Firms' contribution to the internal and external employability of older employees: evidence from Germany

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Abstract In the examination of older employees' employability, one can distinguish between internal and external employability. Internal employability can be measured by individual employment stability, and external employability occurs when employees replace one employment relationship with another. Most studies focus on the personal skills and characteristics that are necessary to maintain employability. However, external factors also contribute to individual employability. Therefore, this study examines which organisational attributes of firms contribute to older employees' employability in Germany. Taking firm and individual characteristics into account, the results of discrete-time survival models show that in specific organisational structures, older employees have higher internal employability. Accordingly, older employees are more likely to maintain employment in the service sector and in recruiting organisations facing (skilled) labour shortages. However, the results also indicate that financially investing organisations facilitate early labour market exits. With regard to older employees' external employability, the results show only little evidence indicating an association between organisational attributes of firms and the likelihood of job change.

Keywords Older employees · Employability · Job exit · Job change · Retirement · Organisational theory

JEL Classification J14 · J26 · J62 · L2

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Introduction

In the empirical examination of older workers' employability, one can distinguish between internal and external employability. Internal employability can be measured by individual employment stability, and external employability occurs when individuals replace one employment relationship with another. Although most studies focus on the personal skills and characteristics that are necessary to maintain employability, external factors also contribute to individual employability. Employability can thus be described as a link between personal assets and external circumstances (Hillage and Pollard 1998). This study focuses on the demand side of the labour market and aims to identify organisational effects on the individual employability of older workers. It examines the organisational attributes of firms and their contribution to older employees' internal and external employability.

In Germany, like in many other countries, older individuals have comparatively low levels of internal and external employability. In particular, career-oriented job changes decrease with age, the vast majority of older employees leave the labour market before retirement age, and individuals who lose their job at an older age struggle to find new employment (Börsch-Supan and Wilke 2009; Carless and Arnup 2011; Dietz and Walwei 2011).

Although policy makers argue that individual employability can help older men and women to maintain employment (Hillage and Pollard 1998, Lefresne 1999; Eichhorst and Rhein 2005), only few approaches look into the relationship of ageing and employability (see e.g., van der Heijden and de Lange 2010). Some studies are trying to show that individual productivity decreases with age, and therefore, older employees become less attractive to employers. In particular, it has been argued that

employees' productivity decreases with age, while their wages tend to increase (Skirbekk 2003). However, more recent studies find no evidence that productivity declines with age (Börsch-Supan et al. 2008; Cardoso et al. 2011), but employers in Europe remain expecting higher productivity-pay gaps among older employees than among the younger (Conen et al. 2012). Furthermore, outdated skills and qualifications as well as bad health of older employees are assumed to result in lower internal and external employability (Haan and Myck 2009; Hofäcker 2010).

Moreover, most studies concerning employability analyse labour market outsiders and their individual ability to gain employment (Apel and Fertig 2009; Brussig et al. 2010; Koen et al. 2013). However, individuals who are already in the labour market also have different levels of employability, and the ability to realise or actualise employability depends on not only employees' personal skills and characteristics but also external circumstances and employers' demands.

To develop internal employability (hence to stay with an employer) and/or external employability (hence to change employer), both labour supply and labour demand factors are crucial.

So far, only little research has focused on the labour demand side's contribution to individual employability.

Overview

Literature

Currently, the body of literature on organisational effects on internal employability or job duration at higher working ages remains limited. In addition, only a few analyses have examined the external employability and job changes of older employees.

With respect to older workers, many studies instead analyse individual and institutional effects on retirement decisions (see, e.g., Siddiqui 1997; Antolin and Scarpetta 1998; Börsch-Supan 2000; Radl 2007). Regarding Germany, the common findings are that, in the 1990s and early 2000s, the pension system provided many incentives for early retirement and that retirement decisions were mostly driven by those incentives. In return, investing in internal and external employability was relatively unattractive for individuals.

Other studies investigate organisational influences on the internal employability and job duration of older employees. First, Heywood et al. (2010) find a positive association between delayed compensation and the employment of older adults. In addition, organisations that have work councils are more likely to employ older workers (Boockmann and Zwick 2004). Furthermore,

Boockmann and Steffes (2010) analyse the effect of firm-specific measures on older employees and the influence of those measures on employment duration. Their findings indicate that mixed-aged teamwork has a positive effect and that part-time schemes aimed at older workers have a negative effect on employment duration. Training measures and specially equipped workplaces are not found to influence older employees' employment duration.

Only a very limited number of studies concentrate on the influence of firm characteristics on external employability and job mobility. Carless and Arnup (2011) show that the absence of job security increases the chance of career changes, whereas salary is not related to job changes. However, no age-specific findings are presented. Similarly, Longhi and Brynin (2010) report no age-specific findings in analysing job change and occupational change in Britain and Germany. Accounting for firm size, the study shows that individuals in large organisations are less likely to change their jobs within an occupation. Finally, de Grip et al. (2004) show that employability varies among industrial sectors.

Theoretical considerations

The most popular approach for explaining employers' operational decision making and its influence on individual employment trajectories is segmentation theory (Reich et al. 1973; Baron and Bielby 1980). Segmentation theory attempts to explain how different organisational structures result in employment stability. Applying segmentation theory to Germany, Lutz and Sengenberger (1974) and Sengenberger (1987) differentiate between three classic labour market segments: the firm-specific labour market segment, the craft-specific labour market segment, and the secondary labour market segment. Organisations assigned to one labour market segment differ in regard of their need for qualified and specialised labour, their demand for flexibility, and their size. Most small firms in Germany are craft industries with a comparatively high demand for skilled labour. These organisations operate and exchange their labour in the craft-specific labour market. Firm-specific labour markets can mostly be found in large firms with high demand for skilled labour. According to segmentation theory, organisations with firm-specific labour markets require a large share of firm-specific human capital. They have an interest in keeping their personnel over the long run and offer internal career paths to remain attractive to their employees. Therefore, internal employability should be found in large organisations and in organisations with a large share of skilled workers. Organisations in the secondary labour market segment have a low demand for skilled labour and should have a high demand for external personnel flexibility. Consequently, external employability

should be found among older workers in the secondary labour market.

Critics of segmentation theory state that often more than one of the three labour market segments coexists within a single organisation (Köhler et al. 2008). Large enterprises combine a firm-specific labour market for their core workforce and a secondary labour market segment to maintain numerical flexibility. Furthermore, employers' operational decision making can be assumed not to treat all social groups of employees equally but to be dependent on the demographic structure of the organisation and its economic situation.

Accordingly, organisational ecology theories attempt to explain individual career trajectories based on a dynamic organisational context (Haveman 1994, 1995): individual employment trajectories depend on organisational growth and decline. Firm-specific trends and employers' decisions are anticipated to influence internal and external employability on the individual level. With respect to organisational ecology, a few assumptions can be made about investment in older employees' internal and external employability: First, expanding organisations that report labour shortages or that have high levels of recruitment activity should invest in their older employees' internal employability. In addition, a demand for skilled labour should result in internal employability on the individual level because firm-specific human capital should be especially high among older employees. By contrast, a large number of temporary contract workers should result in low investment in internal employability. Moreover, financial investment and a large share of older employees might also reduce internal employability. Owing to seniority payments, older employees are, on average, more expensive than younger employees who are new to the labour market.

External employability is not in the interest of employers. Investing in human capital that cannot be used appears to be unreasonable. Nevertheless, individuals with higher levels of external employability might select themselves into organisations that have specific characteristics. Principally, external mobility can either depend on push or on pull factors. Unskilled employees of the secondary labour market, who often are only temporary employed, might be pushed out of their current jobs more frequently. At the same time, these individuals are more likely to find new, often again temporary, positions on the secondary labour market. Hence, external employability should often be found in organisations with secondary labour markets, which thus have large shares of temporary employment and unskilled labour. Moreover, pull factors can cause external employability. According to search theory (Lippman and McCall 1976), individuals are likely to change a job when another employer offers significantly better condition than the current work place. However, "the probability a worker quits a job

declines as the worker's age increase, and as job tenure increase" (Burdett 1978, p. 212) for two reasons: first, the wage of an older worker should be comparatively high (Myck 2010) and external offers exceeding this wage are rare, and second, the workers do not know the relevant characteristics of a potential employer and rather decide to maintain on familiar grounds.

Data and methods

The Linked Employer-Employee dataset (LIAB) of the Institute of Employment Research (IAB) provides suitable data for analysing organisational influences on the internal and external employability of older employees in Germany. The LIAB combines employers' survey information with the administrative records of employees who are subjected to social insurance.

The following analyses are conducted by using LIAB Longitudinal Model Version 3, which contains survey information for the period from 1994 through 2007. The LIAB information about the organisations was taken from the IAB Establishment Panel, the largest survey of employers in Germany. The IAB Establishment Panel has been conducted annually since 1993, and since 1996, East German firms have also been included in the sample. The following analyses are limited to those organisations with valid interviews between 1996 and 2007.

The employee portion of the LIAB contains the employment histories of all workers employed in the surveyed organisations and is based on the employment register of the German Federal Employment Agency. These administrative records are restricted to the employment histories of employees who are subject to social insurance and therefore do not cover other forms of employment, such as civil servants, self-employed individuals, and freelancers. In total, the administrative records cover approximately 80 per cent of the total workforce in Germany. Approximately 2,300 organisations and 1.8 million individuals of different birth cohorts are included in the LIAB Longitudinal Model Version 3.

For the analyses, individual records are matched with the establishment panel. The study is restricted to older adults of the birth cohorts from 1941 to 1943, who were employed in one of the selected establishments at the age of 55 years. The birth cohorts from 1941 to 1943 all reached the official retirement age within the observation time. This specification allows controlling for differences regarding age and cohort and assumes no period effects. It is assumed that the decisions to quit or change employment are dependent on age, because pension and work legislations in Germany are based on individual age. Also pension legislations change among cohorts, and different cohorts

Table 1 Overview of the sample

Cohort	55 years of age	64 years of age	Men aged 55 (t_0)	Women aged 55 (t_0)	Total
1941	1996	2005	7,709	4,155	11,864
1942	1997	2006	6,061	3,419	9,480
1943	1998	2007	6,094	3,735	9,829
Total			19,864	11,309	31,173

Source: LIAB Longitudinal Version 3; own calculations

differ regarding their typical employment biographies (Simonson et al. 2011).

Men are observed from the age of 55 years until the official retirement age of 65 years. Female employees are only followed until the age of 60 years, the official retirement age for women who were born before 1952. An overview of the sample size is provided in Table 1.

Dependent and independent variables

The variable of interest has three possible categories, denoting whether older employees change employers, maintain employment with one employer, or exit the labour market permanently. Older adults with job changes indicate external employability; job maintenance suggests the presence of internal employability. The labour market state is measured on a yearly basis, from the ages of 55–64 years for men and from the ages of 55–60 years for women. Therefore, only individuals who are still in the labour force at the age of 55 years are included in the sample.

With respect to women, the group still employed at the age of 55 years should be comparatively selective because many women became homemakers after the birth of their first child within the observed birth cohorts. The mean daily wage among women indicates that a considerable proportion of women work part-time (cf. Table 2).

The covariates of main interest comprise organisational characteristics on the firm level. Next to industry differences, the influence of demographic composition, such as company size, share of skilled labour, average exit age, and the share of older employees on internal and external employability, is tested. Furthermore, the models include characteristics describing organisational dynamics and economic circumstances. The analysis further considers the ratio of recruitment to labour release, financial investments, the share of temporary employees, labour shortages, and indicators of whether firms offer further education for older employees.

Most covariates on the organisational level can, in principle, vary over time. However, a firm is very unlikely to change its industry. Moreover, some questions are only irregularly included in the establishment survey. Therefore, binary variables indicate whether a firm reported a labour

Table 2 Descriptive statistics: covariates

	Men	Women
<i>Individual level</i>	38.81 %	36.74 %
Cohort 1941		
Cohort 1942	30.51 %	30.23 %
Cohort 1943	30.68 %	33.03 %
Residents of West Germany	66.02 %	42.19 %
Unskilled	39.89 %	33.17 %
Skilled and semiskilled	34.47 %	57.50 %
High-skilled ^a	6.76 %	3.81 %
Mean daily wage (in Euros)	95.09	65.47
Mean job tenure (in years)	14	9
<i>Firm level</i>		
Small enterprises <50	2.31 %	3.95 %
Medium-sized enterprises <250	10.43 %	15.00 %
Large enterprises >250	87.26 %	81.05 %
Average share of skilled and high-skilled workers	72.02 %	80.07 %
Average share of temporary employees	7.41 %	10.92 %
Average share of older workers (50 +)	15.87 %	17.60 %
Average age at firm exit	40.52	40.52
Average yearly investments (in millions of Euros)	56.7	18.5
Sector: agriculture	7.36 %	3.90 %
Sector: trade	1.47 %	3.32 %
Sector: finance	13.18 %	8.96 %
Sector: service	21.88 %	63.36 %
Sector: production	56.11 %	20.47 %
Recruitment > labour release	36.68 %	33.77 %
Demand for skilled labour > demand for unskilled labour	33.83 %	27.68 %
Further education for older employees	64.04 %	53.62 %
Labour shortage	14.16 %	20.26 %

^a Approx. 20 % of the sample has missing values for level of skills at the age of 55

Source LIAB Longitudinal Version 3; own calculations

shortage or offered further education for older employees within the observation time. Questions about labour shortages were included in 1997, 2004, and 2006; questions about further education for older employees were included in 2002 and 2006.

In addition to the organisational covariates, the analysis also controls for individual heterogeneity according to birth cohort, individual qualification, job tenure, income, and region of employment. Table 2 describes the organisational and individual covariates.

The majority of men and women in the sample work for large-scale enterprises. Large enterprises are the most important employers of older workers for two reasons: First, many small enterprises are newly formed companies

that start with comparatively young personnel. When they establish, their employees age along with them (Schmidt et al. 2012). Second, in large enterprises, employees can change between different workplaces, and older workers can refrain from engaging in physically demanding tasks.

Older men and women are employed in companies in different sectors. The majority of older men work in the production sector; older women are more often found in service industries. Furthermore, on average, older women work for companies employing a larger share of skilled and highly skilled workers, but which are less likely to provide training opportunities for their older employees.

Method

The dataset is analysed by using discrete-time survival analysis (Rabe-Hesketh et al. 2002; Zheng and Rabe-Hesketh 2007), and controlling for regression model errors correlated within organisations (Cameron and Miller 2010). Cluster robust standard errors are calculated with the assumption that error terms are independent and differently distributed across organisations but that they follow a general pattern within an organisation (Wooldridge 2003). Without clustering within organisations standard errors would be underestimated.

At the beginning of the observational period (t_0), all individuals are employed by one of the employers in the dataset. At every discrete point in time t_i ($t_i > t_0$), the individuals stay with an employer, change to another employer, or leave the labour market completely. The three competing risks are modelled by using multinomial logistic regression.

The coefficients of the multinomial logistic regression model reflect the conditional probability of internal or external employability (employment maintenance or change of employer) in comparison with employment exit at time interval t_i , given that the event has not occurred until time t_{i-1} . A set of age dummies control for age dependency. These age dummies are the discrete-time duration model equivalent of the baseline hazard function in continuous time duration models.

The models are predicted conditioned on employment at the age of 55 years, separately for men and women. As a robustness check, two-level multinomial logistic regression models with a common random effect on the organisational level are used. Small differences between the cluster robust standard error model and the multilevel model are observed at the level of statistical significance of the effects.

Descriptive results

Figure 1 show the Kaplan–Meier survival functions of men and women within the organisation in which they were employed at age 55. The figure distinguish between large-scale enterprises and small and medium-sized enterprises (SME). Men in large-scale enterprises have higher internal employability, and men in SME tend to exit from their specific employers earlier. Among women, job tenure above the age of 55 years seems not to differ by organisational size. While the 99 % confidence intervals for women in SME and large enterprises overlap, those for men in SME and in large enterprises only overlap at the age of 55.

Remarkably, at the age of 60 years, approximately 50 per cent of all women who were employed at the age 55 years are still working for the same employer. This result is striking because institutional settings allow women from the age cohorts 1941 and 1943 to retire at age 60. However, the presentation of survival curves does not differentiate between full-time and part-time employment, and a significant proportion of the women who were still employed at retirement age may work reduced hours. Also, the German Statutory Pension Insurance Scheme reports most similar average retirement ages among women from the age cohorts 1941 and 1943 (German Statutory Pension Insurance Scheme 2013).

Figure 2 shows descriptive results for external employability. The figure displays the share of individuals with organisational changes after the age of 55 years by firm size and gender. Above the age of 55 years, approximately 20 per cent of men change their employers; no statistical

Fig. 1 Kaplan–Meier survival functions (in an organisation employed at the age of 55)

Fig. 2 Percentage of employer changes by organisational size and gender

significant differences are observed between those employed in small or medium-sized enterprises and those employed in large enterprises. By contrast, women employed in small or medium-sized enterprises seem more likely to change employer than those employed by a large organisation. χ^2 tests reveal that the difference between women in SME and women in large enterprises is statistically significant at 5 % level. On average, women have a lower level of external employability than men.

Multivariate results

The multivariate setting tests the association between organisational characteristics and internal as well as external employability. Tables 3 and 4 present the coefficients of the competing risk model separately for men and women. Risk ratios greater than 1 indicate a positive association with internal or external employability, whereas risk ratios less than 1 denote a negative association. The base level of the competing risk models is permanent exit from the labour market before retirement age.

The coefficients of the age dummies, both for men and women, reveal that the likelihood of maintaining employment and thus internal and external employability decreases with age. Older men and women are more likely to exit from employment when they age. However, men who are employed at the age of 55 years are more likely to maintain their employment until the age of 58 years, and after this age, their likelihood of job exit increases. Younger cohorts are less likely to exit early from the labour market and have higher levels of internal and external employability.

Organisational influences on internal employability

The main covariates of interest are organisational characteristics. Internal employability is associated with the

industry. The results support de Grip et al. (2004) who found that the need for employability is higher in specific industries. The findings of the multivariate models suggest that men working in the agricultural sector are less likely to maintain a job. Also, those working in the production sector are less likely to maintain a job in comparison with those working in other industries (trade, finance, service). On the one hand, tasks within the production industry are physically more demanding than those in the service and trade sectors. Therefore, older employees in those industries are most likely to lose their employability because of their reduced ability to perform physical work. On the other hand, especially in the production sector, seniority payments are very prominent, and older workers are often costly to organisations. Thus, pathways to early retirement have been very prominent and financially attractive. The loss of employability might therefore also result from push factors towards early retirement. Among women, industry seems less related to internal employability. Only those working in the trade or in the service sector have statistically significant higher levels of job maintenance.

Moreover, men in small enterprises have higher levels of internal employability than men in medium-sized organisations, while men in large organisations are more likely to exit early. For women, only the multilevel model, calculated for a robustness check, indicates a negative association between large enterprises and individual internal employability.¹ Therefore, large organisations seem to either provide attractive opportunities for early labour market exits or urge older individuals out of employment.

As assumed by organisational ecology theories, not only the size of an organisation but also organisational dynamics are crucial for internal employability. The findings support this assumption and indicate that older men and women in numerical flexible organisations, with high shares of temporary employment, are most likely to have significantly lower levels of internal employability. By contrast, high labour demand, as indicated by a positive recruitment-release ratio, is positively related to the likelihood of job maintenance. Therefore, recruiting organisations are also more likely to invest in older employees' internal employability. Financial investments, however, are related to a reduced likelihood of job maintenance for women and men, and the demand for skilled labour only positively associates older men's employment maintenance. The findings indicate that organisations have a demand for the experience of older skilled workers, but are more likely to dismiss older employees when financial capital is needed. Furthermore, the coefficient of average age at firm exit indicates that job exits are not associated to general downsizing, but that older individuals in organisations with

¹ Tables are available upon request.

Table 3 Organisational influences on internal and external employability (men)

	Reference: exit from the labour market			
	Internal employability (job maintenance)		External employability (job change)	
	Risk ratio	Std. error	Risk ratio	Std. error
55 years of age	Ref.	Ref.	Ref.	Ref.
56 years of age	1.3318	0.1933*	0.9821	0.1418
57 years of age	1.1159	0.2073	0.7041	0.1101*
58 years of age	1.6107	0.3849*	0.9707	0.2619
59 years of age	0.8104	0.1517	0.6180	0.1164*
60 years of age	0.3191	0.0608***	0.3429	0.0529***
61 years of age	0.4810	0.0860***	0.2778	0.0467***
62 years of age	0.2557	0.0480***	0.2707	0.0566***
63 years of age	0.1624	0.0354***	0.1436	0.0312***
Cohort 1941	Ref.	Ref.	Ref.	Ref.
Cohort 1942	1.3258	0.0478***	1.1977	0.0798**
Cohort 1943	1.3939	0.0817***	1.2316	0.0902**
<i>Firm level</i>				
Sector: production	Ref.	Ref.	Ref.	Ref.
Sector: agriculture	0.5884	0.0980***	0.4734	0.0938***
Sector: trade	1.6360	0.2160***	1.1140	0.2863
Sector: finance	1.4592	0.2737*	0.7815	0.1509
Sector: service	2.0465	0.2038***	0.9597	0.1705
Small organisation (< 50)	1.3532	0.1972*	0.9333	0.1834
Medium-sized organisation	Ref.	Ref.	Ref.	Ref.
Large organisation (> 250)	0.8534	0.0719	1.3003	0.1790
Share of skilled labour	1.0026	0.0019	1.0051	0.0020**
Share of temporary employees	0.9907	0.0025***	1.0020	0.0023
Share of older employees (50 +)	6.3355	14.8908	7.7324	16.4890
Average age at firm exit	0.9503	0.0157**	1.0034	0.0147
Financial investments (in mil)	0.9984	0.0005**	0.9979	0.0006***
Recruitment > labour release	1.3063	0.0804***	1.0382	0.1283
Demand for skilled labour>	1.1628	0.0867*	1.0597	0.1080
Demand for unskilled labour				
Further education for older employees	0.9356	0.0914	0.8645	0.0895
Log-pseudo likelihood	−47,375.892			
n individuals	19,864			
n firms	1,010			

Source: LIAB Longitudinal Version 3—Risk Ratios of Multinomial Logistic Regression with cluster robust standard errors; control variables on the individual level: residency (east/west), level of skills, wage, job tenure; own calculations

*** $P \leq 0.001$; ** $P \leq 0.01$;

* $P \leq 0.05$

higher average at firm exit are less likely to withdraw from their jobs. However, one should be careful when interpreting dynamic organisational factors and their relationship to internal employability, because of potential endogeneity.² The retirement of a large number of older

workers might also cause part of the adaption of dynamic organisational measures. Finally, in accordance with earlier findings by Boockmann and Steffes (2010), the availability of further education for older employees is not significantly associated with older employees' internal employability.

² As a sensitivity analysis, the models were also calculated without the covariates “share of older employees”, “average age at firm exit”, “recruitment-labour release ratio” and “further education for older employees”. However, the risk ratios do not change remarkably, and only the positive association between “higher demand for skilled labour” and internal employability among older women becomes

Footnote 2 continued

statistical significant. With regard to external employability, the “share of temporary workers” among men becomes significant (assumably indicating that high shares of older workers are associated with low shares of temporary employment).

Table 4 Organisational influences on internal and external employability (women)

	Reference: exit from the labour market			
	Internal employability (job maintenance)		External employability (job change)	
	Risk ratio	Std. error	Risk RATIO	Std. error
55 years of age	Ref.	Ref.	Ref.	Ref.
56 years of age	1.5168	0.1189***	0.9119	0.1036
57 years of age	0.7763	0.0750**	0.5050	0.0685***
58 years of age	0.8199	0.1051	0.4114	0.0706***
59 years of age	0.4534	0.0517***	0.3282	0.0654***
60 years of age	0.1775	0.0220***	0.2218	0.0365***
Cohort 1941	Ref.	Ref.	Ref.	Ref.
Cohort 1942	1.3303	0.053***	1.2013	0.1045*
Cohort 1943	1.7165	0.0832***	1.5290	0.1327***
<i>Firm level</i>				
Sector: production	Ref.	Ref.	Ref.	Ref.
Sector: agriculture	0.8643	0.1608	0.5883	0.1231*
Sector: trade	1.6853	0.2260***	0.9445	0.1788
Sector: finance	1.2027	0.3173	0.6833	0.1633
Sector: service	1.9609	0.2446***	1.0364	0.1818
Small organisation (< 50)	1.1770	0.1475	1.0286	0.1966
Medium-sized organisation	Ref.	Ref.	Ref.	Ref.
Large organisation (> 250)	0.9698	0.0834	1.1320	0.1267
Share of skilled labour	1.0019	0.0016	0.9980	0.0017
Share of temporary employees	0.9879	0.0028***	1.0037	0.0023
Share of older employees (50 +)	4.7872	7.3784	2.6182	2.3522
Average age at firm exit	0.9591	0.0107***	0.9949	0.0103
Financial investments (in mil)	0.9955	0.0012***	0.9983	0.0013
Recruitment > labour release	1.2964	0.0871***	1.2352	0.1546
Demand for skilled labour>	1.0379	0.0749	1.1395	0.1705
Demand for unskilled labour				
Further education for older	0.9171	0.0790	0.9255	0.1135
Employees				
Log-pseudo likelihood	–21,759.266			
n individuals	11,309			
n firms	958			

Source: LIAB Longitudinal Version 3—Risk Ratios of Multinomial Logistic Regression with cluster robust standard errors; control variables on the individual level: residency (east/west), level of skills, wage, job tenure; own calculations

*** $P \leq 0.001$; ** $P \leq 0.01$;
* $P \leq 0.05$

Organisational influences on external employability

Organisational influences on external employability are more difficult to interpret, particularly because enterprises are not likely to invest in their employees' external employability. However, some organisational structures and characteristics seem to promote the external employability of older employees. Regarding industry, in comparison with employees in the production sector, men and women working in agriculture are more likely to exit the labour market than to change employers. The multinomial logistic regression model shows no further statistically significant results for the external employability of older women. However, the multilevel model indicates that women working in organisations with a high share of

skilled labour are less likely to change their jobs. Finally, according to the multilevel model, a higher share of temporary employees and expanding organisations are positively related to older women's external employability.³

For men, the multinomial logistic regression model shows an increased likelihood of job change in organisations with high shares of skilled labour but a decreased likelihood of job change with high financial investments. The multilevel model again seems less conservative and further indicates that job changes by older men are more likely in large enterprises, and the likelihood of job changes is increased when the share of older employees is high.³ In order to test whether search theories can be

³ Tables are available upon request.

confirmed, also characteristics of the target organisations of older, job-changing employees are necessary, but unfortunately are not available in this study. Nevertheless, the results indicate that for external employability, individual factors seem more important than organisational factors. In accordance with search theory, external employability decreases when job tenure is high, and men and women with higher wages are more likely to show higher internal employability.⁴

Discussion and Conclusion

This article aims to provide insight regarding firm-specific influences on individual internal and external employability at higher working ages. Internal employability is defined as the ability to stay with an employer, and external employability is defined as the ability to change employers and thus to remain attractive in the labour market. In sum, the findings show that individual internal employability is related to different organisational characteristics and mechanisms. On the contrary, external employability is less associated to organisational factors and comparatively low among older employees in Germany.

This study is limited to employees of three birth cohorts who at the age of 55 are active on the labour market. The three cohorts were followed from the age of 55 until retirement. At the age of 55, employees are not randomly distributed across different organisations. One might rather assume that men and women with higher levels of individual employability select themselves into organisations that offer more favourable positions or into organisations further supporting employability. Therefore, the results on the organisational level might—to some extent—be biased. For example, one could assume that highly motivated older individuals, who are well skilled and attractive to employers, select themselves into organisations that offer further education opportunities.

At the beginning of this study, a few theoretical approaches regarding the influence of firm characteristics on individual employability were discussed. Based on segmentation theory, it was assumed that internal employability should mainly be found on internal labour markets, while external employability should be more visible among employees on secondary labour markets (Sengenberger 1987). Contrary to the assumptions derived from segmentation theory, the findings show that men show higher levels of internal employability in small companies than in organisations with more than 50 employees. Moreover, multilevel models reveal that internal employability is lower among men and women in large enterprises. The increased risk of early labour market exits in large organisations with potentially

firm-specific labour markets indicates that pathways to early retirement were highly institutionalised for the birth cohorts of 1941 and 1943 (Börsch-Supan et al. 2001).

Consistent with segmentation theory, older employees of organisations with secondary labour market segments—and therefore with a large share of temporary employees—are found to have significantly lower levels of internal employability. However, external employability does not seem to be positively related to the organisational share of temporary employees. Changing employers at higher working ages remains difficult, even for those who are employed in the more flexible secondary labour market segment.

A second theoretical approach relevant for this study is organisational ecology theory (Haveman 1994, 1995). With regard to organisational ecology theory, expanding organisations were hypothesised to have an interest in promoting internal employability. The findings support this hypothesis. The results further showed that organisational demand for skilled labour positively relates to internal employability among men. This result highlights organisations' reliance on their specialised personnel in times of skilled labour shortages. However, financial investments are negatively related to older men's and women's internal employability, and financially investing organisations seem to try to replace their cost-intensive older employees. Moreover, men in financially investing firms showed lower level of external employability. This might indicate remunerative pathways to retirement; retirement seems more attractive than employment with another employer.

Finally, search theory was addressed to explain external employability. Search theory suggests that individuals change employers when another job offers significantly better conditions. Older employees on average have comparatively high wages because of seniority payment (Hofäcker 2010). Therefore, it was assumed that older individuals are less likely to establish high levels of external employability (Burdett 1978). In fact, only approximately 20 per cent of the sample changed their employers after the age of 55. Also, only little evidence was found indicating an association between organisational factors and external employability. However, only characteristics of the firms, with which older individuals were employed initially, were taken into account. Further research should examine the companies and jobs where older job changers move to identify the factors that drive job changes at higher working ages.

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⁴ Tables not displayed and are available upon request.

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