

The impact of age on the reservation wage

The role of employability

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INTRODUCTION

In the face of population aging, it is commonly believed that older workers have got to be stimulated to stay longer in the labor force (OECD, 2006). At the same time however, job loss occurs frequently at older ages (Chan & Stevens, 2001). Researchers moreover agree that the unemployment spell lengthens as people grow older (Hanish, 1999; Hansson, Robson, & Limas, 2001) and the probability of finding employment decreases with age (Chan & Stevens, 2001; Green & Leeves, 2003; Kuo & Smith, 2009). Therefore, it is important to gain insight in the factors explaining why the transition to work gets harder as people move from mid to late career.

One barrier that may prevent employers from hiring older workers is their relatively high labor cost (Hirsch, Macpherson, & Hardy, 2000; OECD, 2006). Unless higher wages are sufficiently compensated by a higher productivity, they may prevent employers from hiring older persons (Skirbekk, 2003). This cost is partly structural as it is often attributed to pension benefits and seniority wages (OECD, 2006; Roscigno, Mong, Byron, & Tester, 2007; Taylor & Walker, 2003). However, workers' wage setting behavior when looking for a job may also play a role. Labor costs may be put up as well if wage demands increase with age. In that case, older applicants may maneuver themselves into an adverse labor market position.

In this paper, we examine the relationship between wage claims and age. In particular, we study the reservation wage, i.e. an individual's minimum wage that would have to be offered in order for him or her to accept a job (McFadyen & Thomas, 1997; Mitra, 2007; Nattrass & Walker, 2005). Despite the relevance of individuals' reservation wage for late career issues, the role of age receives very little attention in the literature on reservation wages. Moreover, there is uncertainty about the nature of the relationship between age and the reservation wage. Most studies find a positive effect of age on the reservation wage (Addison, Centeno, & Portugal, 2004; Christensen, 2001, Gorter & Gorter, 1993; Walker, 2003). Older job seekers tend to be less willing to work for a reduced wage (Ahn & García-Pérez, 2002). This positive relationship is found among both employed and unemployed persons, although workers set higher reservation wages than unemployed (Nattrass & Walker, 2005). Some studies however, conclude that age relates to the reservation wage in a curvilinear way (Bloemen & Stancanelli, 2001; Prasad, 2003). They state that the reservation wage peaks before the age of 40 and declines as the career's end approaches. Another study of Prasad (2000) revealed a U-shaped relationship: the reservation wage declined until the age of 53 and then increased with age.

Research results are divergent. Moreover, age is generally treated as a control variable and few studies try to explain the relationship between age and the reservation wage. To unravel the relationship, more insight in the underlying process of how individuals set their reservation wage is needed. In this paper, we focus on one key factor that may influence the wage setting process, namely one's positioning in the labor market, i.e. employability. Although a few studies recognize the importance of employability in determining the reservation wage (Christensen, 2001; Pannenberg, 2007; Walker, 2003), it is usually neglected in empirical studies. We discern two employability dimensions: (1) the 'willingness to move', i.e. the readiness to move from unemployment to employment and (2) the 'ease of movement', i.e. the perceived alternatives in the labor market. While willingness to move could explain a positive effect of age on the reservation wage, ease of movement could clarify a negative age effect. We study whether both factors mediate the relationship between age and reservation wage in opposite ways and assess their relative impact.

In this study we focus on workers aged 40 to 60 years old. While it is relevant to study the relationship between age and reservation wage among both employed and unemployed, we focus only on the employed for several reasons. In the context of late career issues, it is of high importance to find out with which attitude, especially towards wages, older workers would enter the labor market if they would lose their current job. Focusing on the employed moreover makes it easier to compare

the self-reported reservation wages as all workers answer a hypothetical question and use the same time frame, i.e. they report the reservation wage they would set when they would lose their job (cf. infra). A group of unemployed persons may differ greatly in the length of the unemployment spell, which makes it more difficult to study the reservation wage as the duration of unemployment has repeatedly been found to affect the reservation wage (Addison et al., 2004; Hui, 1991; Nattrass & Walker, 2005). We study workers aged 40 to 60 years old since we want to investigate the reservation wage process as people move closer to the retirement age (age 65). Our analyses are based on structural equation modeling (SEM) on Belgian data from a large scale Salary Survey (2008).

This study contributes to the reservation wage literature in two ways. It is the first to explore how age influences the reservation wage. Furthermore, it introduces employability concepts as new determinants of the reservation wage. The study also adds significantly to the employability debate within career literature since specific research on the employability of older individuals is very limited.

The paper starts with a discussion of the reservation wage concept. We also describe the value of employability for studying the reservation wage. Then we hypothesize how willingness to move and ease of movement will evolve with age. Following, we argue how these employability factors will affect the reservation wage. After presenting the methodology and the results, the paper concludes with a discussion about the main findings and the key implications of the research.

THEORETICAL BACKGROUND AND HYPOTHESES

Before developing the research hypotheses, we discuss the main concepts, i.e. reservation wage, willingness to move and ease of movement, in the context of job search theory (Mortensen, 1986). This theoretical framework indicates that employability factors may be of great value for studying people's reservation wage.

Reservation Wage

The reservation wage is a key concept in Mortensen's job search theory (1986). According to this theory, the probability of finding employment is a product of the probability of getting a job offer and the probability of accepting an offer. Job search theory refers to the reservation wage as the main factor determining whether a job offer is accepted or not. It is often defined by means of the *reservation wage property*, a stopping rule which characterizes the optimal job search strategy. It states that it is beneficial for an individual to accept an offer and stop the search when the highest offered wage exceeds the reservation wage (Bloemen & Stancanelli, 2001; McFadyen & Thomas, 1997; Mortensen, 1986). The reservation wage is thus a personal threshold, rejecting all offers with a wage beneath it (Falk, Fehr, & Zehnder, 2006; McFadyen & Thomas, 1997). The concept is widely applicable and can be used to study the labor market behavior of employed, unemployed and inactive persons (Hui, 1991).

The level of the reservation wage has substantial consequences. It determines which proportion of vacancies an individual actually takes into account when searching for work, and which proportion is excluded in advance. A lower reservation wage enlarges the pool of acceptable jobs and increases the probability of finding a job. Hence, the reservation wage is a measure for individuals' selectivity during the job search process.

Some authors argue that a reservation utility rather than a reservation wage should be used. Nonpecuniary job characteristics such as the number of working hours, job status, working conditions, job security and distance to work may also play a role in the decision to accept a job (Bradley & Taylor, 1992; Devine & Kiefer, 1993; McFadyen & Thomas, 1997). Although it makes sense to extend the reservation wage property to a reservation utility property from a theoretical point of view, it is very complex to accomplish it in empirical studies. This explains why the idea of a reservation utility is rarely put into practice. Since it is more common to study the reservation wage rather than the reservation utility, we focus on the reservation wage in the remainder of this article.

Willingness to Move and Ease of Movement

The number of empirical studies on determinants of the reservation wage is quite limited (Addison, Centeno, & Portugal, 2008). Existing literature usually focuses on the impact of alternative sources of income on reservation wages, e.g. unemployment benefits (e.g. Addison et al., 2008) or financial wealth (e.g. Bloemen & Stancanelli, 2001). Little or no attention has been given to the influence of the positioning in the labor market. However, in his analysis of the job search process, Mortensen (1986) stresses that the reservation wage may be influenced by labor market supply factors (like the person's value of leisure or the cost of search) and demand factors (like the offer arrival rate and the wage offer distribution). Mortensen (1986) acknowledges though that these factors may be difficult to measure in empirical studies. In this study, we introduce two factors that relate to the demand and supply side factors and are indicators of a person's positioning in the labor market, namely 'willingness to move' and 'ease of movement'.

Willingness to move is related to March and Simon's concept desirability to move (1958) and refers to the willingness to make a transition from one labor market position to another, in the case of our study from unemployment to employment. We will argue later on that willingness to move may be related to some of Mortensen's supply side factors (e.g. the person's value of leisure). Consequently, willingness to move can be used to introduce some of Mortensen's supply side factors in the analyses on reservation wages. Since we specifically focus on the willingness to make the transition from unemployment to work, we will use the term 'willingness to *work'* in the remainder of the article. In line with March and Simon (1958), we define ease of movement as the individual perception of the available labor market alternatives. Later on, we will discuss that ease of movement may relate to some of Mortensen's demand side factors (e.g. the offer arrival rate). So, ease of movement allows us to introduce some of Mortensen's demand side factors in the analyses on reservation wages.

Ease of movement and willingness to move refer respectively to (the perception of) the ability and willingness to move to employment. Ability and willingness are two dimensions that are often studied together in employability research (Forrier & Sels, 2003). Employability studies stress it is of high importance to take both the capacity and the eagerness to perform work-roles into account when assessing an individual's positioning in the labor market. A low score on one of these two dimensions suffices to reduce an individual's labor market opportunities considerably.

Since the willingness to work and the ease of movement may be likely to change as people age, as will be discussed in the next section, willingness to work and ease of movement may help to explain how age influences the reservation wage.

Age Affects Employability Variables

We use a two-step approach to argue why employability may serve as a mediating mechanism in the relationship between age and the reservation wage. In this section, we discuss how willingness to work and ease of movement may evolve as people get older and move closer to the retirement age. In the next section, we discuss which impact both employability factors may have on the reservation wage.

Willingness to work. Several factors suggest a decrease in willingness to work as people age. First of all, individuals may perceive less financial pressure to work as they grow older. Individual wealth is found to increase with age (Bloemen & Stancanelli, 2001). As a result, people may be less likely to experience a stringent economic need to work as they age (Wanberg, Kanfer, & Rotundo, 1999; Wanberg, Hough, & Song, 2002). This causes working to lose part of its appeal (Wanberg et al., 2002; Christensen, 2001). In addition, OECD research (2006) stresses the importance of unemployment benefits. In several countries, the eligibility requirements for unemployment benefits weaken with age. Moreover, unemployment benefits are frequently more generous as people grow older since they are often based on the wage in the former job (OECD, 2006). Consequently, the financial pressure to get back to work may weaken with age. Unemployment benefits may even be used as an alternative pathway to retirement (OECD, 2006).

Secondly, as people move closer towards the retirement age, they may perceive less social pressure to get back to work. Such social pressure may be liable to a country's 'age culture': 'a system of values and norms related to the rights and obligations attached to age and to the ways of designing the distribution of jobs and welfare transfers among age-based categories' (Guillemard, 2003: 674). If early retirement is socially accepted from a certain age, it may be common practice to push older individuals into early retirement to make room for younger workers. On the other hand, the perceived right to leave the labor market may also increase with age. This could negatively affect the willingness to work.

Finally, the value attributed to leisure time may increase with age (Kooij, de Lange, Jansen, & Dikkers, 2008). Multiple reasons may explain the age-related shift in preferences between work and leisure. For one, as people age and face a shorter time horizon, they may prefer to use the 'time left' for hobbies and relaxation (Higgs, Mein, Ferrie, Hyde, & Nazroo, 2003). The desire to spend more time with one's family may also increase with age, especially if the partner is retired (Gauthier & Smeeding, 2003). Furthermore, the roles a person has to fulfill may change over the lifespan. For instance, as people age, they may want to or have to take care of grandchildren or a sick family member (Gielen, 2009). Finally, declining physical abilities can make it more difficult to work as one gets older (cf. Hurd, 1996). Health issues may push individuals into early retirement (Bound, Schoenbaum, Stinebrickner, & Waidmann, 1999; Curran & Blackburn, 2001). This also suggests a decline in willingness to work as people move closer towards the retirement age.

Hypothesis 1. 'Willingness to work' decreases with age.

Ease of movement. Research among workers (Rothwell & Arnold, 2007; Wittekind, Raeder, & Grote, in press) and the entire labor force (Berntson, Sverke, & Marklund, 2006) indicates that people's confidence to find new employment decreases with age. As people grow older, they have a tendency to perceive more difficulties to find a job in the external labor market. Individual factors (within a person's control) as well as structural factors (beyond a person's control) may suggest a decline in perceived ease of movement as people age (Berntson et al., 2006).

Individuals may perceive fewer alternatives as they grow older because they may be more likely to exclude a range of jobs. Greller and Stroh (2004), for instance, state that older persons, aged 50 and older, are often not aware of the career opportunities they are having. Additionally, as people age, they may exclude jobs that according to age norms are no longer perceived as appropriate for people of their age. They may for instance be reluctant to consider jobs where they have to start at the bottom (Hansson, DeKoekkoek, Neece, & Patterson, 1997) or accept an inferior status (McFadyen & Thomas, 1997). However, as people grow older, they may also be forced to exclude jobs because of health issues. Since physical abilities decline with age (Greller & Simpson, 1999; Ilmarinen, 2006), it could be possible that people are physically no longer able to do particular jobs

as they move towards the retirement age, for instance because the jobs require a lot of physical strength (McQuaid, 2006).

Structural factors may also explain why perceived ease of movement declines with age. It is commonly known that, as people age, they are often confronted with age-related stereotypes and discrimination (Clarke & Patrickson, 2008; Roscigno et al., 2007). Consequently, as one grows older, age can become more and more of a barrier to employment opportunities (Owen & Flynn, 2004; Posthuma & Campion, 2009). Research shows that individuals aged 45 and older are concerned about the negative impact of age discrimination (AARP, 2002). If job seekers expect a negative attitude of future employers towards applicants moving closer towards the retirement age, their perceived alternatives in the labor market may decrease with age.

To conclude, we note that even if individuals do not expect to be confronted with age-related stereotypes and discrimination, they still may be aware of the general finding that age has a negative effect on the chance of finding a job (Hanish, 1999; Hirsch et al., 2000; Wanberg, Glomb, Song, & Sorenson, 2005). This could also explain the negative evolution of the perceived ease of movement with age.

Hypothesis 2. 'Ease of movement' decreases with age

Employability Factors Affect the Reservation Wage

Figure 1 shows that willingness to work and ease of movement are both hypothesized to influence the reservation wage. As a result, age may have an effect on the reservation wage through both employability factors, yet, in opposite way.

Willingness to work. In the job search literature, willingness to move has not been identified yet as a determinant of the reservation wage. Still, we have reasons to assume a negative relationship between willingness to work and the reservation wage.

If people are not prepared to go back to work anymore, they can choose to price themselves out of the labor market by setting the reservation wage at an unrealistically high level (Christensen, 2001; Hogan, 2004; Natrass & Walker, 2005). If they have a low willingness to work, they may be more selective when looking for work. They may target higher paying jobs by setting a higher reservation wage. In this case, they have the ability to take their chance and wait until a lucrative job offer is made. Furthermore, if leisure is valued more highly than work, people may claim a higher reservation wage in order to compensate for the leisure time they give up to go working.

Conversely, we expect individuals with a higher willingness to work to set a lower reservation wage. This allows them to broaden the range of acceptable jobs and so increase the probability to get an acceptable offer. However, a higher willingness to work can also result in a lower reservation wage because the first job offer is immediately accepted. This may hold when people are very eager to work or experience a substantial amount of pressure to find a job (e.g. for financial reasons). They do not have the luxury to wait for the 'optimal' offer (Wanberg et al., 2002).

Hypothesis 3. 'Willingness to work' is negatively related to the reservation wage.

Ease of movement. A few studies have examined how individuals' perceived re-employment chances influence their reservation wage. While Walker (2003) finds that the difficulty job searchers expect when looking for work does not affect the reservation wage, Christensen (2001) and Pannenberg (2007) conclude that unemployed job searchers set a higher reservation wage when

they expect to have good re-employment chances. We believe that reservation wages are positively associated with an individual's ease of movement.

Since ease of movement refers to the perception of moving easily in the labor market (March & Simon, 1958), a higher ease of movement is likely to strengthen the belief of having a strong negotiating position with future employers. This may result in higher wage claims. The idea of having a high 'market value' may lead one to believe it is justified to demand a higher wage and hence, to set a higher reservation wage (cf. value based pricing theory, e.g. Hinterhuber, 2004). Additionally, if people are convinced they can chose between multiple offers, they will target the higher-paying jobs (Mortensen, 1986). The prospect of having several alternatives in the labor market may thus result in selective job search behavior. Hence, we expect individuals with a higher ease of movement to set higher reservation wages.

On the contrary, when people perceive few alternatives in the labor market, they may be more inclined to lower their reservation wage. This way, they broaden the range of acceptable jobs and increase their chance of finding a job. If individuals are aware of their weak labor market situation, they may moreover have the intention of accepting the first job offer they get, even if this implies settling with an inferior, lower paying job.





METHODS

Data and Sample

To test the hypothesized model we use the data from the biannual Salary Survey organized by two weekly Belgian vacancy magazines, namely Vacature and Références. In the months of May and June 2008 they incited all Belgian wage earners through a large-scaled media campaign to fill in the online questionnaire. In sum, 32 192 respondents completed the questions on reservation wages and employability, which deliver the data for this study. The sample contains 10 068 respondents aged between 40 and 60 years old. Workers aged 60 or above were not included as they are only a few years away from the mandatory retirement age. Additionally, part time workers (1 587 of the 10 068 respondents) were not included in the sample since their wage cannot be compared directly with that of full time workers. Only studying full time workers allows us to keep de reported wages pure.

Moreover, 368 observations were excluded due to missing values. The final sample consists of 8 113 full time working Belgian employees from 40 to 60 years old.

The average age of the respondents is 47 years. 39% is between 40 and 44 years old, 31% between 45 and 49, 19% between 50 and 54 and 11% is 55 years or older. The sample is mainly masculine (71%). It includes 14% blue-collar workers, 67% white-collar workers and 19% public servants. In terms of education, 16% of the respondents did not have a high school degree, 28% had a high school degree, and 56% had a bachelor's or master's degree. These proportions do not reflect the actual composition of the 40 to 60 year old Belgian workforce (cf. data from the National Institute of Statistics). The two youngest age groups (40-44 and 45-49) are overrepresented in the sample and so are men. There moreover is an underrepresentation of blue collar workers, public servants and low-educated persons.

Measures

Reservation wage. We used a two-tiered approach to measure the reservation wage. In a first step we asked the following question:

"Suppose you would lose your job and you would receive an offer for a job with the same number of working hours and the same benefits as your current job, how high should the net monthly salary of this job have to be for you to accept the offer?"

Respondents had to indicate whether the net monthly wage (1) could be lower than their current net monthly wage, (2) had to be equal to their current net monthly wage, or (3) had to exceed their current net monthly wage. This question gives a first impression of the extent to which people hold on to their current net monthly wage to position themselves in the external labor market. It moreover gives them a framework to reflect on the level of their reservation wage.

In a second step, respondents who indicated the second option in the question above were automatically given their current net monthly wage - which they reported earlier in the questionnaire - as their reservation wage. The other respondents were asked the following question, which is consistent with other studies using self-reported reservation wages (e.g. Bloemen & Stancanelli, 2001; Gorter & Gorter, 1993; Haurin & Sridhar, 2003; Nattrass & Walker, 2005):

"Suppose you would lose your job and you would receive an offer for a job with the same number of working hours and the same benefits as your current job, how high should the net monthly salary at least have to be for you to accept a concrete job offer?"

In the analyses, we use the logarithm of the reservation wage (in euros) to control for any scale effects resulting from the wide variation in the reservation wage variable compared to other variables (see Table 1).

Age. Age was included as a continuous variable (in years), ranging from 40 to 60.

Willingness to work. Willingness to work was measured by means of 3 items that were developed for this study. The respondents had to indicate on a 5-point scale (1, strongly disagree; 5, strongly agree) what they would do if they lost their job. The three items are (1) I would immediately look for another job, (2) I would take a break for a couple months and then, after the break, actively look for work (reversed scored), and (3) I would stop working (reversed scored). Principal component factor analysis revealed one factor with an appropriate internal consistency (Cronbach's $\alpha = 0,67$). Due to the hypothetical nature of the question, the factor reflects the *intention* concerning the willingness to get back to work if one would be unemployed.

Ease of movement. To measure ease of movement we used a five-item scale, which is a more detailed version of the measure used in previous studies (Berntson et al., 2006; Lambert, Hogan, & Barton, 2001) to ask for people's alternative employment opportunities. The respondents had to indicate on a 5-point scale (1, strongly disagree; 5, strongly agree) how easy they thought it would be for them to find a job if they would lose their current job. The items ask about the expected difficulty to (1) find another job, (2) find a job corresponding to one's knowledge, skills and expertise, (3) find a job that matches one's interests, (4) find a job paying as much as the current job, and (5) find a job of the same level as the current job. Principal component analysis revealed one factor with a good internal consistency (Cronbach's $\alpha = 0.88$). Since the respondents evaluate their alternatives on the labor market, the scale does not reflect the actual ease of movement, but the *perceived* ease of movement.

Control variables. We controlled for the current net monthly earnings, the presence of seniority wages, functional level of the current job, gender, the partner's labor market position, the number of children one is financially responsible for, the level of education and the perceived financial stringency to find a job (reflecting the number of months one can tide over financially if he or she would be unemployed). These factors have known effects on the reservation wage. Research for instance indicates that a job searcher's previous wage is positively related to the reservation wage (Haurin & Sridhar, 2003) and that men set higher reservation wages than women (e.g. Prasad, 2003). It also indicates that the reservation wage is lower for job searchers with a working partner (Walker, 2003) and children for whom one is financially responsible (Bloemen & Stancanelli, 2001). The reservation wage moreover tends to increase with the level of education (Gorter & Gorter, 1993) and financial wealth (Bloemen & Stancanelli, 2001). Additionally, all these factors may account for the effect of age on the reservation wage since the composition of the workforce tends to change across age groups. For instance, as people age the proportion of male workers tends to increase while the proportion of persons with a working partner and with financially dependent children generally decreases (see for instance Humphrey, Costigan, Pickering, Stratford, & Barnes, 2003).

The current wage was included as the logarithm of the net monthly earnings. A dummy variable (1 = yes) indicated if the wage is regularly increased on the basis of seniority. We made a distinction between four functional levels: senior management, middle management, professional staff members (like experts) and clerical staff. The gender variable was dichotomous with 0 = female and 1 = male. The partner variable consisted of three categories: (1) not having a partner, (2) having a working partner, and (3) having a partner who is currently unemployed, retired or not active on the labor market. A dummy variable indicated whether the person is financially responsible for at least one child (1 = yes). We coded three educational levels: (1) low, i.e. no high school degree, (2) average, i.e. a high school degree, and (3) high, i.e. a bachelor's or master's degree. We measured the financial stringency the respondents perceive to find a job by asking them to indicate how many months they could bridge (financially) without being employed. After removing outliers, the number of months ranged between zero and 120. As we wanted the higher values to correspond with a higher financial stringency, the values of the continuous variable were reversed. A value of 0 was ascribed to persons who could bridge 10 years, while a value of 120 was assigned to persons who could not bridge one month.

RESULTS

Descriptive Statistics

Table 1 shows basic statistics and the correlation matrix of the continuous variables. Note the respondents' high willingness to get back to work if they were to lose their job (mean = 4.38, SD = 0.73). The average ease of movement turns out to be neither high nor low (mean = 2.92, SD = 0.82). Table 1 further shows that age is positively related to the reservation wage, but only to a small extent (correlation .09). Age is negatively related to willingness to work (correlation -.18) and ease of movement (correlation -.26) as we expected. Willingness to work and ease of movement appear to influence the reservation wage in the hypothesized way, yet, to a limited extent (correlations of -.09 and .06 respectively). Note the immense correlation (.92) between the reservation wage and the respondents' current wage, which seems to be a guideline when setting the reservation wage.

Variables	n	Mean	SD	1	2	3	4	5
1. Log(reservation wage)	7 547	7.63	0.29	1	-	-	-	-
2. Age	8 113	47.05	5.24	.09***	1	-	-	-
3. Willingness to work	8 113	4.38	0.73	09***	18***	1	-	-
4. Ease of movement	8 113	2.92	0.82	.07***	26***	.10***	1	-
5. Log(current wage)	8 063	7.62	0.31	.91***	.06***	06***	.01	1
6. Financial stringency	7 995	107.91	16.78	21***	10***	.21***	00	24***

 Table 1.
 Means, Standard Deviations and Correlations of Continuous Variables

***: p<0.001

Path Analysis

The research model was tested using structural equation modeling (SEM, CALIS procedure in SAS version 9). This technique allows testing multiple relationships in a simultaneous way. The analysis shows a decent fit between the research model and the observed data ($\chi^2(27) = 462.99$, p < .001; RMSEA = 0.049; CFI = 0.987; NFI = 0.986; NNFI =0.938). Tables 2 and 3 show the results of the path analysis.

	Ease of	Willingness	Log (reservation wage)	
Variables	movement	to work		
Log(wage)			.89 ***	
Seniority wage ^a			.01 *	
Senior management ^b			.01	
Middle management ^b			.01	
Professional staff ^b			01	
Male ^c			.00	
High school degree ^d			.01 *	
Bachelor's or master's degree ^d			.03 ***	
No partner ^e			.00	
Working partner ^e			03 ***	
Financial responsibility for child(ren) ^f			.01 (*)	
Financial stringency			.02 ***	
Age	26 ***	18 ***	.05 ***	
Ease of movement			.07 ***	
Willingness to work			03 ***	
R ²	.07	.03	.83	

 Table 2.
 Results of the Path Analysis (Standardized Coefficients; n=7351)

^a Reference category: no seniority wage

^b Reference category: clerical staff

^c Reference category: female

^d Reference category: no high school degree

^e Reference category: having a partner that is unemployed, retired or not active on the labor market

^f Reference category: not having children for whom one is financially responsible

(*) p < .1; * p < .05; ** p < .01; *** p < .001

Verieble	Direct effe	Indirect effect on				
variable	log(reservation	log(reservation wage)				
Age	.05		01			
Variable		Total effect on				
	Ease of	Willingness to	Log(roconvotion word)			
	movement	work	Log(reservation wage)			
Age	26	18	.04			
Willingness to work	-	-	03			
Ease of movement	-	-	.07			

Table 3.Total Effects

The first two hypotheses concerned the effect age has on employability. Hypothesis 1, stating that age is negatively associated with willingness to work, is confirmed (standardized coefficient = -.18, p < .001). Hypothesis 2 is also confirmed. Table 2 also shows that ease of movement declines with age (standardized coefficient = -.26, p < .001). As we expected, the scores on both employability dimensions decline as people move closer towards the retirement age.

Hypotheses 3 and 4 are related to the effect employability is expected to have on the reservation wage. Table 2 confirms that the reservation wage decreases with willingness to work (standardized

coefficient = -.03, p < .001), while ease of movement is positively related to the reservation wage (standardized coefficient = .07, p < .001).

Since all four hypotheses are confirmed, the data supports our supposition that age affects the reservation wage through two employability paths. While the reservation wage increases with age through willingness to work, it decreases with age via ease of movement (see figure 2). Both factors give insight into the price setting process of aging job searchers.





*** p < .001

Table 3 shows that the indirect effect through ease of movement (i.e. -.26 * 0.07 = -.02) dominates the indirect effect through willingness to work (i.e. -.18 * -.03 = .01). Hence, employability explains a negative age effect (indirect effect = -.01).

Table 2 shows that age is directly related to the reservation wage as well, even after controlling for the current wage and other factors that could account for the age effect. As people grow older, they register higher reservation wages (standardized coefficient = .05, p < .001) for reasons other than a lower willingness to work or a lower ease of movement.

Moreover, the direct, positive effect of age on the reservation wage (standardized coefficient = .05, p < .001) is considerably larger than the indirect effect the employability factors account for (indirect effect = -.01). As a result, age turns out to have a linear¹, positive effect on the reservation wage (total effect = .04; table 3).

Finally, we note that the explained variance of the reservation wage is very high ($R^2 = .83$, see Table 2). This is mainly accounted for by the effect of the (current) wage variable. However, when testing the model without controlling for the current wage, we find an explained variance of 0.44, which is also quite high.

¹ We also tested whether the relationship between age and the reservation wage was curvilinear rather than linear. However, the guadratic term turned out to be insignificant.

DISCUSSION

Our analyses reveal a complex relationship between age and the reservation wage. First, as expected, we find that willingness to work decreases with age and that a lower willingness to work results in a higher reservation wage. We also conclude that ease of movement decreases with age and that a lower ease of movement implies a lower reservation wage. The negative effect (through ease of movement) dominates the positive effect (through willingness to work), implying a net negative relationship between age and reservation wage. However, at the same time, our analyses reveal a direct, positive relationship between age and the reservation wage, even after controlling for the current net monthly wage, the presence of a seniority wage and the person's employability. This direct effect counteracts the negative effect through employability. We can thus conclude that wage demands increase with age on the Belgian labor market as people move closer towards the retirement age. This finding is consistent with most studies examining the effect of age on the reservation wage (e.g. Addison et al., 2004; Gorter & Gorter, 1993). As the retirement age approaches, individuals turn out to maneuver themselves into an adverse labor market position by setting a higher reservation wage. The positive relationship between age and the reservation wage helps to explain why the transition to work gets harder as people move from mid to late career. The relatively high labor cost that may prevent employers from hiring older workers turns out to be not purely structural. It appears to have an agency component since workers' wage setting behavior is age-related and considerably affected by their perceived ease of movement and willingness to work.

While the two counterproductive employability factors play a role in the relationship between age and the reservation wage, other factors are more likely to explain the positive effect of age. It is for instance possible that older persons want to get the (financial) maximum out of their last years on the labor market, regardless of their employability. They may also have more confidence in their negotiating skills. Yet, we cannot exclude the possibility that the importance of employability factors decreases with age since older persons are likely to distance themselves from the labor market.

Implications for Theory and Practice

From a theoretical perspective, the multidisciplinary approach of combining insights from the job search literature and the employability literature pays off. The introduction of employability concepts in the reservation wage literature is a first step in analyzing the process of how individuals set their reservation wages as they move towards the retirement age. Although the employability factors do not fully explain the effect of age on the reservation wage, they play a considerable role in the relationship. Both ease of movement and willingness to work influence the reservation wage to a larger extent than factors which are traditionally included in studies aimed at identifying the determinants, like gender, level of education or the financial responsibility for the partner or children (e.g. Bloemen & Stancanelli, 2001; Christensen, 2001; Prasad, 2003). The introduction of employability concepts thus leads to the discovery of new determinants of the reservation wage, and especially stresses the need to focus on 'subjective' factors when studying the reservation wage, like for instance the perceived need to work.

From a practical point of view, the identification of employability factors as determinants of the reservation wage is important with respect to active labor market policies. Both willingness to work and ease of movement can be interfered with in order to stimulate older workers to extend their career and actively look for work if they would lose their job. Since a higher willingness to work implies a lower reservation wage, measures can be taken to increase people's willingness to work. Think for instance of information campaigns aimed at tackling age norms, or financial incentives to make the care sector more accessible so that fewer people would leave the labor market to take care of their grandchildren or a sick family member. As for ease of movement, it is important that

individuals assess their options on the labor market correctly. Although a low ease of movement implies a low reservation wage, it may also cause early retirement (cf. Greller & Stroh, 2004). It may therefore be important to educate inform older individuals about their alternatives and invest in counseling activities. Yet, people may also overestimate their ease of movement, and demand unrealistically high wages to get a job. Hence, guidance is needed to assist people in the wage setting process. Nevertheless, while acting upon workers' employability is crucial in the debate on the late career, it is important to realize that this may not fully solve the problem of older workers' higher wage demands, one of the key issues jeopardizing their employment prospects.

Limitations & Future Research

This study has some limitations that should be taken into account in future research. First of all, although the explained variance is high, the model does not fully explain the positive effect age has on the reservation wage. Future research should try to identify other factors that influence an individuals' price setting behavior on the labor market and explain why reservation wages generally increase as people get older. It may also be interesting to extend the sample and study the model's explanatory power for different age groups. People may distance themselves more from the labor market as they age, which would make employability factors mainly relevant for younger persons.

The sample moreover consists of employed individuals getting hypothetical questions about unemployment and job search behavior. Although it is highly relevant to study the reservation wage among employed individuals, the results of this study cannot be generalized to unemployed job searchers. Yet, we agree with McArdle (2007) that it is useful to study employability among the unemployed, although it has mainly been studied among employees within the career literature. Future research could verify if the results can be applied to the population of unemployed job seekers.

In addition, the use of an internet survey may be responsible for a selection bias. Older individuals and blue-collar workers are underrepresented in the sample. Furthermore, by using self-reported data respondents may answer according to a certain pattern. We cannot rule out the risk of dealing with a common method error.

To conclude, the cross-sectional data we use do not allow us to study the dynamic nature of the relationship between the reservation wage and its determinants. Longitudinal data are also needed to test the validity of the reservation wage measure. A comparison between the reported reservation wage and the actual, accepted wage after a transition would show if both are related and, more specifically, whether the reservation wage is indeed a lower-limit of the wage a person is willing to accept. Yet, as we pointed out before, we realize that differences may arise since factors other than the reservation wage might play a role when evaluating a job offer.

REFERENCES

AARP. 2002. Staying Ahead of the Curve: The AARP Work and Career Study. Washington, DC: AARP.

Addison, J. T., Centeno, M., & Portugal, P. 2004. *Reservation wages, search duration, and accepted wages in Europe*. Discussion Paper No. 1252, Bonn, Germany.

Addison, J. T., Centeno, M., & Portugal, P. 2008. *Do reservation wages really decline? Some international evidence on the determinants of reservation wages.* IZA Discussion Paper No. 3289, Bonn, Germany.

Ahn, N., & García-Pérez, J. I. 2002. Unemployment duration and workers' wage aspirations in Spain. *Spanish Economic Review*, 4: 103-118.

Berntson, E., Sverke, M., & Marklund, S. 2006. Predicting Perceived Employability: Human Capital or Labour Market Opportunities? *Economic and Industrial Democracy*, 27 (2):223-244.

Bloemen, H. G., & Stancanelli, E. G. F. 2001. Individual wealth, reservation wages, and transitions into employment. *Journal of Labor Economics*, 19: 400-439.

Bound, J., Schoenbaum, M., Stinebrickner, T., & Waidmann, T. 1999. The dynamic effects of health on the labor force transitions of older workers. *Labour Economics*, 6 (2): 179-202.

Bradley, S., & Taylor, J. 1991. An empirical analysis of the unemployment duration of school-leavers. *Applied Economics*, 24: 89-101.

Chan, S., & Stevens, A. H. 2001. Job loss and employment patterns of older workers. *Journal of Labor Economics*, 19: 484-521.

Christensen, B. 2001. *The determinants of reservation wages in Germany*. Kiel Working Paper No. 1024, Kiel, Germany.

Clarke, M., & Patrickson, M. 2008. The new convenant of employability. *Employee Relations*, 30 (2):121-141.

Curran, J. & Blackburn, R. A. 2001. Older people and the enterprise society: Age and self-employment propensities. *Work, Employment & Society*, 15 (4): 889-902.

Devine, T. J., & Kiefer, N. M. 1993. The empirical status of job search theory. *Labour Economics*, 1: 3-24.

Falk, A., Fehr, E., & Zehnder, C. 2006. Fairness perceptions and reservation wages - The behavioral effects of minimum wage laws. *The Quarterly Journal of Economics*, 121 (4):1347-1381.

Forrier, A., & Sels, L. 2003. The concept employability: a complex mosaic. *International Journal of Human Resources Development and Management*, 3: 102-124.

Gauthier, A. H., & Smeeding, T. M. 2003. Time use at older ages: Cross-national differences. *Research on Aging*, 25 (3): 247-274

Gielen, A. C. 2009. Working hours flexibility and older workers' labor supply. Oxford Economic Papers, 61: 240-274.

Gorter, D., & Gorter, C. 1993. The relation between unemployment benefits, the reservation wage and search duration. *Oxford Bulletin of Economics and Statistics*, 55: 199-214.

Green, C., & Leeves, G. 2003. The incidence and consequence of worker displacement in Australia. *Australian Economic Papers*, 42: 316-331.

Greller, M. M., & Simpson, P. 1999. In search of late career: A review of contemporary social science research aplicable to the understanding of late career. *Human Resource Management Review*, 9: 309-347.

Greller, M. & Stroh, L. 2004. Making the most of late-career for employers and workers themselves: Becoming elders not relics. *Organizational Dynamics*, 33(2): 202-214.

Guillemard, A.-M. 2003. Concluding remarks: Company practices and public policies regarding age: Lessons drawn from comparisons. *The Geneva Papers on Risk and Insurance*, 28(4): 673-676.

Hanish, K. A. 1999. Job loss and unemployment research from 1994 to 1998: A review and recommendations for research and intervention. *Journal of Vocational Behavior*, 55: 188-220.

Hansson, R. O., DeKoekkoek, P. D., Neece, W. M., & Patterson, D. W. 1997. Successful aging at work: Annual review, 1992-1996: The older worker and transitions to retirement. *Journal of Vocational Behavior*, 51: 202-233.

Hansson, R. O., Robson, S. M., & Limas, M. J. 2001. Stress and coping among older workers. *Work*, 17: 247-256.

Haurin, D. R. & Sridhar, K. S. 2003. The impact of local unemployment rates on reservation wages and the duration of search for a job. *Applied economics*, 35: 1469-1476.

Higgs, P., Mein, G., Ferrie, J., Hyde, M., & Nazroo, J. 2003. Pathways to early retirement: Structure and agency in decision-making among British civil servants. *Ageing & Society*, 23: 761-778.

Hinterhuber, A. 2004. Towards value-based pricing—An integrative framework for decision making. *Industrial Marketing Management*, 33: 765-778.

Hirsch, B. T., Macpherson, D. A., & Hardy, M. A. 2000. Occupational age structure and access for older workers. *Industrial and Labor Relations Review*, 53: 401-418.

Hogan, V. 2004. Wage aspirations and unemployment persistence. *Journal of Monetary Economics*, 51:1623-1643.

Hui, W.-T. 1991. Reservation wage analysis of unemployed youths in Australia. *Applied Economics*, 23: 1341-1350.

Humphrey, A., Costigan, P., Pickering, K., Stratford, N., & Barnes, M. 2003. *Factors affecting the labour market participation of older workers*. Research Report No 200. Department for Work and Pensions, Leeds.

Hurd, M. D. 1996. The effect of labor market rigidities on the labor force behavior of older workers. In D.A. Wise (Ed.), *Advances in the economics of aging:* 11-58. Chicago, IL: University of Chicago Press.

Ilmarinen, J. 2006. *Towards a longer worklife. Ageing and the quality of worklife in the European Union*. Helsinki: Finnish Institute of Occupational Health.

Kooij, D., de Lange, A., Jansen, P., & Dikkers, J. 2008. Older workers' motivation to continue to work: Five meanings of age. A conceptual review. *Journal of Managerial Psychology*, 23: 364-394.

Kuo, M. & Smith, E. 2009. Marketplace matching in Britain: Evidence from individual unemployment spells. Labour Economics, 16: 37-46.

Lambert, K. G., Hogan, N. L., & Barton, S. M. 2001. The impact of job satisfaction on turnover intent: A structural measurement model using a national sample of workers. The Social Science Journal, 38: 233-250.

March, K., & Simon, H. 1958. Organizations. New York: John Wiley & Sons.

McFadyen, R. G., & Thomas, J. P. 1997. Economic and psychological models of job search behavior of the unemployed. *Human Relations*, 50: 1461-1484.

McQuaid, R. W. 2006. Job search success and employability in local labor markets. *The Annals of Regional Science*, 40: 407-421.

Mitra, S. 2007. The reservation wages of social security disability insurance beneficiaries. *Social Security Bulletin*, 67: 89-111.

Mortensen, D. T. 1986. Job search and labor market analysis. In O.C. Ashenfelter, & Layard, L. (Eds.), *Handbook of Labor Economics, Volume II*: 849-919. Oxford, UK: Elsevier Science Publishers BV.

Nattrass, N., & Walker, R. 2005. Unemployment and reservation wages in working-class Cape Town. *South African Journal of Economics*, 73: 498-509.

OECD. 2006. Work longer, live longer. Paris: OECD.

Owen, L., & Flynn, M. 2004. Changing work: Mid-to-late life transitions in employment. *Ageing International*, 29 (4): 333-350.

Pannenberg, M. 2007. *Risk aversion and reservation wages*. IZA Discussion Paper No. 2806. Institute for the Study of Labor, Bonn, Germany.

Posthuma, R. A., & Campion, M. A. 2009. Age stereotypes in the workplace: Common stereotypes, moderators, and future research directions. *Journal of Management*, 35 (1): 158-188.

Prasad, E. S. 2000. The dynamics of reservation wages: Preliminary evidence from the GSOEP. *Vierteljahrshefte zur Wirtschaftsforschung*, 69 (2): 44-50.

Prasad, E. S. 2003. What determines the reservation wages of unemployed workers? New evidence from German micro data. IZA Discussion Paper No. 694, Germany.

Roscigno, V. J., Mong, S., Byron, R., & Tester, G. 2007. Age discrimination, social closure and employment. *Social Forces*, 86: 313-334.

Rothwell, A., & Arnold, J. 2007. Self-perceived employability: Development and validation of a scale. *Personnel Review*, 36: 23-41.

Skirbekk, V. 2003. *Age and individual productivity: A literature survey*. MPIDR Working Paper no. 2003-028, Max Planck Institute for Demographic Research, Germany.

Taylor, P., & Walker. A. 2003. Age discrimination in the labour market and policy responses: The situation in the United Kingdom. *The Geneva Papers on Risk and Insurance*, 28: 612-624.

Walker, R. 2003. Reservation wages - Measurement and determinants: Evidence from the Khayelitsha/Mitchell's Plain (KMP) Survey. CSSR Working Paper No. 38, University of Cape Town, South Africa.

Wanberg, C. R., Kanfer, R., & Rotundo, M. 1999. Unemployed individuals: Motives, job-search competencies, and job-search constraints as predictors of job seeking and re-employment. *Journal of Applied Psychology*, 84 (6): 897-910.

Wanberg, C. R., Hough, L. M., & Song, Z. 2002. Predictive validity of a multidisciplinary model of reemployment success. *Journal of Applied Psychology*, 87: 1100-1120.

Wanberg, C. R., Glomb, T. M., Song, Z., & Sorenson, S. 2005. Job-search persistence during unemployment: A 10-wave longitudinal study. *Journal of Applied Psychology*, 90(3): 411-430.

Wittekind, A., Raeder, S., & Grote, G. (in press). A longitudinal study of determinants of perceived employability. *Journal of Organizational Behavior*.