older workers, the use of old-age part-time arrangements to reduce the work force and speed up micro-economic reform, the limited retention of older workers – all are indicators of a lack of demand for older workers. They may reflect general employer perceptions of the productivity and work performance of older workers relative to younger ones, the appropriateness of their relative wages, their health status, and the role of employment protection legislation – perceptions that in some respects are borne out in the case plant under consideration.

However, this is only part of the story, as it does not take into account the behavioural patterns of older workers (i.e., the supply side). Even if employers recognise the net benefits of employing older workers, older workers may no longer want to work, preferring the option of early exit. In a sense, the effectiveness of age management will, to a large extent, depend on the degree to which it will affect older workers' attitudes towards work. Given the dissatisfaction of older workers and unions with government attempts to extend working life by closing down early exit routes and reforming the retirement system, this issue is not of minor importance. In fact, a growing body of literature on work incentives for older workers suggests that retirement decisions by older workers are influenced by a wide range of factors, not only by the retirement system (see *Blöndal and Scarpetta,* 1999, *Taylor,* 2001).

Poor working conditions are increasingly voiced as an important factor for older workers wanting to withdraw from work. This is in fact, the rationale behind the policy stance of the unions who continue to favour policies which allow early exit from the labour market. They argue that persons who are worn out by their jobs, should continue to be able to retire early, not least because they have a reduced life expectancy. Thus they want to protect older workers, who are vulnerable by physically demanding jobs and stressed out by technological changes. As Lee (2004) points out, the American seniority system for layoffs in the manufacturing sector was to some extent a response to the work speed-up in the 1920s[10].

Thus, the low employment rate of older workers may be a result of the combination of factors:

[10] Workers older than 40 found it hard to maintain the work speed, and they feared that they would be the first to loose their jobs in situations of employment reductions. LIFO is a similar response according to which employers may be obliged by labour law, e.g., in Sweden, to lay those workers off first, in case of retrenchment, who have the least seniority, thereby effectively providing employment security to older workers.

- Employers shed older workers because they see in them a burden rather than a resource.
- Employers shed older workers because early exit is a desirable option for workers as their financial situation is cushioned by a generous welfare system (disability or early retirement).
- Employers believe that older workers are better able to adjust emotionally to job loss than the young and middle aged.

Could it then be said that the exit of older workers from the labour market is mostly voluntary? There is a certain ambiguity about early exit from the labour market, i.e., the concept of voluntary early exit as opposed to forced redundancy. There may be pressure from the employer as well as colleagues, particularly younger ones who are competing for the job. These are all matters for further enquiry in order to establish the basis for a sound policy on the retention of older workers.

In any event, the behaviour of employers and employees is influenced by a complex set of institutions/regulations and policies. Wages are a major policy variable, in particular age-related wages. Whether a positive age wage relationship is embedded in a formal seniority pay system or not, the key question is whether wages rise faster than productivity for any given worker. According to a recent EU report, "there is no empirical evidence that older workers are more or less productive than other age groups" (European Commission, 2003, p.174). Clearly this is a finding for the average, but, it does not appear to be true in our case plant. Even though the labourers are the group with the least tendency of wages to rise, they are the ones most disadvantaged in terms of employment security.

In view of the increasing difficulties of blue collar workers to cope with work as they grow older, the industrial relations system has to make provisions for flexible working arrangements, including a reduction of the speed of work, a reduction of working hours, and provisions of phased retirement (flexible retirement) to meet the preferences of older workers.

As far as education and training are concerned it may promote the employability of workers as they age. However, training provision depends upon the nature of production processes and upon the consequent structure of jobs available. Firm-specific training strengthens the employee's position by making him/her more productive, which decreases the probability of layoff.

The old, especially the less skilled, get relatively little training. According to Heckman (2000) this is because the old have a shorter horizon to recoup their investment and because there are dynamic complementarities in human capital investment. That is, training and formal education are complementary goods. In our case plant, however, most blue collar workers are highly skilled as they have received continued further education and training on the job. But there are limits to improving productivity by further training by the sheer nature of the jobs and technology.

If older workers lose their jobs, education and training measures do not appear to be very successful in raising their re-employment probability. This is not only the case in Austria. According to the OECD Ageing study of Norway, the few studies that are available find "very different estimates of the rate of return on training and do not provide much indication of which types of training appear to be most effective. (..). It is important to carry out more evaluations of the effectiveness of different types of training, especially for older workers" (*OECD,* 2004B:109).

The best available evidence, particularly from the active manpower policy literature, suggests that training programmes, on their own, are of limited use in bringing people out of unemployment or inactivity into jobs. Of prime importance are subsidies and targeted job search and job placement programmes; and even here there are risks of deadweight loss and of ineffectiveness if they are not part of a larger policy package.

Even if training can, in principle, help to bring people back into work, the jobs they acquire may not be of high quality/status. This explains why the incentive of older unemployed to take up another job may not be overwhelming. This is particularly the case if workers have been employed in a high wage industry and/or large enterprise and have no other alternative than a job in a low wage industry, where working conditions are often not better than in the previous job. Depending on the welfare/pension system, workers may not be inclined to take on low-paying or low status jobs. Indiscriminately providing training, in the absence of other incentives, is not a promising road for raising the employment retention or re-employment of older workers.

Income support and work incentive

In the future, the issue for the national economy will be how to balance adequate income support for those in need of it – a social protection objective – against the economic objective of ensuring an adequate work incentive in order to increase labour force participation? It may well be that some social security and pension arrangements encourage people to exit the labour market. In Austria, as well as in some other countries, like Sweden and the Netherlands, relatively generous sick and disability benefits are conducive to withdraw at least temporarily from work. *Faggio and Nickell* (2003) suggest that something similar, though on a smaller scale, may have happened in the UK. Thus, the deterioration of health provides an incentive to withdraw from the labour market, particularly where early retirement or disability pension is easily accessible and where the benefit level is high relative to the reduced earnings potential from work. In the circumstances, it has to be noted that older workers have a different working time horizon than younger workers, implying a higher opportunity cost of leisure of older workers. This could explain why older workers have a preference for reduced working hours, or outright early exit from the labour market, if their living standards are not unduly compromised thereby.

In Austria until recently, for a large number of long term unemployed, the disability benefit has been a means to exit the labour force. In 1999, the most recent year for which comparable

data are available for a large number of OECD countries, the *ratio* of the rate of inflow into disability benefits at age 55-59 over the rate of inflow at age 35-44 was much larger in Austria than in any other OECD country, five times higher than on average across the OECD. In contrast, inflow into disability benefits was far below OECD average for workers at age 20-44 and just about average at age 45-54.

The main reason for the large inflow into disability from the age of 55 onwards is the own-occupation basis of assessment (Berufsschutz). This relies on a very narrow definition of a lack of work ability, as capacity to continue in one's normal occupation has to be proven rather than general incapacity to work. The Austrian social partners have retained this regulation, even though most other countries with similar regulations have abolished it (e.g., Italy 1984, Norway 1991, the Netherlands 1994 and Germany 2001). The assessment process has been tightened, however, since the early years of 2000 (Table 1).

Table1 : Inflow into disability benefits by age in international comparison

Age-specific disability benefit inflow rates, and ratio over age group 35-44, 1999

	Inflows per 1000, by age group				Ratio over age group 35-44			
	20-34	35-44	45-54	55-59	20-34	35-44	45-54	55-59
Australia	3.2	5.1	8.6	17.7	0.6	1.0	1.7	3.5
Canada	0.4	1.0	2.4	4.7	0.4	1.0	2.3	4.6
Denmark	1.6	3.1	7.0	11.1	0.5	1.0	2.3	3.6
France	0.2	0.7	1.9	4.7	0.2	1.0	2.8	6.9
Germany	0.6	2.3	6.9	18.5	0.3	1.0	2.9	7.9
Netherlands	8.3	11.6	15.6	12.0	0.7	1.0	1.3	1.0
Norway	3.3	8.5	18.2	36.9	0.4	1.0	2.1	4.3
Poland	1.6	7.1	18.1	11.7	0.2	1.0	2.5	1.6
Portugal	1.2	2.0	7.7	19.8	0.6	1.0	3.8	9.9
Spain	0.4	1.6	3.6	8.4	0.3	1.0	2.3	5.3
Sweden	1.9	5.0	9.6	19.8	0.4	1.0	1.9	4.0
Switzerland	2.4	4.4	8.5	14.1	0.5	1.0	1.9	3.2
United Kingdon	9.7	12.4	17.8	22.3	0.8	1.0	1.4	1.8
United States	2.7	4.5	7.8	13.9	0.6	1.0	1.7	3.1
OECD (14)	2.7	5.0	9.6	15.4	0.5	1.0	1.9	3.1
Austria								
1980	0.6	1.6	6.8	23.4	0.4	1.0	4.4	15.0
1985	0.6	2.2	10.1	42.2	0.3	1.0	4.6	19.4
1990	0.6	1.9	8.3	37.3	0.3	1.0	4.3	19.4
1995	0.6	1.7	8.5	44.9	0.3	1.0	5.0	26.3
1999	0.7	2.2	9.5	34.9	0.3	1.0	4.2	15.6
2003	0.5	1.4	5.7	23.0	0.4	1.0	4.0	16.3

Source: Adapted from Table 4.9 in *OECD* (2003), *Transforming Disability into Ability*. – Note: Contributory disability benefit programme only.

The case study showed that it is in the interest of the employer as well as the employee to keep the early exit options of older workers open, as they ensure a reasonable income for older persons while at the same time reducing the need for changes in personnel policy at

the plant level. As labour scarcities, especially of the less skilled, are not to be expected for some time, both parties see little reason for change.

However, public policy forces change upon the workers and employers alike as ageing, ceteris paribus, implies unsustainable strains on public sector budgets. In consequence, the retirement system has been reformed and early exit routes are increasingly being closed, e.g., by tightening eligibility criteria for disability pensions and reforming the institutional responsibilities linked with the medical judgement. Thus public policy is effectively forcing change upon employers and employees alike.

So far as our case study is concerned, more immediately, age management is the appropriate response. It can work effectively and fairly if a policy mix is put in place, which facilitates the implementation of more flexible work arrangements while at the same time drawing a safety net for the workers. To ensure employment and/or income security over the working life span especially of its older employees, the policies have to be cognizant of the challenges ahead:

- By progressively removing age related pay from those whose productivity no longer improves with age and experience.
- By offering further education and training and/or co-financing it, as it may promote the employability of older workers
- By ensuring a healthy workplace and by implementing preventive health care thereby prolonging the work ability.
- By reforming the redundancy payment system for those whose employment is terminated before their normal retirement age, based on years of service as well as years before normal retirement[11].

Concluding remarks

For the case plant, the subject of this paper, age-management is well in place by now following an analysis of the status quo in the form of a survey. This survey examined work stress among employees, their job characteristics, the organisational and social resources of the enterprise, and the subjective feelings of wellbeing of the employees, i.e., a salutogenic analysis of work, in addition sick leave data were analysed as a complementary piece of information[12]. The research has set in motion an agenda of age-management with the active participation of employees.

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[11] While Austria has successfully reformed the system of severance pay (Abfertigung Neu) for workers who entered employment in the year 2000, the problem of older workers who are in the old system of severance pay has not yet been resolved (*OECD,* 2005:133).

[12] Salutogenesis is a concept created by the medical sociologist *Aaron Antonovsky* (1979 and 1987) to refer to a new approach to health promotion and needs assessment. It examines the creation of wellbeing by looking at successful coping strategies and health. Salutogenesis examines the underlying social constructs, the broader picture, in order to both define the health problem and to search for coping resources or mechanisms. Salutogenesis

The experience with the implementation of age management strategies has so far been promising to the extent that it is beginning to make all aware that things are changing and that early exit may not be the only option and that they may have to consider working at a reduced speed and/ or reduced hours, an that this may entail reductions in pay, which may be partly offset by transfer payments.

This process is still ongoing, during which time it is being monitored and analysed by consultants and/or researchers. The age-management in place appears to have already prompted an improvement in work motivation as well as a reduction of stress, which could be expected to boost productivity or at least keep it at a high level as the work force is getting older. It remains to be seen if it also reduces sick leave. This case study suggests that age management should be regarded as an age diversity programme rather than simply as a programme for the aged.

For enterprises facing a predicament similar to that of our case plant, the road ahead will call for institutional reforms which will accommodate and facilitate change in a way that will take account of both the economic needs of the employers as well as the socio-economic well-being of the older employees. In short, the institutional environment will have to promote flexibility while at the same time providing a social safety net for all.

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