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Old Age Work Participation

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Abstract

To understand how to raise labor force participation of older workers, it is necessary to understand demand, supply, and institutional factors. Labor supply and retirement decisions of older workers are at the core of microeconomic research and many countries have recently reformed their pension systems to make early retirement financially less attractive. Noneconomic factors like quality of work, health status, social networks, and peer group behavior are important as well. The demand side of the labor market is equally important, particularly now that recent pension reforms have raised labor supply.

Key questions are: How to maintain the productivity of older workers? How to eliminate existing prejudice toward older workers among employers and coworkers? How effective are laws against age discrimination or public campaigns to promote the image of older workers? Which demand side adjustments will be necessary to accommodate an increased supply of older workers, concerning, e.g., hiring policies, reducing wage costs, training of older workers, using alternative exit routes, accommodating workers with a health problem and facilitating gradual retirement?

In this article, we discuss the labor force participation of older age groups. We discuss definition and measurement of old age and work participation and present some data on OECD countries, provide an overview of the determinants of retirement and labor supply of older age groups, and summarize what we know about labor demand and productivity. We also discuss policy issues that may guide future research.

Introduction and Background

The increase in life expectancy in recent years poses new challenges for policymakers across the world. Policymakers faced with unprecedented rises in social expenditures on those in retirement and the need to ensure fiscal sustainability of social welfare and pension systems, have endeavored to extend working careers by attaining higher employment rates among older workers. In particular, many countries of the European Union face the challenge of reversing the trend toward early retirement by providing financial incentives to make people remain in work longer. This policy agenda requires a good understanding of demand and supply factors underlying the labor force participation of older age groups.

Since 1999, active aging has featured often in many of the EU policy frameworks. The goal of active aging has often been narrowed to extending working lives and discouraging early retirement. The focus on enhancing labor market participation of older workers is reflected in two EU-level targets: the 2001 Stockholm target to ensure that half of those in the age group of 55–64 years were in employment by 2010, and the 2002 Barcelona target to increase the average age of exit from the labor market (for retirement) in 2010 by 5 years. While none of the EU countries has managed to achieve the Barcelona target, Germany, Ireland, Cyprus, the Netherlands, and Finland did raise the employment rate for the age group of 55–64 years to over the 50% threshold by 2010 (Zaidi and Zolyomi, 2012). (In Sweden, Denmark, Portugal, and the UK the employment rate of this age group was already above 50% in 2001.)

Under the European Union's strategy for smart, sustainable, and inclusive growth, known as 'Europe 2020,' one of the five headline targets that EU Member States have agreed to implement to increase the employment rate of 20- to 64-year-old individuals to 75% by 2020. This target can only be achieved by increasing the employment rate of older workers and raising the effective retirement age. Another target is to lift at least 20 million people out of poverty and social exclusion in the next decade. This involves ensuring adequate pensions for older people, for which extended working careers are essential. In line with Europe 2020, the European Employment Strategy also promotes policies and measures targeted at supporting longer working lives. The Europe 2020 New Skills for New Jobs flagship initiative emphasizes better training and skills through occupational training and lifelong learning opportunities, among others for older workers (Zaidi, 2012).

The idea of the Silver Economy offers a solution to the current economic problems of lack of growth in the European economies exploiting the potential of a rising share of older people in society. It refers to the fact that the rising share of older consumers represents a potential for additional demand for new types of products and services, such as personalized care and technology that enables people to maintain healthy and independent lives as they age. Furthermore, the new cohorts of retirees are also expected to be wealthier than their predecessors, and thus generate more specific demand in the economy. The term 'Silver Economy' also sometimes encompasses the rising segment of older workers who ought to be considered as a resource for their employment potential and other social contributions (such as transfer of skills toward younger workers) in bringing economic growth.

To understand how to raise labor force participation of older workers, it is necessary to understand demand, supply, and institutional factors. Labor supply and retirement decisions of older workers are at the core of microeconomic research and many countries have recently reformed their pension systems to make early retirement financially less attractive. Noneconomic factors like quality of work, health status, social networks, and peer group behavior are important as well. Health plays a major role, in particular through limitations at work due to ill health and disability. The demand side of the

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In this article we discuss the labor force participation of older age groups. First we discuss definition and measurement of old age and work participation and present some data on OECD countries. Then we provide an overview of the determinants of retirement and labor supply of older age groups, followed by a summary of what we know about labor demand and productivity. Finally, we discuss policy issues that may guide future research.

Old Age

At least three definitions of old age are in use in the social gerontology and economics of aging literature:

- Subjective definition – based on each individual's own assessment, usually derived from their labor market activity or health status.
- Functional definition – using objective information on how people function, considering restrictions due to health problems and frailty in different domains of life (e.g., in being employed, in physical and mental functioning in their day-to-day life).
- Chronological definition – using an objective age threshold beyond which the old age phase of life begins (e.g., the statutory pension age).

These definitions can provide an approximate entry into the old-age period of life around the time of retirement from the labor market or deterioration in health status. The chronological age cut-off can also be defined on another basis. For instance, the employment rate of older workers by EUROSTAT (the Statistical Office of the European Union) is calculated using the age group of 55–64 years. This age group is the primary focus of analysis in this article and in most of the literature on labor force participation of older age groups.

In addition, there is an increasing trend to work beyond the statutory retirement age (often age 65). Such workers are often referred to as 'silver workers.' Silver workers are increasingly visible in every sphere. In the UK, for instance, the most obvious examples include Queen Elizabeth (age 86) Sir Alex Ferguson (manager of Manchester United until age 71), and the actress Dame Judi Dench who competed for the Golden Globes at age 78. Employment after the statutory age is of special interest as it may provide a necessary complement to income and thus avoid poverty in old age. The financial aspect is not the only factor, however, as higher income workers are often overrepresented among post-retirement workers (Giarini, 2009). A formal job after retirement also serves as a possible means to remain active in other social and civic engagements.

One advantage of the chronological age definition is that age is by definition an exogenous attribute, whereas indicators of old age on the basis of labor market or health status are often affected by individual choices. An adoption of the definition on the basis of the chronological age will allow us to capture diversity within the old-age population in terms of their labor market participation (i.e., the endogenous variables). Moreover, the chronological definition is free from negative biases that arise from common myths and misconceptions about aging and older people, such as the perception that they are often frail, ill or disabled, and may thus be a burden on the community.

Work Participation

Individuals can be classified in three categories: employed, unemployed, or economically inactive. The most common definitions for these follow the Resolution of the 1982 International Conference of Labor Statisticians known as the 'ILO guidelines' (ILO, 1982). Two important elements are the selection of an age group (the reference group), and the time unit of the assessment (the reference week):

- Employed persons comprise those aged 15 years or above who either (1) worked for pay, profit, or family gain for at least 1 h during the reference week or (2) were not at work during the reference week but were temporarily absent from their job or business. This definition is applicable to employees, self-employed persons, and family workers. Pay includes cash payments or/and payments in kind (that is, in goods and services).
- Unemployed persons comprise those of ages 15–74 years who are: (1) not employed according to the definition mentioned above, (2) currently available for work (i.e., for paid employment or self-employment before the end of the 2 weeks following the reference week), and (3) actively seeking work (i.e., had taken specific steps in the 4 weeks ending with the reference week to seek paid or self-employment).

In some countries, the reference group is defined slightly differently. For instance, in Spain and Great Britain, the reference age group corresponds to those 16 years and more, while the upper age limit for the reference group is restricted to 74 years in Denmark, Estonia, Hungary, Latvia, Finland, Sweden, and Norway.

The residual third group is commonly referred to as 'inactive.' For older people, however, the distinction between unemployed and inactive is often blurred (Marin, 2013). For example, 'discouraged workers' who lost interest in searching for a job are categorized as 'inactive' rather than 'unemployed.' The most useful distinction for the analysis in this article is, therefore, employment versus nonemployment.

Employment Rates of the Age Group 50–64 Years

Figure 1 (males) and 2 (females) show large differences in the employment rates of workers aged 50–64 years across countries

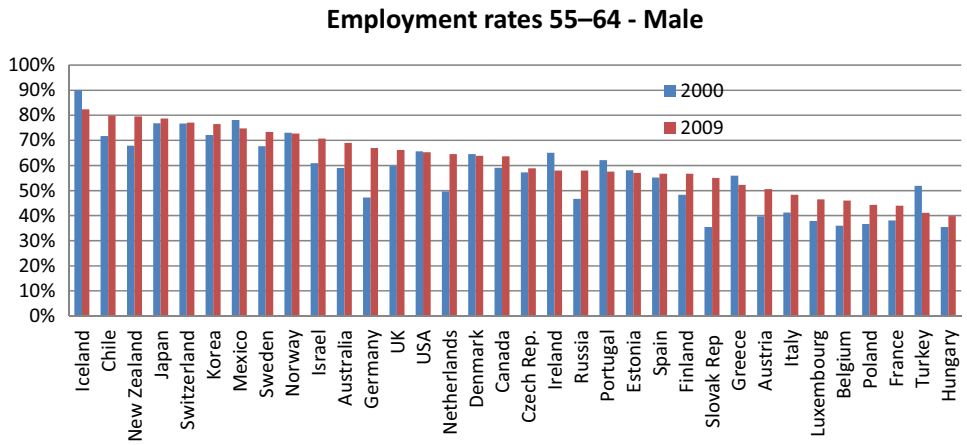

Figure 1 Employment rate for males, in the age group 55–64 years, during 2000 and 2009.

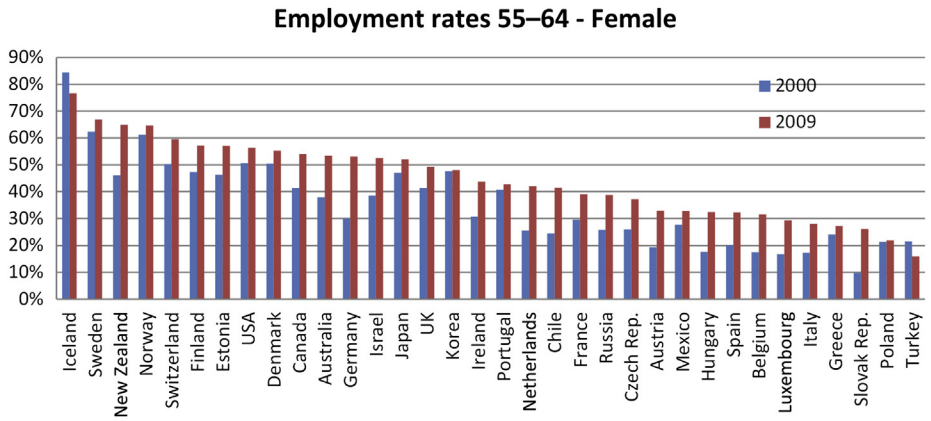

Figure 2 Employment rate for females, in the age group 55–64 years, during 2000 and 2009.

in 2000 and 2009. For males in 2009, some countries had employment rates of older workers close to 80%, whereas in other countries it was less than half as large (Hungary, Turkey, France, and Poland). Still, most countries improved in comparison to 2000. This positive trend seems to have stopped since 2009 (Zaidi and Zolyomi, 2012, Figure 6) as an effect of the global economic crisis since the fall of 2008. The trends for an earlier period (1998-2005) also show rising trends of employment among older workers (see Zaidi et al., 2007 for more discussion).

For older females, Iceland, Sweden, New Zealand, and Norway show employment rates in excess of 60%, and Switzerland, Finland, Estonia, and the United States lag only slightly behind (around 60%). At the other end of the spectrum, Turkey (16%) and Poland (22%) performed worst in 2009. In comparison to the trends for males, the improvement in the employment rate for female older workers is larger and observed in more countries. Still, the employment rate of older females remains quite low in many countries.

The Netherlands, Germany, and Finland are examples of countries where the employment rates among older workers have risen considerably because of specific policy measures. In the Netherlands, three public policy drivers are viewed to be responsible for these trends (Euwals et al., 2009): (1) Elimination of financial disincentives to delay retirement and make the pension system actuarially fair; (2) Measures to keep (older) people with reduced work capacity in the labor market instead of granting them permanent invalidity benefits; and (3) Other relevant policy measures such as stricter job search requirement for unemployed older workers.

In Germany, two partial retirement schemes (the partial retirement (Altersteilzeit) and the partial pension (Teilrente)) aim to provide a gradual transition from working life to retirement. Employees can claim a partial retirement if they have reached age 55 and wish to reduce their working time to half of the collectively agreed hours and if the employer agrees. Until 2010, the employer could receive subsidies to cover the costs if the part-time job is filled with a previously unemployed person. The partial pension can be 33, 60, or 67% of the full pension, but take-up of this pension is much lower than that of partial retirement.

In Finland, the 2005 reform of the earnings-related pension system introduced flexibility regarding the time of retirement between the ages 63 and 68 years. Within this age range, incentives to delay in retirement are given by higher accrual rates. From age 18 to 63 years a pension right of 1.5–1.9% of the pensionable wage is acquired each year. From age 63 until age 68, it is possible to receive an old age pension, but the

accumulation rate increases to 4.5% annually, creating a strong incentive to remain at work. If the old age pension is further deferred after age of 68 years then the amount is increased by 0.4% per month. These incentives had a strong impact, increasing the effective age of retirement.

Figure 3 (males) and 4 (females) show how the ratio of employment rates of older (aged 55–64 years) and prime-age (aged 35–44 years) workers have changed between 2000 and 2009. They show that in most countries the relative position of older workers compared to younger workers (both males and females) has improved. An exception is Turkey, where the employment situation among older female workers has deteriorated between 2000 and 2009. For Turkish males, there is also a decline in the relative position of older workers, but much less stark than for females.

The reforms across European countries are characterized by two broad types of policy measures:

1. Promotion of employment of older people, through financial incentives for work in the pension and old-age social security systems and through phasing out early retirement schemes, and by raising retirement ages or abolishing the mandatory retirement age; and
2. Improvement of conditions for the recruitment, retention, and productivity of older workers. This involves age management policies at the company level; public measures for the improvement and modification of qualifications and competences; reductions in labor costs of employment of older workers, and active labor market programs.

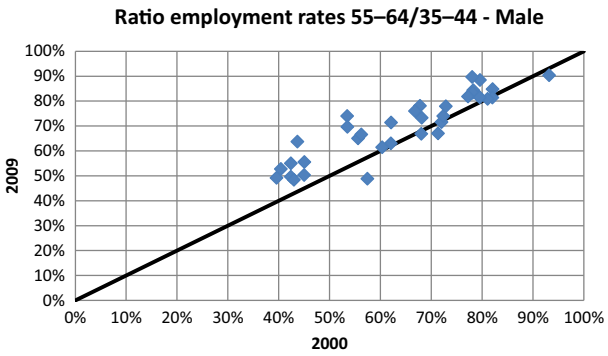

Figure 3 Ratio of employment rates for older workers (55–64) and younger workers (35–44), for males, during 2000 and 2009.

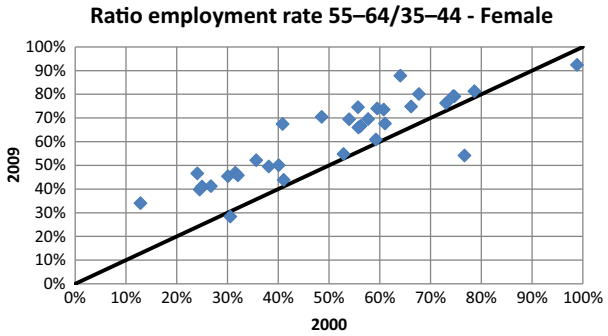

Figure 4 Ratio of employment rates for older workers (55–64) and younger workers (35–44), for females, during 2000 and 2009.

Many countries have successfully implemented the first type of policy measures during the late 1990s and early 2000s, and have now embarked on complementing them with the second type (European Commission, 2012). A good example is Poland, which after successful pension reforms, has now prepared a comprehensive program ('Solidarity across generations. Measures aiming at increasing the economic activity of people over 50') to achieve the Lisbon employment rate target of 50% for the age group of 55–64 years by 2020.

Labor Supply of Older Workers

At least three supply explanations for the large variation in retirement patterns across countries have been given (Kapteyn and Andreyeva, 2008). The first is financial incentives, emphasized by a group of researchers performing country-specific studies using a harmonized methodology (Gruber and Wise, 2004), evaluating the link between old-age social security programs and national retirement patterns. These studies consider the substitution effect as the dominant factor in shaping individual choices in the income–leisure trade-off: a higher reward for working longer raises the price of leisure around the retirement age, and therefore reduces the demand for leisure and increases labor supply. They emphasize that in many systems, retirement benefits did not increase with delaying retirement, so that the implicit tax on continued work was often 100%.

To illustrate: Gruber and Wise (2004) summarize their results of a hypothetical pension reforms in 12 countries, based upon a common model. The reform (named *Three-Year Delay*) shifts all pension entitlements by 3 years (if the actual entitlement at age X is Y, the simulation assigns entitlement Y to age X+3). They compute by how much the percentage out of labor force changes for a country-specific age group around retirement (the first age at which at least 25% of the workforce is out of the labor force plus the next 4 years). The results show that retirement behavior is sensitive to financial incentives: in 11 of the 12 countries, nonparticipation in the age group considered falls by more than 40% if pension entitlements are shifted by 3 years. Many other empirical studies have confirmed the sensitivity of retirement for financial incentives, with empirical strategies varying from reduced form difference-in-differences approaches to sophisticated structural dynamic programming models (e.g., French and Jones, 2011).

Another explanations for cross-country differences and particularly the gap between the United States and many European countries are based upon the larger extent to which home production can be substituted with services available in the labor market (Freeman and Schettkat, 2001), differences in personal preferences or culture (Blanchard, 2004), or the power of unions (Alesina et al., 2006).

A discussion of retirement patterns also has to consider the role of health. Failing health may lead to retirement (Kalwij

and Vermeulen, 2008). Retirement status may also have a (positive or negative) influence on health: it can remove mental stress and physical work effort, but may also be a life event that creates stress and reduces health. Existing studies often find a negative effect of retirement on, in particular, cognitive functioning, as a result of living less stimulating lives in retirement compared to working lives (Rohwedder and Willis 2010; Bonsang et al., 2012). An economic framework for studying the relation between health and retirement is the Grossman model (Grossman, 1972) in which individuals derive utility from consumption and health, and health also influences earnings. Galama et al. (2013) introduce variants of the basic Grossman model that include a retirement decision. Here individuals with lower human capital have fewer resources to invest in health so that their health deteriorates faster, implying that health will be positively associated with income and education. A higher earnings capacity also induces people to work longer, as observed in many studies. Yet, at the same time improvements in health over time have an income effect that reduces work effort and hence explains trends in early retirement.

The Demand for Older Workers: Productivity, Wages, and Substitution

Of the models that predict the demand for older workers from the firm's perspective, the best known is Lazear's 'delayed compensation contracts' model (Lazear, 1979). Lazear argues that a work contract where the worker is paid less than the value of the marginal product at younger ages, and more at later ages, has advantages for both workers and employers. For workers, this type of contract will increase lifetime wealth. Employers, although forced to bear the higher fixed costs associated with delayed compensation, gain from improvements in performance and stronger employee commitment induced by the workers' fear of losing delayed compensation. Mandatory retirement is required as a way of terminating the contractual work, as the worker would not voluntarily retire due to the high wage. In this model, firms avoid hiring older workers, as this will reduce the possible benefits of delayed compensation.

Skirbekk (2003) summarizes earlier studies relating age to productivity, finding evidence of a decline in several aspects of physical and mental functioning from around age of 50 years. On the other hand, other studies argue that older workers often rely on their professional experience to adapt and compensate for the decline in physical and mental ability and find no significant difference between the job performance of older and younger workers. Recent studies using matched employer–employee data suggest that individual productivity declines with age in some dimensions, but the decline can be partly compensated by experience, personal aids, and suitable workplace adjustments (Crépon and Aubert, 2003). In a study for Belgium, Lallemand and Rycx (2009) find that, particularly in ICT firms, young workers are significantly more productive than older workers, although age effects on productivity have substantially decreased over time. Empirically, higher wages for 55- to 64-year-old individuals relative to 25- to 29-year-old individuals are negatively correlated with activity rates at the age of 55–64 in the case of both men and women (OECD, 2006), in line with the firm's disincentive to employ older workers if productivity rises less with age than wage costs.

In view of the current context of high youth unemployment in many European countries, it is important to dispel the myth that a longer working career would imply less employment opportunities for younger people. The idea that the old should make place for the young is based on the incorrect notion that the total number of jobs is fixed (the 'lump-of-labor' fallacy). The same argument was used in the past to discourage women from joining the workforce and to motivate anti-immigrant policies. The lump-of-labor fallacy seems to pop up over and over again in the policy debate and becomes a serious concern for the intergenerational conflict. Evidence against it comes from the stylized facts that the high-employment rate among older workers (55–64) is typically positively associated with the high employment among youth (15–24). If the lump-of-labor arguments were correct, the opposite would be expected. Readers are referred to Kapteyn et al. (2004) for more rigorous empirical research supporting this line of argument.

The skills offered by older people are very often distinct and cannot always be substituted by those of younger workers. For instance, patients tend to prefer older physicians and older retail assistants often are more knowledgeable and patient. Earlier retirement, therefore, will probably not generate more jobs for young entrants. Instead, using the full potential of older workers and reaping the benefits of the demographic shifts in the demand for products and services will create more jobs both for the old and the young (Zaidi, 2012).

Employer Attitudes, Age Discrimination and Regulation

A special Eurobarometer survey (European Commission, 2007) shows that almost half of the population feels that age is, together with the onset of a disability, one of the most important criteria that might put a job candidate at a disadvantage when competing against someone with the same qualifications: 78% of respondents feel that a person aged 50-plus is less likely than a younger person to get a job, accepted for training, or promoted.

In a survey of 500 large employers in the UK, Taylor and Walker (1994) show that many had negative stereotypes of older workers, especially with regard to their openness to training and ability to adapt to new technologies. Laboratory and field experiments confirm that employers discriminate against older applicants (Riach and Rich, 2002). More recent studies show mixed results. For example, McNair et al. (2007) found that age stereotypes and attitudes tend to favor older workers in general (emphasizing more skills, life experience, reliability, loyalty, etc.) though negative views also exist (e.g., lack of willingness to adopt new work methods). Ilmarinen (2006) emphasizes the need to change toward a work culture that is better suited for workers of all ages, involving employers and employees as well as society. Van Dalen et al. (2009) analyze employer attitudes and actions in Greece, Spain, the Netherlands, and the UK and find that only in the UK, older workers are recognized as a valuable source of labor

supply. Vickerstaff (2010) summarizes the literature on this topic and concludes that most organizations have no specific strategies for age management and that the business case for a well diversified age composition of the workforce is extremely fragile, particularly during recession. Karpinska et al. (2013) find that Dutch managers generally do not find it important to keep older workers until the mandatory retirement age.

Cheron et al. (2011) extend the standard model of equilibrium unemployment with an explicit role of age. They argue that a standard retirement age explains the lower employment rate among the older population: it reduces the willingness of firms to recruit older workers, as expected returns will be lower. Moreover, the shorter expected job duration reduces the tendency of older workers to invest in job search. They conclude that existing policies in many countries present strong perverse effects on employment and social welfare.

There are several empirical studies on the impact of employment protection legislation. Bassanini and Duval (2006), using data from 21 OECD countries for 1982–2003, find a positive relation between employment protection legislation and the employment rate of workers aged 55 to 64. OECD (2004) finds that the negative relation between employment protection and the hiring rate of men aged 50 and over is compensated by a decrease in firings.

On-The-Job Training

Jacobs (2010) shows how to systematically analyze the interactions between human capital investments in on-the-job training (OJT), retirement choices and pension saving. The model adds an endogenous retirement decision to the standard life-cycle model of OJT investment and human capital formation. By extending the time-horizon over which investments in skills materialize, a higher retirement age promotes investments in OJT. Later retirement and OJT investment are therefore complementary and generous early retirement schemes therefore indirectly discourage investment in human capital. The intuition is that the opportunity return at which future labor earnings are discounted increases with the retirement age and human and financial capital are substitutes over the life cycle. This analysis implies that promoting lifelong learning or later retirement will not be effective as long as strong disincentives caused by labor market institutions, early retirement schemes and incentives for pension savings remain in place. Moreover, promoting private pension savings may inadvertently create implicit taxes on skill formation and indirectly stimulate early retirement, thereby worsening the aging problems.

Empirical work analyzing OJT of older workers is scarce. A major empirical problem is that investment in OJT is very difficult to measure. According to Heckman (2000) most training is informal rather than formal, limiting the applicability of commonly employed training measures, which are often based on subjective data (from firms or employees), on formal OJT investment. Moreover, firms and employees have different views on the participation intensity of training (Leuven, 2005). Not only the costs (i.e., the OJT investment), but also the returns (future wages) are difficult to measure, because earnings are not equal to labor productivity even if labor markets are perfectly competitive (since time investment in OJT drives a wedge between gross labor productivity and gross earnings).

Policy-Related Research Questions

Some major policy relevant research questions concerning old-age work participation in OECD countries are the following:

Which Economic and Noneconomic Factors Drive labor Supply of Older Workers?

Studies on the consequences of introducing and abolishing generous early retirement arrangements in many countries have shown that retirement decisions are sensitive to financial incentives. The quantitative importance of other factors (health, job characteristics, family considerations, peer group effects, etc.) is less clear.

What Are the Advantages and Disadvantages of Gradual Retirement?

Gradual retirement, in the form of either phased retirement reducing hours in the career job, a less-demanding bridge job, or self-employment, is more common in the United States than in Europe. It potentially offers an opportunity to keep people attached longer to the labor market.

What Are the Consequences of Working Longer for Well-Being in Old Age?

It seems clear that working longer may reduce old age poverty if it also leads to higher pensions, but studies on the consequences for health and cognitive skills seem inconclusive.

How can Negative Employer Attitudes toward Older Workers Be Eliminated?

Negative stereotypes and prejudice against older workers are diminishing but are still strongly embedded in society. Positive employer attitudes are often not translated into actions. How effective are legislation against age discrimination and public campaigns promoting a more positive view of older workers?

How Can Lifelong Learning be Promoted?

The effectiveness of investment in skills of older workers depends on how long these workers remain employed, leading to important relations between human capital investment, productivity, retirement saving, and early retirement arrangements.

What Is the Relation between Labor Market Flexibility and the Position of Older Workers?

Compared to the United States, European labor markets are characterized by larger employment protection, less job mobility, longer durations in jobs, and lower hiring rates of older workers. Would removing institutional restrictions and increasing flexibility improve their position?

Does the Economic Crisis Affect the Relevance of Existing Policy Recommendations?

The increasing unemployment rates (among young workers in particular) should not reduce the political pressure on increasing participation of older workers. It is important to dispel the myth of work sharing that early retirement would generate employment for younger workers.

Conclusions

All in all, we know more about labor supply of older workers than about their demand and productivity. Financial incentives matter for retirement decisions, though other, noneconomic factors like job satisfaction, health, working conditions, and attitudes of employers and coworkers also can have important effects. Still, more work is needed on, e.g., joint retirement decisions of husbands and wives, gradual retirement, substitution between exit routes, the interplay between economic and noneconomic factors, etc. Cross-country analysis exploiting the institutional variation seems particularly fruitful. Recent pension reforms in many countries give room for applying quasiexperimental approaches and improved identification of causal effects.

More research challenges remain concerning employer attitudes and labor demand. Good microdata are quite scarce here and the heterogeneous nature of jobs and firms increases the difficulty of this task. Qualitative research using cross-country comparisons suggests that a "coordinated and comprehensive package of age friendly employment measures and policies" leads to the best results (Sigg, 2007), but much more work is necessary to determine what characterizes optimal age management. In particular, the interplay between economic and noneconomic is poorly understood.

Older workers must be attractive to employers, because of their skills, productivity, and wage costs. Attitudes of employers toward older workers vary across countries and have to change in some countries. Subsidies for investing in older workers may help; the effects of employment protection and other features of labor market flexibility and opportunities for self-employment after a career job need to be better understood. Job characteristics, the organization of work, accommodation of workers with a disability and the recognition of the comparative advantages of older workers can contribute to increasing productivity and participation of older workers. In future research, the variation across countries in institutions and institutional reforms can be better exploited to improve our understanding of the mechanisms at work.

See also: Adult Education and Lifelong Learning: The US Experience and Beyond; Aging and the Labor Market; Family and Work; Happiness and Work; Welfare Reform; Welfare and Work.

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