Chapter 11
Labour Mobility and Retirement

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11.1 Work Life Histories

Public and private pensions represent the main income source of Europeans in their old age. Pension provisions depend on workers' career: workers retiring under the same pension regime might receive very different pension benefits depending on the time pattern of employment and unemployment spells, on the magnitude and the timing of income shocks and, more generally, on the age-profile of earnings (Boeri and Brugiavini 2009). Individuals are often induced to retire early, but inadequate contributions due to a short work history may reduce household's welfare later in life (Angelini et al. 2009). Previous work has shown great variability in the patterns of transition from work to retirement (Peracchi and Welch 1994; Brugiavini and Peracchi 2005; Brugiavini et al. 2008), yet little is known about how the working history of individuals affects their resources in retirement. This would require panel data where workers are followed over a long period of time. Long panels, however, are hardly available and would be subject to serious problems of attrition and non-response. A simple alternative are cross-sectional data or short panels with a retrospective component, such as SHARE. The SHARELIFE component of this survey provides information on the history of past employment and allows accounting for periods of unemployment during the working life. In this paper we relate incidence and duration of unemployment, as well as tenure in a job, to the replacement rate at retirement. The international comparability of the data provides insights on the effect of labour market institutions and regulation on workers' mobility, and on the insurance properties of social security against earnings risks.

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The rest of the paper is organized as follows. Section 11.2 documents the patterns of jobs turnover across European countries. The data show marked differences between Northern and Southern Europe: in Denmark, at one end of the spectrum, the average worker changes six jobs in his working life, in Greece, at the other end of the spectrum, only once. The same number of transitions between jobs during a working life may result in very different contribution histories, depending on the tenure at each job and the duration of unemployment spells between jobs. Therefore, Sect. 11.3 reviews duration data and, again, provides evidence of a North–South gradient. Job tenure and mobility feed back into replacement rates, which are investigated in Sect. 11.4. The data reveal smaller cross-country differences in replacement rates, suggesting that the design of social security systems may in fact contribute to attenuate the effect of different career patterns on retirement benefits. Section 11.5 concludes.

11.2   Job Turnover

In this section we document the wide variability in working histories of European workers. We start by looking at the number of jobs that individuals held in their life. Figure 11.1a, b is based on the entire sample and show that women tend to have a lower number of jobs, particularly in Poland and in Southern countries such as Italy, Spain, and Greece. The German sample is split into those who in 1989 were living in East Germany (DE-E) and those who were in West Germany (DE-W). Irrespective of gender, younger cohorts have a higher number of jobs, indicating that mobility between jobs is more common for the younger old. Note that some of the younger old are still working, so that our data may effectively underestimate the degree of labour mobility The gender gap is smaller in Northern than in Southern countries, where female participation is lower. Differences across cohorts are also smaller in Northern countries. The overall picture is one of greater job turnover in Northern countries, where the differences between genders and across cohorts are generally smaller. Depending on the social security system and the pension legislation, higher mobility may be associated with "losses" in terms of pension and social security benefits, for example if pension rights are not fully portable or if changes are associated with long unemployment spells. It should be stressed that mobility per se does not necessarily have a negative effect on pensions, as for example workers may go from a low-pay job to a high-pay job hence increasing their pension levels. It is the existence of distortions in the pension rules (such as lack of portability) which might create these losses in association with mobility (Gustman and Steinmeier 1993).

Moreover, even when pension benefits are fully portable, pension income may vary depending on whether job turnover is associated to job-to-job transition or to transition from job to long unemployment spells. Therefore, in Fig. 11.2a, b we graph the average number of job changes which resulted in at least 6 months out of employment, again grouping the data by gender and year of birth. The data show

(a)

(b)
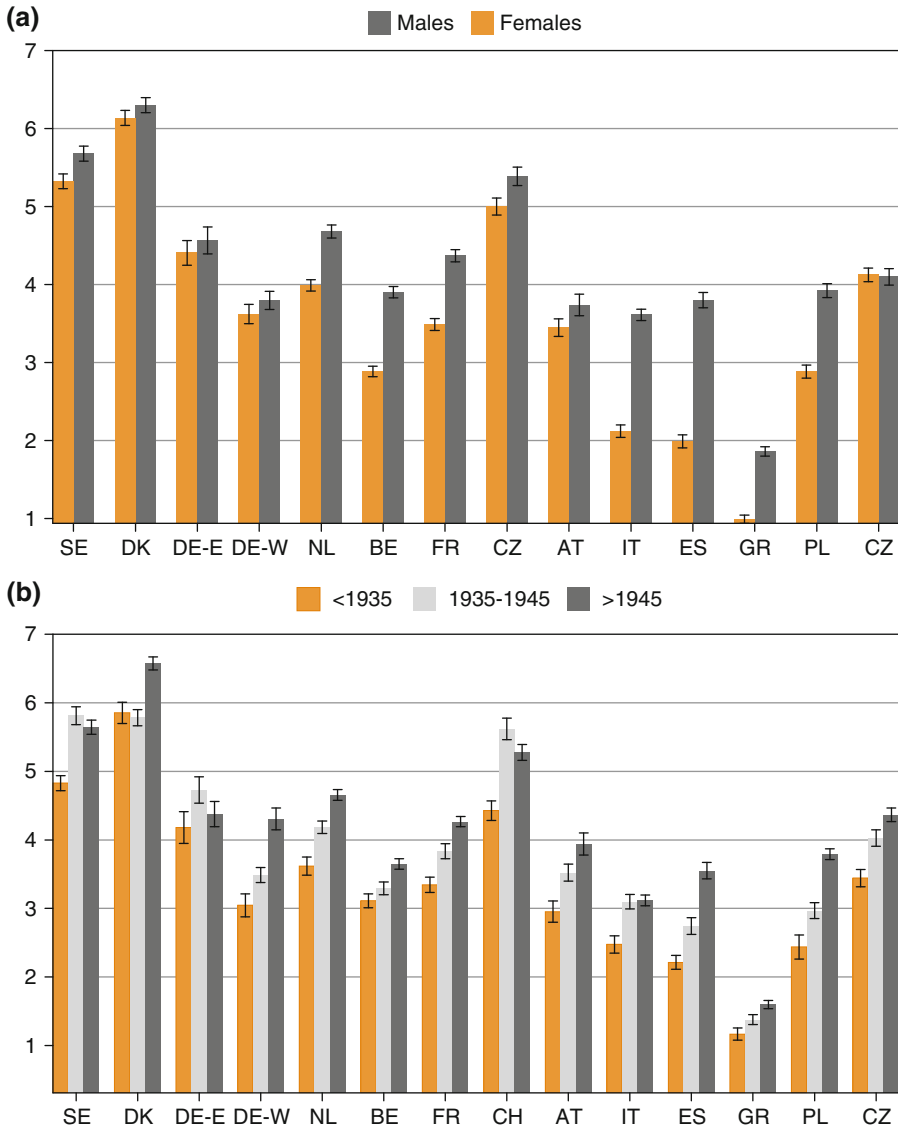
Fig. 11.1 (**a**) Average number of jobs per individual, by gender. (**b**) Average number of jobs per individual, by cohort

differences between countries with Northern countries and East Germany now scoring a higher number of job-to-unemployment transitions compared to Southern European countries. This is particularly true among women, and as a consequence gender differences are wider in Scandinavian rather than Southern countries. Figure 11.2a, b also indicate that most of the job changes during the life span are job-to-job transitions, which are unlikely to imply losses in terms of pension

(a)

(b)
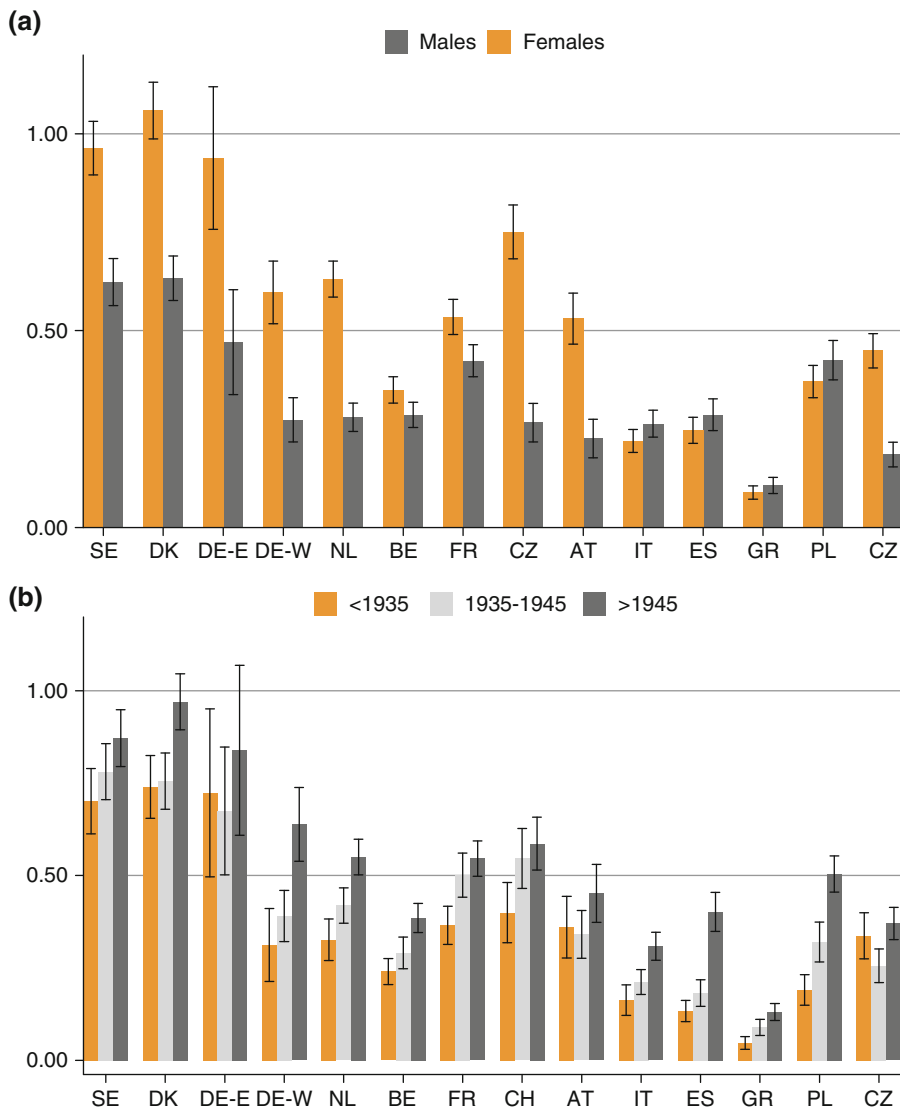
Fig. 11.2 (**a**) Average number of job changes per individual which entailed 6 months or more out of employment, by gender. (**b**) Average number of job changes per individual which entailed 6 months or more out of employment, by cohort

benefits: the average number of changes which involved at least 6 months out of employment is much lower than the average number of jobs per individual.

In terms of gender differences, European countries can be split into two groups. In the first group (Sweden, Denmark, East and West Germany, the Netherlands, Switzerland, Austria and the Czech Republic) women have approximately twice the

number of job changes than men, which suggests that women experience many transitions out-of-the-labour-market. In the remaining countries (Italy, Spain, Greece, France, Belgium and Poland) gender differences are smaller. This does not necessarily indicate that labour market conditions for women are better: it is quite likely that in these countries women experience fewer employment episodes, and thus fewer transitions from one job to another. Differences across cohorts are almost not significant in Sweden, while for Spain, at the other end of the spectrum, the average number of job changes which involved more than 6 months out of employment is twice as large for the youngest old, as shown in Fig. 11.2b. Furthermore, differences across cohorts are larger in Fig. 11.2b than in Fig. 11.1b, probably due to changes in the employment protection legislation across cohorts depending on the time of entry to the job market.

Working histories might be similar in terms of job turnover, but very different when it comes to their effects on replacement rates. This depends on the portability of benefits between jobs, but also on average job tenure and the duration of unemployment spells between jobs. We therefore devote the next section to document how job tenure and unemployment duration vary across European countries.

11.3 Employment and Unemployment Duration

The SHARELIFE survey allows us to measure the length of time spent in each specific labour market state, i.e. the duration of the different spells of employment and unemployment. Being more specific, the respondent is asked to report each employment and unemployment episode lasting 6 months or more. Short employment and unemployment episodes are therefore excluded from our analysis.

Table 11.1 describes the distribution of duration of employment spells lasting at least 6 months. Therefore, the sample includes all the employments spells of any

Table 11.1 Percentage distribution of employment duration by country

|	Duration in years			Number of observations
	0–24	25–34	35+	
SE	90.78%	5.07%	4.15%	6,898
DK	93.90%	3.89%	2.21%	8,669
DE-E	89.71%	5.73%	4.56%	1,030
DE-W	84.82%	7.86%	7.32%	2,213
NL	91.34%	5.15%	3.51%	6,353
BE	83.18%	9.56%	7.26%	5,994
FR	87.02%	7.96%	5.03%	6,146
CH	92.74%	4.03%	3.24%	4,420
AT	81.70%	10.40%	7.90%	2,481
IT	80.52%	11.51%	7.97%	4,441
ES	80.16%	8.48%	11.36%	3,608
GR	55.47%	18.59%	25.94%	2,340
PL	81.21%	11.31%	7.48%	4,093
CZ	77.39%	9.62%	12.98%	4,052
Total				62,738

individual who reported to have worked at least once in his/her life. The distribution is left skewed for all countries, with marked differences across countries: Denmark displays the highest degree of left-skewness, while for Greece the distribution is relatively flat. Jobs at different points in a working life are likely to have different tenures, due to search for a good match at the beginning of the career and job-specific skill acquisition later in life. Since we can observe duration and timing of employment spells over the life cycle, we can study the distribution of employment spell changes between jobs, and in particular between the first job and the last job. The results, which we do not show for brevity, reveal interesting patterns: the distribution of employment duration for the last job is quite even across all European countries. This is perhaps not surprising, if the cost of searching for a good match increases with age at a similar rate across European countries.

It is worth noticing that the fraction of people reporting extremely long employment spells is somewhat higher than expected: 6.64% of the overall sample of spells lasts 35 years or more, 3.25% more than 40 years, and 1.21% lasts more than 45 years. This does not seem to be driven by employment duration of civil servants, which is likely to be on average longer than employment duration of private sector employees: the same table obtained excluding civil servants exhibit the same long right tail. Even after dropping spells longer than 45 years, as they are likely to be outliers, the distribution might give more weight to longer spells than expected, for three reasons: first, since we are dealing with older workers it is common to start working at very young ages and hence it is likely that these generations had long spells. Second as already explained spells shorter than 6 months are not considered, thus reducing the probability mass on the left tail. Third, interviewers were asked to instruct respondents to count short-term jobs which are similar, even if working for different employers, as a single spell and not record changes of job for the same employer as different spells.

Figure 11.3 shows the average duration of long unemployment spells in years. In all countries (except Czech Republic), women experience longer unemployment spells. Looking at the average duration of unemployment spells can however hide important differences between workers, beyond those simply captured by gender.

11.4 Replacement Rates

Depending on the pension regime a person faces at different stages of her life, the sequence of jobs in her work history could be more relevant or less relevant for her pension benefits entitlements and therefore for her replacement rate. In this section, we compute the replacement rate as the ratio of the first benefits received over the last wage in the main job for those respondents who indicate as their main job the one that ended with a transition into retirement. Note that in this way we neglect those who had a secondary job in the last years before retirement, those who chose other pathways to retirement (for example through disability), and those who experienced a long period out of employment before retirement, e.g. women who
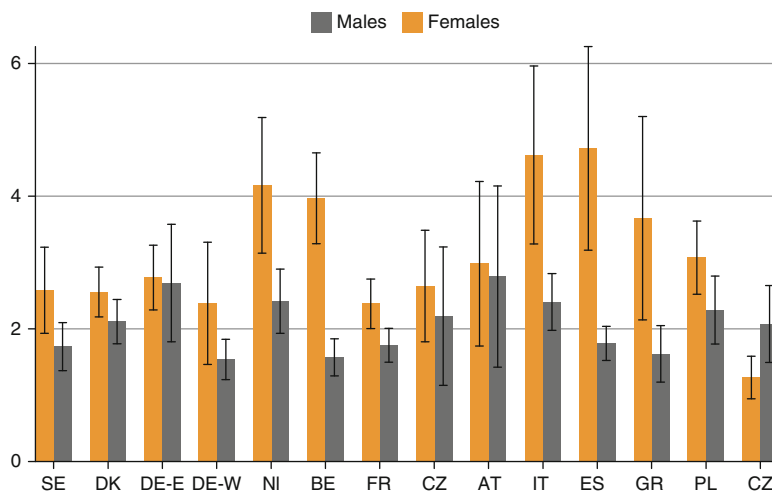
Fig. 11.3 Average number of years spent in unemployment conditional on having been unemployed

leave their job to take care of home and family. We also drop the self-employed and focus only on private and public sector employees: rules concerning benefit calculation are quite different for the employees and the self-employed, and for the latter it is often problematic to relate replacement rates to work histories.

Figure 11.4a shows the average replacement rate (the average of individual replacement rates). For most countries it ranges between 0.70 and 0.80, with Austria, Belgium and Spain featuring a lower rate, and East Germany and Greece a slightly higher rate. In Figs. 11.4b, c the observations are grouped by gender and year of birth. Changes in institutional arrangements which affect the generosity of the pension system may in principle lead to gender and cohort differences within countries. We find that these differences are not statistically significant.

Given the large heterogeneity of replacement rates across countries, it is important to understand to what extent the observed differences correlate with differences in number and duration of employment and unemployment spells.

Figure 11.5a, b show the relation between the replacement rate and the number and duration of employment spells respectively. The straight line is the regression line fitted to the data. Because East Germany and Greece appear as outliers, we include them in the scatter plot but not in the fitted regression lines. Figure 11.5a reveals a positive relation between the number of employment spells and the replacement rate. This may be due to the fact that, as we have already shown, most of the job changes are job-to-job transitions. Therefore, a higher number of employment spells may signal a faster career and a higher contribution accrual, rather than a difficulty in retaining a job. By the same token, a longer tenure does not have any statistically significant effect on replacement rates (see Fig. 11.5b): as long as most of the job changes are job-to-job movements, there is no reason to expect the average duration of an employment spell to matter in terms of pension rights.
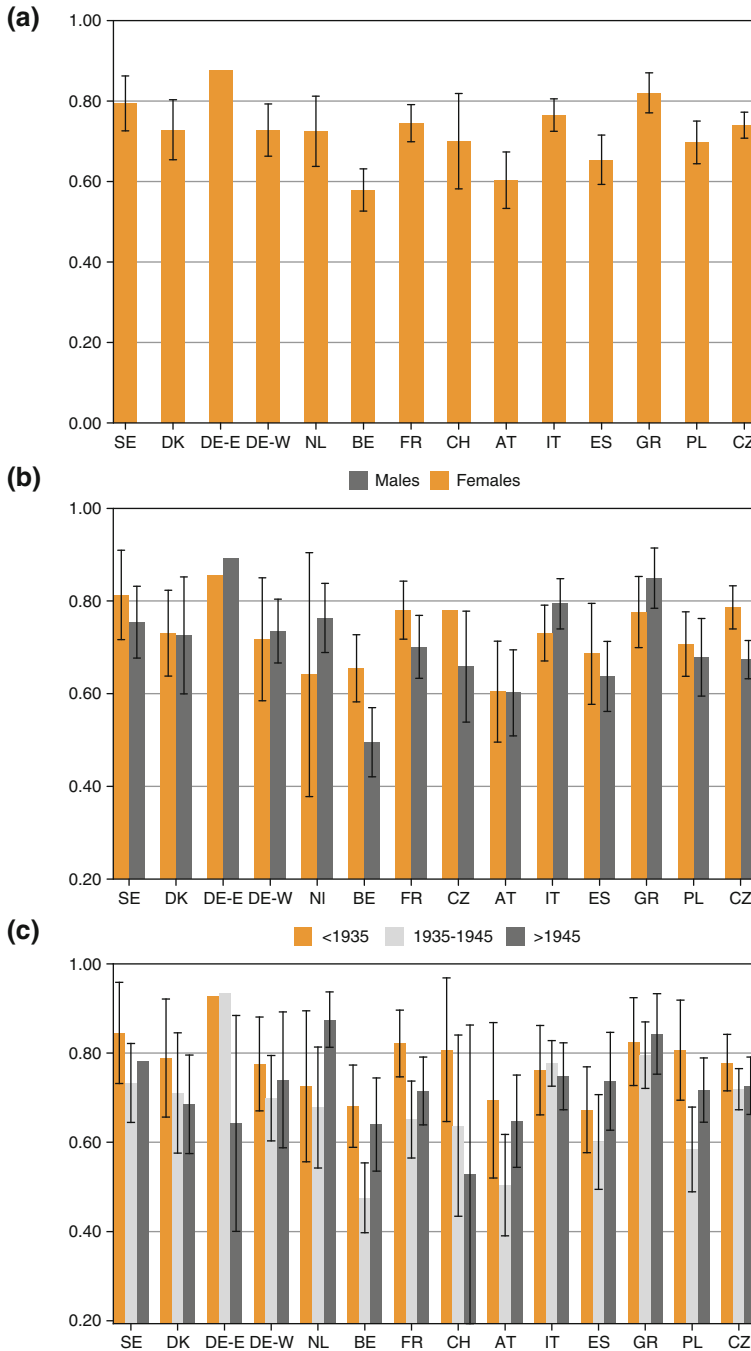
Fig. 11.4 (**a**) Replacement rate by country. (**b**) Replacement rate by gender. (**c**) Replacement rate by cohort
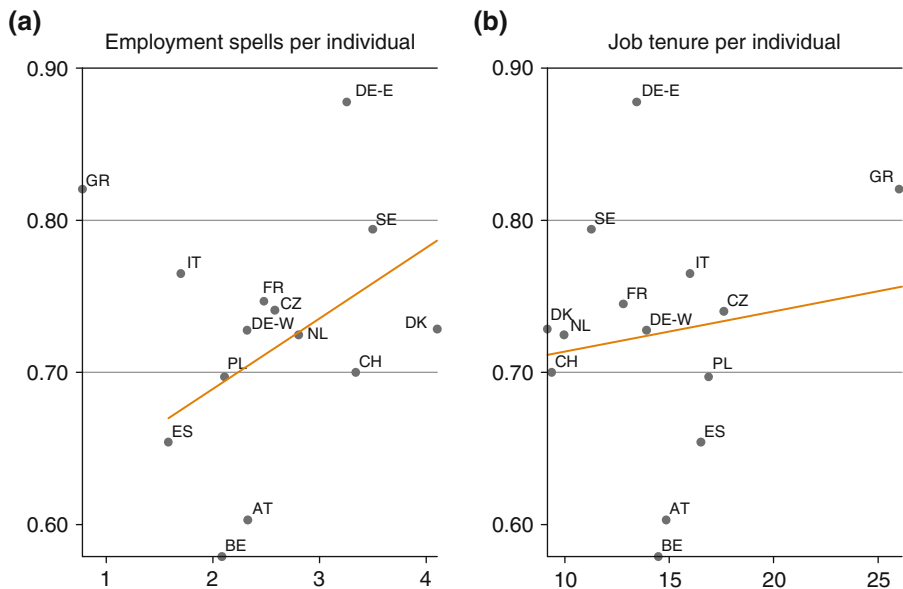
(a)

Employment spells per individual

(b)

Job tenure per individual

Fig. 11.5 Replacement rate and number and duration of long employment spells

(a)

Unemployment spells per individual

(b)

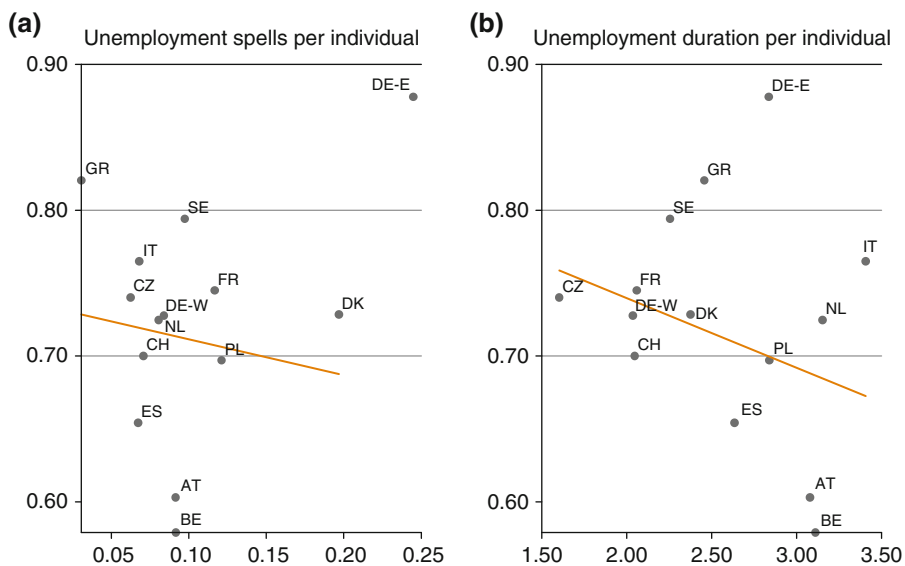Unemployment duration per individual

Fig. 11.6 Replacement rate and number and duration of long unemployment spells

Figures 11.6a, b show the scatter plots of the average number and the average duration of long unemployment spells by country against the average replacement rate. Although we include the observation for East Germany in the scatter plot, we exclude this country from the regression line, because its high average number of
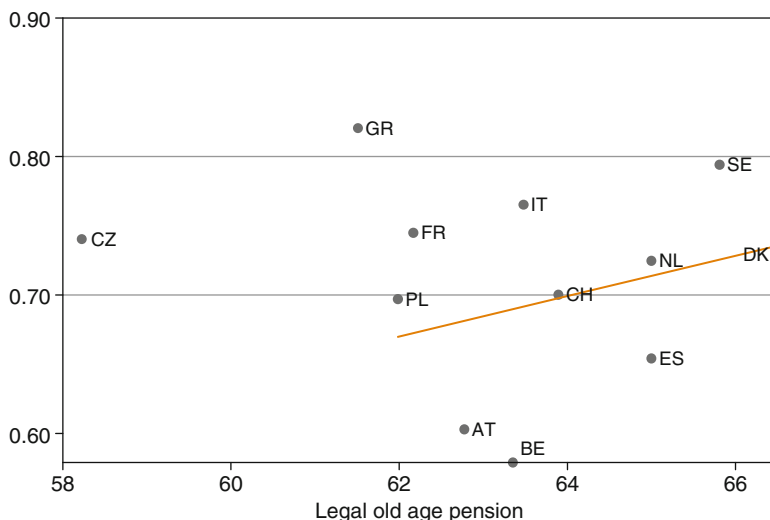
Fig. 11.7 Replacement rate and legal old age pension at the moment of retirement

unemployment spells may just be due to the very small sample size. The figures reveal a clear negative relationship between the replacement rate and the number as well as the duration of long unemployment spells. Countries characterized by work history with many and long unemployment spells tend to exhibit lower replacement rates.

Finally, Fig. 11.7 relates the actual average replacement rate of each country with the average legal retirement age prevailing at the time of retirement in the sample. Once again we exclude Greece and the Czech Republic from the regression line because the institutional data about the past legal retirement age and also about the actual replacement rate show some inconsistencies. The legal retirement age for old age pension is the country-average of the legal retirement age for each individual at the time of her retirement, which is meant to emphasize the role of institutions through the "exogenous" legal retirement age. The positive association between the actual replacement rate and the legal retirement age suggests that in those countries where people are induced to work longer (higher retirement age) they also achieve higher replacement rates. This result might be due to both a "formula" effect, i.e. it might depend directly on the way the length of the career enters the benefit calculation and a "filling" effect, i.e. individuals who have the opportunity to work longer may fill the contributions gaps due to unemployment spells.

11.5 Conclusions

The patterns of job mobility vary greatly across European countries. The number of jobs held during a career by the average worker is much higher in Northern than in Southern countries. The available evidence points into the same direction: labour

markets in Southern countries are much less mobile than in Northern countries. However, cross-country differences in job mobility do not translate into corresponding cross-country differences in replacement rates. On the other hand, pension entitlements appear to be very sensitive to the number and duration of unemployment spells in the workers' careers.

Our results suggest that labour mobility, if anything, positively affects the replacement rate, and that institutions which help keep unemployment spells short, for example through active labour market policies, also reduce differences between less and more mobile workers. Therefore, the current tendency to de-regulate European labour markets is not necessarily detrimental for income after retirement, provided it is tempered by policies designed to limit long-term unemployment.

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