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### Introduction<sup>1</sup>

A large body of economic literature has analysed early-retirement behaviour from a labour-supply perspective. In this context, legislation or institutional arrangements are of great importance. International comparative studies (see, for example: Gruber/Wise 1998 and 2005, Fischer/Sousa-Pozer 2006; Börsch-Supan et al. 2008; Famira-Mühlberger et al. 2010) show that legislation or the institutional design of the social security systems (such as eligibility criteria or benefit generosity) has a strong impact on the labour-market participation of older workers.

Research on an international comparison of pension systems mainly focuses on three factors: the generosity of the pension system, the actuarial neutrality of pension systems and early-exit possibilities (Riedel/Hofer 2013:11). In this context, occupational pension schemes also play a decisive role.

However, it is important to emphasise that legislation or the institutional design does not only refer to the area of pension insurance and the availability and conditions of early or statutory retirement. Decisive factors influencing the labour-market participation of older workers are the availability and conditions of benefits in the case of ill health, (partial) disability or unemployment (Budimir 2011:128). Taxes or tax-benefits should also be taken into consideration (see, for example: National Report – Belgium and Norway)

This means that research examining the impact of legislation or the institutional framework on the labour-market participation of older workers should address the different reasons for older workers' labour-market inactivity or the different pathways by which older workers leave the labour market (see, for example: Famira-Mühlberger et al. 2010; Famira-Mühlberger 2010a) and not narrow the focus down to the pension system or even on early-retirement regulations.

The effects of labour demand on early retirement or the question of involuntary early retirement have received far less attention (see, for example: Hutchens 1999; Dorn/Souse-Poza 2005, Vickerstaff 2006). But legislation (e.g. employment protection legislation) and the institutional design of the social security systems also impact on the motivation of employers to employ older workers. In this context, anti-age-discrimination legislation and employment-protection legislation are also important.

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### **Methodology**

The search strategy was based on a four-step process:

- 1) First of all, key references were identified by means of a systematic literature review using the most appropriate search engines and screening databases (Web of Science, Google, Google Scholar), with search terms in English and German. A time frame was set from 2000 to 2014. The texts found were almost limited to reviewed articles and comparative studies at the EU level.
- 2) To identify scientific reports that have not undergone a review process but were issued by research institutes or national authorities, publications and homepages of these institutes were screened (e.g. The Austrian Center for Labor Economics and the Analysis of the Welfare State, Austrian Institute of Economic Research (WIFO), Institute for Advanced Studies (IHS); Main Association of Austrian Social Insurance Institutions).
- 3) Further references were found within literature quotes in the texts. Some authors were cited frequently or some research studies quoted seemed to be very interesting, and thus a search was undertaken for these studies or further studies by these authors. Thus, the time frame was enlarged to also include important studies prior to 2000. Within the texts, new terms of reference were identified and another round of database screening was carried out.
- 4) Research was narrowed down by identifying key literature. This literature was categorised within chapters and then analysed. Within this process, the first finding was defined some texts relate to more than one domain (e.g. financial factors). In addition, a literature list was drawn up with key literature and search terms, categorised by domain, with a direct link to the article.

### FindIngs

According to Börsch-Supan et al. (2008:5), "institutions play a very large role in shaping retirement patterns. They explain most of the international variations". But institutional arrangements or social-security legislation not only affect the supply side, that is the availability of older workers for the labour market, but also the demand side, that is the motivation of employers to employ older worker (Börsch-Supan et al 2008:2).

### Labour supply side

#### **Pension systems**

According to the labour supply theory, individuals maximise their utility from leisure and work by choosing the optimal time for retirement. Thus, the optimal date of retirement is determined by future payments from pension systems and by foregone earnings from withdrawing from the labour market. Thus, the detailed design of the old-age pension system plays a crucial role in the retirement decision of older workers (Riedel/Hofer 2013:11).

Research on international comparison of pensions systems mainly focus on three factors: the generosity of the pension system, the actuarial neutrality of pension systems and early-exit possibilities (Riedel/Hofer 2013:11).





International comparison confirm the assumption, that more generous retirement systems (e.g. replacement rates<sup>2</sup>) facilitate early retirement pensions (see, for example: Blöndal/Scarpetta 1999; Duval 2003; Börsch-Supan et al. 2008). That means relatively high replacement rates lead to lower than average participation rates of older worker. Lower replacement rates, on the contrary, can increase the participation rates of older workers (Riedel/Hofer 2013:12).

According to Fischer/Sousa-Poza (2006) and based on SHARE data, however, actuarial fairness<sup>3</sup> (i.e. a net reduction or net increase of pension benefits in the case of early retirement or retiring later) is more important for explaining early labour-market exit than replacement rates.

Based on the ad-hoc module 2006 of the European Labour Force Survey, analyses by Riedel/Hofer (2013: 37) confirm that replacement rate and pension wealth both negatively correlate to retirement age. In contrast to most of the literature, however, this evidence is provided for *planned* rather than for effective retirement age.

Interestingly, Dorn/Sousa-Poza (2005:18) show that "high replacement rates seem to be associated with more voluntary, and actuarially unfair pension systems with involuntary early retirement".

It must, however, also be noted, what Hanappi (2012:37f.) stated for the Austrian pension system: Retirement regulations are characterised by a considerable degree of diversity, due to continuing pension reforms in all European and OECD countries over the last decades. Due to this complexity (as well as the uncertainty related to potential future reforms), it is not entirely clear to what extent individuals are in fact capable of forming rational expectations about their future entitlements.

The third major institutional determinant of pension systems refers to early-retirement options or possibilities to retire before statutory retirement age (Riedel/Hofer 2013:14). Several studies (see, for example: Gruber/Wise 2005; Börsch-Supan et al. 2008) confirm that there is a strong correspondence between exit from the labour market and the age at which early retirement benefits can be claimed.

Analyses of Riedel/Hofer (2013:37) show different effects for different parts of Europe. In richer countries of the EU15, statutory retirement age seems to have a larger effect on planned retirement age than in poorer EU15 states or in new EU member states. The effect of pension wealth (= future stream of pension benefits to which older workers are entitled), in contrast, is largest in the new EU member states and smallest in rich EU15 countries.

<sup>2</sup> "The old age pension replacement rate is a measure of how effectively a pension system provides income during retirement to replace earnings which were the main source of income prior to retirement" (Riedel/Hofer 2013:11)

Actuarial fairness of a pension system requires that the present value of lifetime contributions is equal to the present value of lifetime benefits. Actuarial fairness relates to the entire lifetime of contributions and benefits (Queisser/Whitehouse 2006).





Occupational pensions schemes that increase pension wealth were found to also trigger early retirement among older workers (see, for example: Bundell et al. 2002 and Bütler et al. 2004).

#### Interplay of different social security transfer programs

Early-retirement options have indeed contributed to lowering participation rates among older workers in the past (see, for example: Gruber/Wise 2005). However, relatively easy access to various social transfer programmes, such as unemployment-related or disability benefits, also has an effect on early labour-market exit since these programmes are often substituted for early retirement schemes (see, for example: Duval 2003, Börsch-Supan et al. 2008, Famira-Mühlberger et al. 2010 and 2010a, Budimir 2011).

On the basis of European Labour Force Survey 2008, Famira-Mühlberger et al. (2010 and 2010a) have investigated in how far differences in the labour-market participation of older workers can be linked to the country-specific design of social-security systems (pension insurance, unemployment insurance and benefits due to disability<sup>4</sup> or ill-health). In addition to Austria, the countries investigated included Belgium, Denmark, Germany, Netherlands, Slovenia, Finland, Sweden and Great Britain (see also: Budimir 2011). Retirement and ill health or disability seemed to be the main reasons for the inactivity of older workers in all countries, but there are large countries differences (Famira-Mühlberger et al. 2010:8f).

In countries with a comparably low retirement age and high replacement rate, such as Slovenia and Austria, retirement is the prime cause of labour-market inactivity. Other countries, due to a higher retirement age, lower replacement rates and/or higher pension reductions in case of early retirement, offer fewer incentives for early retirement. Thus, for instance, in Sweden, Denmark and the Netherlands, early retirement among older workers is relatively rare. Labour-market inactivity in these countries is largely due to disability or ill health as provisions in the case of ill health are generous and easier to claim than in the other countries (Famira-Mühlberger et al. 2010:9; Budimir 2011:133).<sup>5</sup>

Börsch-Supan et al (2008:27) come to this conclusion: "While health is an important determinant of earlier retirement, it does not explain the large cross-national variation. This is explained by institutional differences in welfare systems, which clearly affect the distribution and the age pattern of participation to the labour market and of retirement".

National studies come to a similar conclusion: Using administrative data from the Netherlands, Borghans et al. (2012) provide empirical evidence that reducing the generosity of disability benefits increases enrolment into other forms of social insurance. Karlström et al. (2008) find that stricter eligibility criteria for disability benefits in Sweden increased take-up of unemployment and sickness

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In this case benefits due to disability could refer to disability pensions but also to benefits granted by other social security institutions (e.g. the health system).

It must be noted, that information and research conclusions are based on data and regulations valid and effective in 2008.





benefits but did not raise employment rates. By contrast, Kyyrä (2010) provide evidence that increasing age-thresholds for unemployment benefits and tightening medical criteria for disability eligibility in Finland raised the effective retirement age. Kyyrä/Ollikainen (2008) show a strong increase in early retirement following the implementation of a reform in Finland that increases the eligibility age for extended unemployment benefits.

#### Labour demand side

#### **Involuntary early retirement**

Based on micro-data of the International Social Survey Programme (ISSP) (1985-1997), Dorn/Sousa-Poza (2005, 2010) state that generous early-retirement provisions do not only make voluntary early retirement more attractive for older workers but also induce employers to force more older workers into early retirement (also see: Hutchens 1999, Hakola/Uusitalo 2005, Smith 2006; Desmet et al. 2005).

"Social security benefits can act as a form of unemployment insurance, effectively subsidizing workforce reductions by lowering the cost to the firm of shedding older workers. In other words, generous social security provisions for early retirement might have the undesirable effect of reducing employment and creating involuntary early retirement instead" (Dorn/Sousa-Poza 2005:2).

The extent of involuntary early retirement differs significantly among different countries but mostly affects workers at the age between 45 and 59. According to Dorn/Sousa-Poza (2010: 431ff.) involuntary early retirement tends to be particularly high in countries with low labour-market participation rates of older workers, increasing unemployment rates and countries facing economic recession and/or high levels of employment protection legislation.<sup>6</sup>

#### **Anti-age-discrimination**

Very few studies — at national level — deal with the question of if and how far the definition of a statutory retirement age contributes to the fact that older workers are forced to leave the labour market or to claim involuntary retirement pensions (see, for example: Sargeant 2006). In this context, Breda/Schoenmaekers (2006:530) state that the "legal retirement age determines the moment when retirement becomes a right — or sometimes a duty".

According to Breda/Schoenmaekers (2006:532), a further problem with age limits is that treating every one of the same age in the same manner can be inappropriate. Age limits presuppose that age groups are homogeneous, which older people certainly are not. Therefore, those who still have a high work ability despite being older might feel restricted by a mandatory retirement age, as age thresholds in legislation are setting a standard. At the same time, an advantage of a mandatory retirement age could be to make it easier for the young people to enter the labour market (Numhauser-Henning/Rönnmar 2013:407).

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<sup>&</sup>lt;sup>6</sup> It must be noted, that information and research conclusions are based on data and regulations valid and effective between 1985 and 1997.





A very important aspect to be considered when talking about age-discrimination is the gender dimension. According to Walker (et al. 2007:37), "[a]ge discrimination will need to take account of the gender dimension of ageism." Until now the focus of the studies has mostly been on men, early exit of older women is hardly researched, especially on age being a cause of involuntary exit. "There is evidence that stereotypical beliefs about gender and age combine to form a 'double jeopardy' for women in organisation" (Walker et al. 2007:38).

In response to a European Union Directive (2000/78/EC) forbidding discrimination on the grounds of age, some countries implemented strict anti-age-discrimination legislation (e.g. Belgium, UK) and studies have been carried out in order "to ascertain the prevalence and justification of the use of age criteria in legislation" (Breda/Schoenmaekers 2006; see also: Sargeant 2006) or the organisational reaction to anti-age-discrimination legislation (Parry/Tyson). According to Heywood/Siebert (2009:12) and based on US evidence, anti-age-discrimination laws does lead to less older workers being hired, which is to be expected, since such age laws are a form of employment protection legislation.

#### **Employment Protection**

According to the results of Dorn/Sousa-Poza (2010) for OECD countries, strict employment protection legislation leads to higher levels of involuntary retirement. This can be explained by the fact that employment protection legislation encourages companies to send older workers into early retirement rather than laying them off.

Based on SHARE data, Fischer/Sousa-Poza (2006), on the other hand, found no significant relationship between early retirement and employment protection legislation in their sample of European countries. In the literature, this issue is rarely dealt with; hence, more research on employment protection legislation is needed in order to draw a general conclusion. (Riedel/Hofer 2013:16)

### **Analyses of Research**

With regard to the question of what impact legislation or institutional arrangements have on the labour-market participation of older workers, numerous economic and, above all, econometric comparative studies are available. Most of these studies, however, only investigate early-retirement behaviour from a labour-supply perspective, i.e. the availability of older workers for the labour market.

Institutions or social-security legislation taken into consideration are the pension systems, the unemployment schemes and regulations or benefits regarding ill health and/or disability. Very few studies also relate to employment protection legislation. Some studies, however, only consider the role pension systems play in shaping the labour-market decisions of older workers. In these studies spill-over effects or the inactivity of older persons due to unemployment and ill health are hardly taken into account.





Datasets used are the Survey of Health, Ageing and Retirement in Europe (SHARE), the European Labour Force Survey (LFS), and, to a much lesser degree, the International Social Survey Program (ISSP).

There also are some, if few, economic and econometric studies on the demand-side perspective. Here the key question is if early retirement is the employees' free choice (= voluntary) or a forced decision (= involuntary) induced by the employer. Beside comparative studies, also some research at the national level and based on national data could be found. Since research outcomes show that involuntary early retirement — at least in some continental European countries — is an important phenomenon, the low level of research attention is quite surprising and incomprehensible.

With regard to anti-age discrimination legislation only few studies – at national level – could be found, mostly carried out by political scientists or sociologists. Some of them address the question of statutory retirement age as a possible source of age-discrimination. One qualitative study investigates female age-discrimination. Some other studies deal with the legal traditions anti-age discrimination legislation is confronted with or the (possible) impacts of anti-age discrimination legislation at national level.

### **Cross-National Diversity**

Based on the National Reports provided in the context of this JPI fast-track project, "Understanding employment participation of older workers", it can be stated that research on the domain "legislation and its implementation" differs widely between participating countries. In this context, we must also bear in mind that social-security and tax systems and especially pension systems differ largely between these countries.

In addition, there are some overlaps within the domain of "financial factors". That means that, in some National Reports, legislative issues (especially with regard to the financial incentives of the pension systems) are treated under the domain of "financial factors" and not under the domain of "legislation".

One common issue seemed to be the relatively high "gender blindness". Only very few studies mentioned in the National Reports distinguish in their results between women and men or deal with the differences in the impacts of social security legislation on women and men.

In some countries (Belgium, the Netherlands and Austria), the impact of legislation or the institutional design of the social security systems (such as eligibility criteria or benefit generosity) on the labour-market participation of older workers has been rather well researched, even though many studies focus on the pension system only and do not take into account the other pathways out of the labour market or spill-over effects to other social insurance programmes (e.g. unemployment insurance or ill-health and disability benefits).

For Belgium, Austria and Norway, we can see that econometric and simulation analyses, based on both survey and administrative data, are important or prevail.





**Belgium:** Some studies deal with the different pathways out of the labour market of older workers or the links between the different exit routes. Studies also explore individual retirement behaviour in response to social security arrangements. They found strong incentives for retiring earlier, but significant differences between women and men, and between wage earners, civil servants and the self-employed (for details, see: National Report – Belgium, legislation domain).

Some studies investigate the impact of taxes or tax-benefits on the labour market participation of older worker, but they do not consider the interaction between taxes and social security benefits (for details, see: National Report – Belgium).

Analyses of the Intergenerational Solidarity Pact (ISP) in Belgium indicate a positive impact of the reform on elderly employment, with slightly larger effects on men and a negative effect on younger males, suggesting a substitution effect. Some studies analyse the Belgian career-break system – permitting a partial (and final) withdrawal from the labour market at a higher age. They found no evidence that this system contributes to delaying retirement; much rather the contrary seems to be true (for details, see: National Report –Belgium, legislation domain).

**Netherlands**: Changes in social-security arrangements and their impact on pathways out of the labour market of older workers are evaluated in a systematic way, but no studies on the impact of the anti-age discrimination law are mentioned. Simultaneously, making early retirement much more unattractive and making both employees and employers pay more for disability insurance has effectively discouraged early retirement and prevented 'substitution' via disability insurance (for details, see: National Report - the Netherlands, legislation domain).

**Austria:** Recent comparative studies investigated the different pathways by which older workers leave the labour market. For Austria, early labour-market exit is mainly due to early retirement pensions, inactivity due to ill health is less important and unemployment is not relevant in this context. But studies also show that pension reforms, on the one hand, contribute to raising early retirement age and, on the other hand, lead to large spill-over effects to the unemployment insurance scheme (for details, see: National Report – Austria, legislation domain).

Some studies addressed the impact of recent pension reforms on the effective retirement age and, to some extent, also on pension levels. Findings suggest that the tightening of eligibility criteria for early-retirement pensions and the abolishment of early-retirement pensions have significantly delayed retirement in Austria. At the same time, the gap between exit from standard employment and receiving a pension benefit is increasing (for details, see: National Report – Austria, legislation domain).

One study on the subsidised old-age part-time scheme found that while the scheme is meant to reduce early labour-market exit, the overall effect on labour supply is rather negative since most older workers making use of the scheme substitute part-time work for full-time work followed by de facto early retirement (for details, see: National Report – Austria, legislation domain).

Regarding the implementation or/and the impact of the anti-age discrimination legislation in response to a European Union Directive (2000/78/EC), only the UK reports research activities. Research in the **UK** indicates that well before the implementation of the Employment Equality (Age)





Regulation of 2006, employers had already included age in their (formal) equality policies. Since the abolition of the default retirement age only happened in 2011 (now employers can retire older workers only on a legally justifiable reason), there is little research on the impact of the regulation and this is defined as a research gap. There is also a lack of research on the continuous and rather fast increase of the state-pension age, especially with regard to women (i.e. in 2028 the state pension age will be 67 years, for both women and men) (for details, see the UK National Report, legislation domain).

The **Finnish** National Report describes different legislative measures, their implementation and impacts on retirement behaviour/possibilities of older workers (e.g. the introduction of a flexible oldage retirement age between 63 and 68 and of a partial sick-leave in 2007) (for details, see: National Report – Finland, legislation domain)

The **Swedish** National Report describes historical changes within the pension system (e.g. newly defined contribution pension scheme; flexible pensionable age) and indicates some evaluation studies of policy design and changes (see: National Report – Sweden).

In **Germany**, only two descriptive studies were found. According to them, transitions to retirement have changed since 1996 and the time gap between exit from employment and receiving pensions is increasing. Workers' expectation to retire early dropped substantially from 1996 to 2002 (for details, see the National Report - Germany).

In **Norway**, there has been extensive research into the effects of policy measures and changes aimed at extending working age since 2001. Studies on tax reductions for employees 62 and older, for example, found a reduction in older workers' exit rates, compared to younger employees. An interesting survey experiment demonstrates that even if persons are well informed about changes in the pension system they do not behave differently from persons who are not informed (for details, see: National Report – Norway, legislation domain).

In addition, numerous studies have been carried out, based both on register data and survey data, on the effects of/changes in the early retirement scheme, special tax rules for older workers, changes in disability benefits, etc... The main conclusion is that financial incentives do have an effect on retirement behaviour (for details, see the National Report, financial factors).

A questionnaire in **Denmark** shows that the age limit for early retirement determines workers' expectations as to when they will retire more than the statutory retirement age for an old age pension. Another study comes to the conclusion that rendering the early retirement schemes less available and less lucrative seemed to be an efficient tool to reduce early retirement (for details, see: National Report – Denmark, legislation domain and financial factors)

The National Report from **Poland** describes the gradual increase of the retirement age for women (from 60 to 67 years) and for men (from 65 to 67 years), stressing that these changes are not taken into account in the current analysis, which evaluates the economic activity and the financial situation of the past.





#### **Research Conclusions**

- Qualitative studies examining the different pathways by which older workers leave the labour market are needed, in order to better understand the interplay of different social security transfer programs and the possibilities structure for older workers in a given national context.
- In-depth qualitative research on the impact of legislation and the other determinates (see other domain chapters) on the labour-market participation or retirement behaviour of older workers is needed in order to explain and better understand the outcomes of the quantitative research studies.
- More (current) studies investigating the impact of legislation or institutional arrangements on the labour-demand side would be very important, since involuntary early retirement or early exit induced by the employer seemed to play quite an important role.
- Gender-and class-specific analyses are needed, since legislation or institutional arrangements are likely to impact differently on women and men, on blue- and white-collar workers or on low- or high-income workers. This is also true with regard to the question of age-discrimination.
- Comparative studies on the aims, the implementation and the different impacts of the anti-agediscrimination legislation are needed. In this context the consequences of an abolition of the statutory retirement age would be also of interest.
- Changes in legislation or institutional arrangements not only impact on the labour-force
  participation of older workers but often also affect benefit levels (e.g. early retirement pension
  benefits). Monitoring the effects of changes/reductions in early retirement schemes (and other
  social-security transfer programmes) on benefit levels and risk of poverty for older workers and
  pensioners (including gender and class specific analysis), would be very important, especially
  with regard to involuntary exit from the labour market.





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