

Working beyond retirement age in Germany: The employee's perspective

Dennis Dittrich¹/Victoria Büsch²/Frank Micheel³

1. Introduction

The social security system and the labour market face new challenges due to demographic change. Low replacement fertility and rising life expectancy in the past have shaped age composition in Germany so that the birth cohorts of the mid-1950s to the mid-1960s, the so called “baby-boomers”, are the largest group in the German population. This group will retire in the near future. Low fertility will lead to a decreasing number of young workers. Replacement of older workers leaving the labour force by young people will become more difficult (e.g. Höhn et al. 2008, Börsch-Supan and Wilke 2009, Bäcker et al. 2009).

In Germany, as in most European countries, the pension system is organised as a pay-as-you-go system, so the increasing age-dependency ratio leads to a need to adapt the pension system, with regard to a shrinking and ageing population. More contributions to the system are needed, and a reduced number of pension years would help to re-establish a sustainable public finance system.⁴ Past demographic trends, combined with the current age composition, will determine the mid-term future population. The “baby-boomers” are expected to depart from the labour market in the 2020s, leaving a large gap in the labour supply. Reversing this trend by demographic “instruments” (higher fertility and higher amounts of migration flows) is only a realistic option in the (very) long run (e.g. Höhn et al. 2008: 20pp.). Promoting higher employment rates, in particular of older people, is a serious alternative. However, the participation rate of older men was only 63% in 2008. Figure 1 shows that the average retirement age is still significantly earlier than 65 years: the current legal retirement age for old-age pensions in Germany. We see, by comparing with other OECD countries, that this trend pattern is true for most industrialised countries.

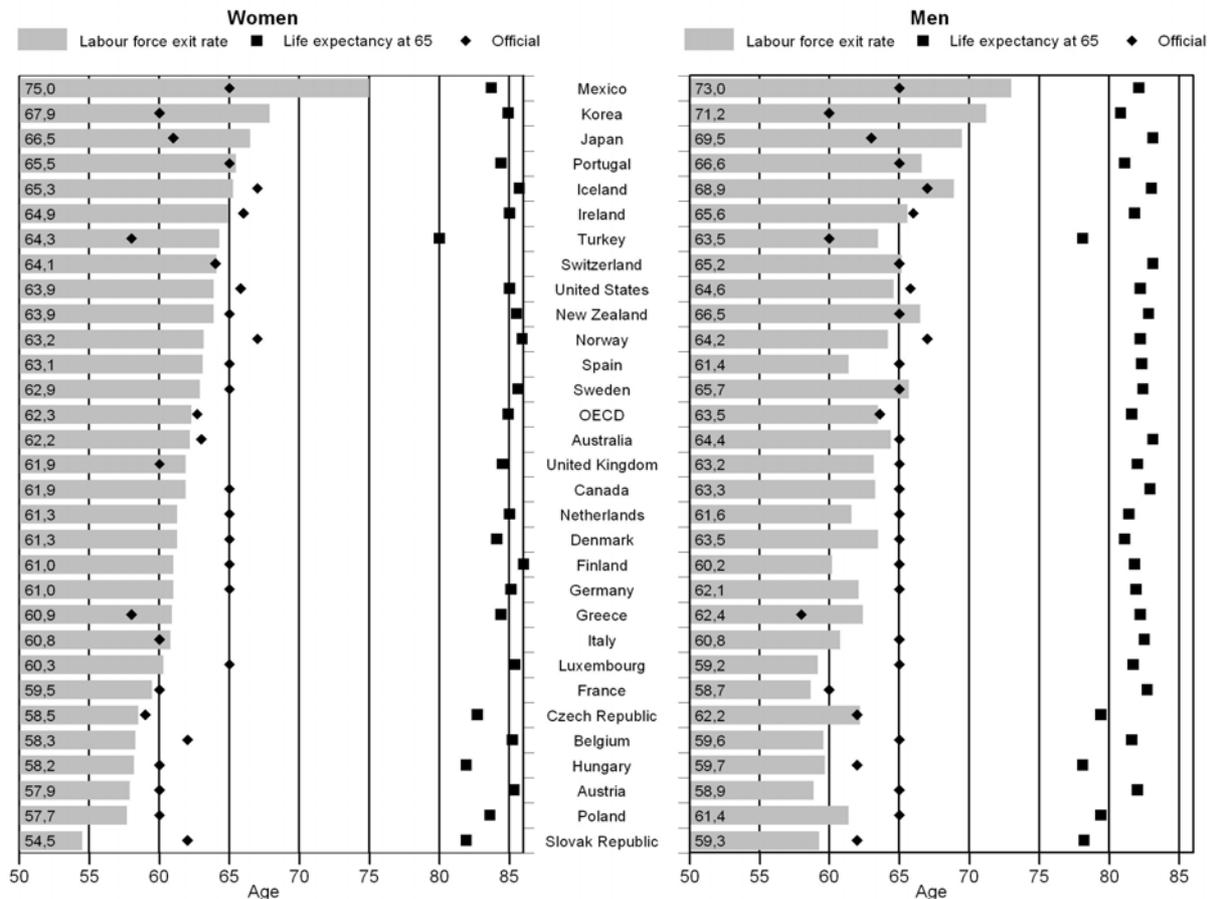
¹ Prof. Dr. Dennis A. V. Dittrich, Jacobs University Bremen, Jacobs Center on Lifelong Learning and Institutional Development, Campus Ring 1, 28759 Bremen, d.dittrich@jacobs-university.de

² Prof. Dr. Victoria Büsch, SRH Hochschule Berlin, Ernst-Reuter-Platz 10, 10587 Berlin, victoria.buesch@srh-hochschule-berlin.de

³ Frank Micheel, Federal Institute for Population Research, Friedrich-Ebert-Allee 4, 65185 Wiesbaden, frank.micheel@destatis.de

⁴ In addition, reducing unemployment in general, an earlier entry into the labour market of young people, or raising the participation rates of females particular in the Western part of Germany and immigrants are important measures as well.

Fig. 1: Labour force exit rate versus the official retirement age, 2007; Life expectancy at 65, 2005



Source: OECD (2009)

Taking these numbers into account, the German government initiated several pension reforms reflecting the impact of future population ageing on the pension system. Partial retirement will no longer be subsidised after 2010, and a gradual increase of the legal pension age for old-age pension to 67 years will start in 2012. Beside these reforms, the statutory pension system has undergone several major changes in recent years, focusing on the pension adjustment formula, lowering the replacement level in the long run (Sachverständigenrat 2008: 355pp. and 413pp., Bäcker et al. 2009: 46pp.). These reforms put pressure on older workers to stay longer in the labour market. One question remains: *Are economic pressure and legal constraints sufficient political measures to postpone retirement?* One major concern is that older unemployed workers may stay longer in unemployment before they are eligible for pension benefits. In Germany the chances for older workers of being hired are significantly lower than the chances of being employed until retirement (Heywood et al. 2010). Beyond that, *are older workers willing to stay longer in the work force or will they choose alternative channels (for example seeking options for retirement via disability pensions) to avoid this growing pressure?*

2. Research questions

Due to the argument that older people might be obliged to continue working after retirement age, leaving the labour market is one of the main topical issues. Most research has been on retirement decisions (for comprehensive overviews see Beehr 1986, Feldman 1994, and Wang and Shultz 2010) and little is known about the intentions of older people to continue working (Shacklock et al. 2009). Mainly in the American literature, a considerable amount of research is found on bridge employment (Wang and Shultz 2010), i.e. continued paid employment after a worker has officially retired. It could either be a continuance of the former regular job or a different job and refers to a time span between full engagement in work and full retirement (Ruhm 1990, Feldman 1994). This phenomenon has only been studied since the 1990s, because the transition from full-engagement to full-retirement is more the exception than the rule for older workers in the U.S.

From the macroeconomic perspective, with respect to economic growth, Börsch-Supan (2010) claims that due to population ageing (and shrinking), an increase in labour productivity is needed, to compensate for a decline in the domestic product; to speed up and increase human capital, in order to combat a shortage of qualified labour supply, more education is required. These aspects combined lead us to the following research questions:

1. Do people wish to work beyond legal retirement age, and what are the driving forces?
2. Is the intention to continue working affected by self reported work ability? Are older workers motivated at their workplace?
3. Which indicators are related to participation in further education programmes?

Following Wang and Shultz (2010), one could distinguish between four different types of antecedents of bridge employment: individual attributes, job and organisational factors, family factors, and socio-economic factors. We focus on job and organisational factors, apart from some individual attributes. Our aim is to understand the needs of older workers at their workplace, and their willingness to continue working beyond retirement age. This might help us to explore how human resource management can introduce appropriate measures to improve the job environment. We assume a significant influence of job status, job demand, job reward, job position, working time, size of the company, and especially motivation for the wish to prolong working life.

In a representative poll in Germany, 73% claimed that they would be willing to work beyond 65, if they could improve their financial situation (Opaschowski 2008). According to McNair (2006), there is a divide amongst attitudes to work in the older workforce. Some people need to work due to resource issues, and others enjoy the chance to work.

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Blue-collar workers are confronted with physically demanding tasks during their working life. It is less likely that they are willing and/or even able to postpone their retirement. Official statistics about German retiree entrances confirm this. White collar workers need experience and established networks, since these play an important role in the increasing knowledge-based economy and both increase with age.

In a study with 346 older Dutch employees, van Dam et al. (2009) expected a correlation between anticipation of a manageable workload and willingness to retire. They cited studies showing that stressful working conditions with heavy workloads are closely connected with higher intentions to retire early. They did not find the expected correlation, yet it is quite probable that reduced stress might lead to later retirement. If stress at work as induced by job demands is low, the employees wish to work longer (see also Siegrist et al. 2006).

In a British study using different surveys like the Labour Force Survey, workers over State Pension Age (SPA) worked fewer hours than younger workers, and are twice as likely as other age groups to work in smaller companies with 1-10 staff (Smeaton and McKay 2003).

Based upon research on 402 Canadian health care managers, aged 50 years and older, Saba/Guerin (2005) claim that, besides financial rewards, non-financial factors like perceived recognition play an important role in extending work beyond retirement age.

According to a study by Pienta and Hayward (2002), it is more likely that workers with high intrinsic motivation will stay longer in their jobs. They used data from the 1992 Health and Retirement Study. We want to test for a correlation between willingness to work beyond retirement age, and motivation at the work place, since we assume a strong connection.

We test for gender differences, since Smeaton and McKay (2003) confirmed an influence on the retirement decision, particularly when combined with other factors such as marital status. Divorced men are less likely to remain working than women. Women are motivated by different factors than men. One main objective for women to go to work is the social interaction at the workplace, while an important driver for men is their career (Hofstede 2001). Older women might have a higher motivation to work, compared to men, since most of the older men have already reached their career related goals.

For the HR manager, where the employees are willing to continue working, the core question is if they are still able to do so. We assess the level of work ability (WA), using self evaluation questions according to Ilmarinen (2005). Negative age stereotypes are widespread, and older people are seen as less productive than younger people. The "older age group" is quite heterogeneous, with respect to WA (Büsch 2004). According to Ilmarinen (2005), 60% remain on the same level, and 10% even improve their WA. Only

30% show a decreasing productivity. Where people claim that they have a low or medium level of WA, it is necessary to improve the level of WA via participation in further education, and a change in the work environment insofar as it affects WA.

Older workers may be unwilling to take up offers of training. One reason is a lack of self-confidence (Phillipson/Smith 2005). The earlier factors might also play a role, explaining participation in further education. We test for the importance of job related factors like job award, job position, working time, size of the company and also of gender and income on the participation rate in further education programmes.

3. Data description, methods and results

In May 2008 a sample survey was conducted by infratest in Germany with 1,500 employees (blue collar workers, white collar workers and civil servants) aged between 55 and 64 years. Using unweighted data: 48% were male and 52% were female. The majority of participants (71%) were under 60 years old. By level of education, people with successful apprenticeship or similar represent half of the sample (48%), followed by graduates from university or university of applied sciences (30%), master craftsmen/technicians or similar (17%), and people with no vocational graduation (4%). Most respondents were employed in jobs with qualified tasks (48%). 31% quoted that they perform highly qualified tasks, whereas 21% were employed in jobs with simple tasks. Being employed in full time jobs is the mode. 75% of the participants reported a working time of 35 hours per week or more. 20% worked in part-time jobs with 15-34 working hours per week and 6% worked less than 15 hours per week. Information on net household income shows, thanks to a wage structure based on seniority, a negatively skewed distribution: income groups with 2,000 up to 3,000 Euros and 3,000 Euros or more held the largest shares of 31% respectively, followed by income groups with 1,500 up to 2,000 Euros (18%), 1,000 up to 1,500 Euros (15%), and below 1,000 Euros (5%). By firm size we see that the majority of the respondents (32%) worked in firms with 250 or more employees, followed by the employment size groups 50-249 (28%), 10-49 (26%) and less than 10 (14%) employees.

47% of respondents wished to continue working after reaching their legal retirement age. Only 6% actually state a desired retirement age past their individually expected retirement age, while 63% would rather like to retire earlier. Consequently only 17% of respondents assess the gradual increase of the legal retirement age in Germany as “good” or “very good”, as compared to 69% who consider the increase as “bad” or “very bad”. In our further analysis, we focus on the wish to continue working after reaching the legal retirement age, noting that reported levels may be too high, due to social desirability concerns, when answering the questionnaire. Differences between the various subgroups should be largely unaffected.

Tab. 1: ANCOVA Desire to continue working

	Sum Sq	Df	F value	Pr(>F)
Work Motivation	3.46	1	2.85	0.092
Job Demands	2.69	1	2.21	0.137
Job Rewards	5.42	1	4.46	0.035
Job Status	1.10	2	0.45	0.635
Work Hours	7.71	2	3.17	0.042
Firm Size	30.17	6	4.14	<0.001
Blue/White Collar / Civil Servant	17.72	2	7.29	0.001
Household Income	32.79	10	2.70	0.003
Health	0.91	1	0.75	0.388
Expected Work Ability	10.09	1	8.30	0.004
Gender	7.99	1	6.57	0.011
Age	11.35	1	9.33	0.002
Education	7.19	5	1.18	0.315
Disposition for Further Education	8.25	1	6.78	0.009
Residuals	1157.42	952		

The analysis included all interactions and took the sampling weights of the survey into account. Due to the limited space we report only the main effects here. The reported statistics refer to the Type-II tests that are calculated according to the principle of marginality, testing each term after all others, except ignoring the term's higher-order relatives. Significant interactions were job demands: expected work ability ($F=4.74$, $df=1$, $p=0.030$), gender: job reward ($F=5.04$, $df=1$, $p=0.025$) and gender: job status ($F=4.19$, $df=2$, $p=0.015$).

Source: Weiterbeschäftigungssurvey, own calculations

Table 1 shows the analysis of covariance (ANCOVA) for the desire to continue working, and several organisational and personal factors. Job demands are measured on a scale consisting of seven items (e.g. “My job demands constant full concentration”; $\alpha=0.71$), job rewards on a scale consisting of nine items covering financial and non-financial aspects (e.g. “I get too little money for my work”; $\alpha=0.73$); job demands and rewards closely correspond to the effort and reward scales of Siegrist et al. (2004). Job status is measured ordinally (“simple”, “qualified”, “highly qualified and supervisory” work). Work motivation is measured on a single item (“My work motivation is very high”, 5-point Likert-scale). Health is a scale consisting of 13 items measuring the impairment due to several physical and mental illnesses ($\alpha=0.85$). Expected work ability is measured by a single item (“What do you expect your productive efficiency with respect to your current work tasks will be in five years?”; 5-point Likert scale). Finally, education is measured on an ordinal scale (from no formal education to university degree) and disposition for further education on a scale consisting of three items (e.g. “I will always try to further educate myself”; $\alpha=0.75$).

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Observation 1: The main predictive factors for the desire to continue working are household income, firm size, work classification, and expected work ability.

The main predictive factors for the desire to continue working are household income: the lower the income, the higher the desire to continue working; firm size, the smaller the firm, the higher the desire to continue working; work classification, only 37.5% of civil servants reported a desire to continue working past the legal retirement age, while 43.6% of blue collar workers and 50.4% of white collar workers did so; expected work ability, and the individual's disposition for further education, the higher the expected work ability or the disposition for further education, the higher the desire to continue working. Job rewards are another significant predictive factor, a more rewarding job leads to a higher desire to continue work; this effect is stronger for female respondents. Current working hours are a significant predictive factor: while only 44.7% of respondent working full time report a desire to continue working past the legal retirement age, 52.7% of respondents working part time and 58.7% of respondents working less than 15 hours per week want to continue working past retirement age. Respondents with high work motivation show a higher desire to continue working. This effect is minor when we control for all other factors. Age is positively correlated with the desire to continue working, though this may be a selection effect, as our sample only consists of people still working, and those who do not want to continue working past retirement age may already have left the labour force. Education, job demands and health do not significantly contribute to the explanation of the desire to continue working. Job status is only predictive in the female sub-sample: the higher the job status, the more likely is the female respondent's desire to continue working. These interaction effects are also responsible for the reported significant effect of gender, the actual difference between 48.3% for female and 45.7% for male respondents' endorsement rate for continuing working is not statistically significant (chi2-test $p=0.425$).

Although health is not indicative of the desire to continue working, the (expected) ability to work determines whether an individual can still actively participate in the work force. We expect health to be one major determinant of work ability. We measure current work ability in our questionnaire by a single item ("How do you rate your productive efficiency with respect to your current work tasks?"; 5-point Likert scale). In table 2 we report the analysis of covariance for current Work Ability and the organisational and personal factors introduced above.

In a separate analysis, some of the factors show statistically significant differences for the corresponding sub-samples, but the effect sizes are diminished in a joint analysis that simultaneously controls for all factors. This applies to work classification (with average work ability scores of 3.74, 3.88, and 3.89 for blue collar, white collar workers and civil servants respectively;

chi2-test $p=0.004$), work hours (3.90, 3.69, and 3.62 for full time, part time and less than 15 hours per week; chi2-test $p < 0.001$), and firm size, household income, level of education, and disposition for further education, that all show a positive correlation with subjective work ability (chi2-test $p < 0.001$).

Tab.2: ANCOVA Current Work Ability

	Sum Sq	Df	F value	Pr(>F)
Work Motivation	6.11	1	17.20	<0.001
Job Demands	2.01	1	5.66	0.018
Job Reward	1.98	1	5.58	0.018
Job Status	5.32	2	7.48	0.001
Work Hours	0.89	2	1.25	0.288
Firm Size	3.18	7	1.28	0.258
Blue/White Collar / Civil Servant	0.97	2	1.37	0.255
Household income	3.29	10	0.93	0.508
Health	70.42	1	198.13	<0.001
Gender	0.95	1	2.68	0.102
Age	0.10	1	0.29	0.588
Education	3.31	5	1.87	0.098
Disposition for Further Education	1.11	1	3.13	0.077
Residuals	372.46	1048		

The analysis included all interactions and took the sampling weights of the survey into account. Due to the limited space we report only the main effects here. The reported statistics refer to the Type-II tests that are calculated according to the principle of marginality, testing each term after all others, except ignoring the term's higher-order relatives. Significant interactions were motivation: gender ($F=7.13$, $df=1$, $p=0.008$), motivation: age ($F=12.83$, $df=1$, $p<0.001$), motivation: work hours ($F=4.00$, $df=2$, $p=0.019$), health: income ($F=2.99$, $df=10$, $p=0.001$), age: work hours ($F=3.58$, $df=2$, $p=0.028$), age: income ($F=2.20$, $df=10$, $p=0.016$), work hours: disposition for education ($F=4.98$, $df=2$, $p=0.007$).

Source: Weiterbeschäftigungssurvey, own calculations

Observation 2: The main predictive factor for current work ability is health.

In the joint analysis, as expected, health is the single most important factor determining an individual's subjective current work ability: the better the health, the better the work ability. The positive effect of health even increases (non-linear) with household income. Higher job demands that may imply higher chronic stress levels at work (cf., e.g., Salavecz et al. 2010) lead to a lower subjective work ability, while higher job rewards and higher job status correspond to higher work ability. Higher work motivation leads to higher subjective work ability; this effect is smaller for female and older respondents. Women feel on average slightly less capable than male respondents, they score on average only 3.78 on the 5-point work ability scale as compared to 3.89. On the other hand, older respondents who work full time report higher work ability than those who work part time or less than 15 hours per week. This seems to be

a self-selection effect. There is also a non-linear interaction effect for work hours; the positive effect of work motivation on work ability is strongest for respondents who work part time.

Tab. 3: ANCOVA Disposition for Further Education

	Sum Sq	Df	F value	Pr(>F)
Work Motivation	22.44	1	32.02	<0.001
Job Demands	15.65	1	22.33	<0.001
Job Rewards	0.70	1	0.99	0.319
Job Status	5.71	2	4.08	0.017
Work Hours	0.19	2	0.14	0.874
Firm Size	6.87	7	1.40	0.202
Blue/White Collar / Civil Servant	9.28	2	6.63	0.001
Household Income	8.90	10	1.27	0.242
Health	1.43	1	2.04	0.153
Gender	0.19	1	0.27	0.601
Age	0.50	1	0.72	0.397
Education	7.58	5	2.16	0.056
Residuals	755.33	1078		

The analysis included all interactions and took the sampling weights of the survey into account. Due to the limited space we report only the main effects here. The reported statistics refer to the Type-II tests that are calculated according to the principle of marginality, testing each term after all others, except ignoring the term's higher-order relatives. Significant interactions were job rewards: work hours ($F=3.97$, $df=2$, $p=0.019$), health: age ($F=3.85$, $df=1$, $p=0.050$), work classification: job status ($F=4.32$, $df=4$, $p=0.002$), work classification: income ($F=1.95$, $df=15$, $p=0.016$), and firm size: education ($F=1.93$, $df=15$, $p=0.018$).

Source: Weiterbeschäftigungssurvey, own calculations

Observation 3: The main predictive factors for an individual's disposition for further education are his work motivation and his job demands.

The two most important factors predicting an individual's disposition for further education are work motivation and job demands: the higher the motivation and job demands, the higher the disposition for further education. Blue collar workers report on average a substantial lower disposition for further education than white collar workers and civil servants (with average scores on the disposition scale of 3.7, 4.2, and 4.3 respectively). A similar relationship can be found for job status: the more qualified the tasks of the job, the higher the disposition for further qualification. For white collar workers and civil servants, the increase in their disposition for further education due to their job status ("qualified" and "highly qualified and supervisory" tasks) is even stronger. There is also a positive effect of the level of education on the disposition for further education, which is amplified by increasing firm size. Job rewards have a more positive impact for respondents who are part time or full time employed, than for respondents who work less than 15 hours per week. There are no gender

differences, and the disposition for further education is also independent of age; though there is a small positive age effect for healthier respondents, i.e. the mean disposition is the same across age groups, yet it diverges for different health conditions with age.

Since the disposition for further education has a significant positive effect on the desire to continue working past the legal retirement age, an individual's work motivation and job demands indirectly predict his desire to continue working.

4. Discussion and Outlook

Due to demographic change, and the resulting need to find a sustainable "generation contract" in order to finance pay-as-you-go social systems, a longer working life will be necessary, among other measures to promote higher participation rates of women, especially in the Western part of Germany, and immigrants. The legal retirement age for women's old-age pensions was already increased from 60 to 65 during the 1990s in Germany. Starting in 2012, the legal retirement age will gradually increase for the entire working population from age 65 to 67, starting with the birth cohort 1947.

The majority of respondents in our survey sample disagreed with recent pension reforms, in particular the increase in the legal retirement age, but 47% wish to continue working. ANCOVA analyses demonstrate that household income has the highest predictive power for this wish. Household income and the intention to continue working beyond retirement age display a negative relationship: the lower the income, the more likely is the wish to continue working. This result is consistent with findings from previous research work (e.g. Beehr 1986, Feldman 1994): older people who think that they are better prepared for retirement are more likely to leave the labour market earlier than their low income peers, who are less able to sustain their current living standards.

Job and organisational factors, in particular the size of the firm and job rewards, are able to explain some differences in the willingness to postpone retirement. The smaller the firm size, the higher the probability that people wish to extend their working life. Large firms in manufacturing industries were hit by economic structural changes, with the consequence of mass layoffs. Strategic firm policy, decreasing employment, would not provide older workers the chance to stay longer in their jobs (see also Feldman 1994). Especially in the 1980s and 1990s, large companies often took the opportunity to offer their employees pre-retirement arrangements, which might also have influenced the work atmosphere. (see, e.g., Bäcker et al. 2009: 169 and 179).

Work motivation influences the willingness to work beyond retirement age, mainly through its positive effect on self reported work ability, and the individual's disposition for further education, while job rewards have an

additional significant direct positive impact on willingness. Human resource managers should consider improving the work and age climate in their companies. This would be an important step to recognize the work efforts of their employees.

Job rewards are a key factor, as they positively influence work ability. Firms need to balance between job rewards and demands (see also Bethge et al. 2009). Although high job demands have a negative impact on self reported work ability, as they imply chronic stress, they also have a positive impact on the disposition for further education. Firms have to pay regard to creating a work environment that is not too demanding, yet still gives older workers a (new?) challenge!

Besides health status, current work ability also depends on work motivation and job status, positively related to the disposition for further education. Since work motivation can be widely influenced by the enterprise, e.g. through high identification with goals, there is a key for change and improvement.

For HR management, it might be meaningful to develop a new typology of employees, to have as an alternative to age, as an indicator to deduce a course of action. One option is to cross the different levels of work ability with the level of motivation. In the case that people claim they have medium or even high motivation, but only low or medium level of WA, it is recommended to improve the level of WA, via participation in further education, and a change in the work environment insofar as it affects WA.

Tab. 4: Distribution of Work Ability and Motivation

WAI	Motivation		
	Low	Middle	High
Low	8.5	13.9	6.1
Middle	11.5	25.3	19.0
High	2.3	5.5	7.9

Source: Weiterbeschäftigungssurvey, own calculations

More than 50% with a middle or even high motivation at the workplace claim that they have only a low or medium level of work ability (see table 4). From the employer's perspective, participation in further education is necessary to maintain and improve the older worker's productivity. Yet, successful participation in further education entails a positive attitude towards further education, and consequently a high disposition for further education. Hence, a high disposition for further education is a prerequisite for productive ageing.

Why are civil servants significantly less willing to work longer, compared to white or even blue collar workers? Is there possibly a lack of motivation due to daily routine or financial security in retirement? Are legal and administrative barriers to the extension of working life the reason why they are less willing to

continue? At this point we can only speculate about these aspects, and leave them open to further investigations.

A better understanding of the transition into retirement helps to identify (new) potential, and develop new strategies for management to maintain qualified personnel until, or even beyond, legal retirement age. For future research, retirement should not be seen as an event but as a process (Wang and Shultz 2010: 177pp.). Longitudinal data is needed to study this retirement process, and isolate cohort effects from period effects.

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