Assessing Old-age Pension Benefits: The Rules Applied in Different Countries

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A fundamental set of institutional rules that governs the current stance and future course of public pension finances relates to the assessment of individual pension benefits accruing as regular old-age pensions. Other entitlements, e.g. for disability pensions and survivor benefits, are often derived from these standard procedures. The following survey may thus provide useful materials for comparing important features of pension systems across countries or investigating their financial viability through in-depth analyses. It covers qualifying conditions and pension formulae in the countries of the former EU-15, plus Switzerland and the US. In addition, special rules applying to early retirement, the treatment of spells of unemployment and child-rearing, as well as the indexation of benefits are included in the survey. Unless otherwise stated, the legal framework taken into consideration is that of 2002.[1]

Qualifying conditions, statutory retirement age and early retirement

Entitlements to receive old-age pensions are usually tied to fulfilling certain qualifying conditions, notably having worked or having paid contributions for some minimum time span. In countries with universal pension schemes that are meant to provide some basic amount of pension benefits to the entire population, similar rules exist regarding the period of residence. Longer periods of labour force participation, in which contributions are being paid, or longer periods of stay are required for entitlements to receive a "full" amount of ben-

efits based on the standard pension formula, i.e., earnings-related benefits without any reduction or a maximum basic amount. Once, these qualifying conditions are met, withdrawing benefits is usually possible starting from a specified age, the statutory retirement age. Earlier receipt of old-age pensions is often possible, but may be subject to reductions of annual benefits that go beyond the pure effect of shorter work biographies. Table 1 summarises the main qualifying conditions for public pension schemes operated in the countries covered here.

The figure shows the statutory retirement age for both males and females and compares it with the effective age at withdrawal from the labour market observed in the same set of countries. In some countries, there is no statutory retirement age in the strict sense of the word; there – e.g., in the US – we use information regarding the age threshold from which old-age pensions can be received without any reduction due to early retirement. Changes in statutory retirement ages are under way, or are already scheduled for a more remote future, in several cases. For instance, in the US the threshold embodied in social security legislation is currently being increased and will reach 67 for males as well as females in 2027. In Denmark, on the other hand, the statutory retirement age is being reduced from 67 to 65 for both sexes starting from 2004. Lower thresholds applying to women are, or will be, abolished in Austria (between 2024 and 2033), Belgium (in 2009), Germany (until 2005), Greece (for those entering insurance 1993 or later), the UK (between 2010 and 2020); in Switzerland, the threshold for women will be increased to age 64 in 2005.

Building on the current legislation, the statutory, or legally-defined, retirement age is thus basically 65 throughout the countries considered here at some point in time in the future. The main exceptions are the US and France, where it will continue to be at age 60 for males and females. Only in Italy and Switzerland, will there be a lower statutory retirement age (60 and 64, respectively) for females. Nevertheless, the figure also demonstrates that the statutory retirement age is not a good predictor for actual retirement decisions. Figures regarding the effective age at withdrawal from the labour market given there are taken from Scherer (2002). They include exits that do not immediately lead to old-age pension take-up but, according to national laws

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Table 1

Qualifying conditions for regular old-age pensions[a]

	Minimum qualification periods	Entitlements to receive full benefits[b]
A	15 years of contributions, or 25 years of insurance, or 15 years of insurance within the last 30 years	40 years of insurance
B	None	45 years in employment (women: 43 years; increased to 45 until 2009)
CH	1 year of contributions	44 years of contributions (women: 40 years)
D	60 months of contributions	Reaching the statutory retirement age
DK	*Basic pension (Folkepension):* 3 years of residence starting from age 15 (foreigners: 10 years, 5 of which immediately preceding retirement)	40 years of residence starting from age 15
	Supplementary pension (ATP): none	Non-fragmented record of contributions
	Premium pension (SP): none	Not defined
E	15 years of contributions, 2 of which within the 15 years immediately preceding retirement	35 years of contributions
F	1 quarter of insurance	159 quarters of insurance (160 starting from 2003)
GR	4,500 work days of contributions	35 years of contributions (if membership started before 1993: 10,500 work days)
I	20 years of contributions	37 years of contributions (35 years starting from age 57)
IRL	24 weeks of contributions per year on average (*10 for Old-Age [Contributory] Pensions);* 260 weeks of contributions in total (520 starting from April 2012); coverage starting at least 10 years before retirement	48 weeks of contributions per year on average
LUX	10 years of insurance (contributions are rebated if condition is not met)	40 years of insurance
NL	None	Residence from age 15 to 65
P	15 years of contributions or other pensionable periods	40 years of contributions
S	None	Not defined
SF	*Basic pension (Kansaneläke):* 3 years of residence starting from age 16	40 years of residence starting from age 16; no earnings-related benefits or foreign pensions
	Supplementary pension (Työeläke): 1 year of contributions on annual wages exceeding € 690.97 (2002); self-employed and farmers: none	40 years in employment
UK	*Basic pension:* 10 years of contributions	44 years of contributions (women: 39 years)
	Supplementary pension (SERPS[c]): passing once the income limit of 3,415 £ or 5,285 € p.a. (2002)	Not defined
USA	At least 1 quarter of insurance per year starting from age 21	Not defined

[a] For benefit entitlements before reaching the statutory retirement age: see Table 2. – [b] I.e., earnings-related benefits without any reduction or a maximum basic amount. – [c] In 2002–03: replaced by the *State Second Pension ("S2P")*.
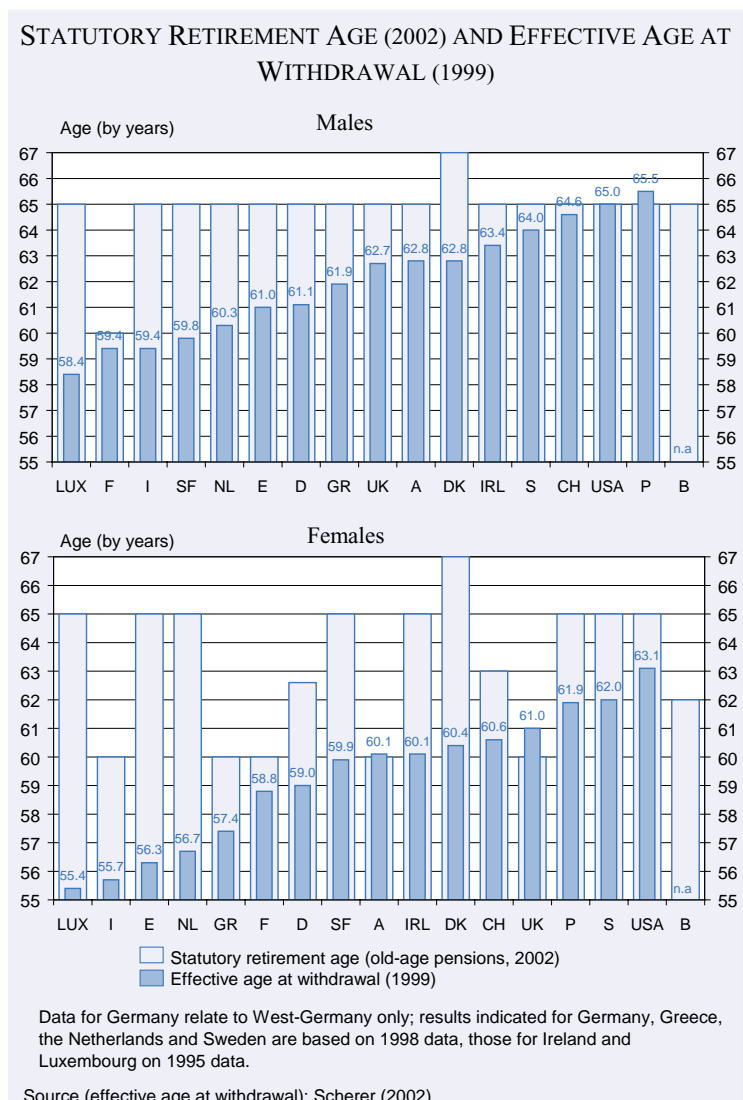
and habits in this area, may imply a period of formal unemployment or disability, with other categories of benefits being received. Results are based on contingent exit probabilities and calculated in a similar fashion as life expectancies, given the relevant mortality rates.[2]

Effective ages at withdrawal show much more variation across countries than legally-defined retirement ages would imply. In more than half of the countries, the former is substantially lower than the latter; only Portuguese men as well as Austrian and British women appear to work even longer than required by pension law. In spite of different levels, the ranking of countries is almost identical for males and females, with Luxembourg and Italy having very low effective retirement ages in both cases, and Portugal and the US having rather high ones. Finland and France appear to be particular in that both sexes effectively retire at similar ages there.

The case of France also illustrates that statutory retirement ages are not the only rules affecting

[2] Here, we use the latest "static estimates" available that Scherer (2002) prepared using cross-section data referring to 1999 or earlier years. For Belgium the latest relevant observations were from 1976.

STATUTORY RETIREMENT AGE (2002) AND EFFECTIVE AGE AT WITHDRAWAL (1999)

Data for Germany relate to West-Germany only; results indicated for Germany, Greece, the Netherlands and Sweden are based on 1998 data, those for Ireland and Luxembourg on 1995 data.

Source (effective age at withdrawal): Scherer (2002).

effective retirement ages is larger. Exceptions are Finland and the Netherlands, where it is access to unemployment benefits and disability pensions, respectively, which creates the huge gaps. In both cases, the relevant laws can be seen as creating alternative channels towards early retirement for older workers with poor prospects for re-employment.

In most countries, drawing on old-age pensions before reaching the legally-defined retirement age is possible, though often under additional conditions regarding individual work biographies only. Also, benefits are usually reduced against the amount of old-age pensions that would accrue given the same work biography if the statutory retirement age were reached. On the other hand, reductions are often smaller than would be required for actuarial fairness, considering the shorter period where contributions are made and the extended period of retirement.[3] Table 2 summarises the rules regarding early retirement with (reduced) entitlements to receive old-age pensions.[4] Note that the reduction rates given there are meant to reduce current pension benefits over what the effect of a shorter work record, or a smaller number of years with contributions, would be in pension schemes with benefits related to earnings or contributions.

Pension formulae and indexation of benefits

Upon retirement, old-age pension benefits are assessed using the (standard) pension formula applied in each country. In most cases, it establishes a functional relation between average covered earnings received during the insurance period – usually indexed to how wages have grown over time – and

actual retirement decisions. In addition, opportunities to retire early (see Table 2) as well as the rules governing disability pensions and unemployment benefits are potentially important here. The fact that there are no early-retirement options in France may thus explain that the effective age at withdrawal of French males is in a similar range as those in Luxembourg, Italy and Finland. More generous rules regarding early retirement usually imply that the difference between statutory and

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[3] For more detailed analyses see, for instance, Blöndal und Scarpetta (1999). Calculating reductions that are actuarially fair requires specific information regarding contribution rates, future benefit levels, life expectancies and potential peculiarities of the standard benefit formula. Results are also contingent on the discount rate assumed for calculating present values, or on how it relates to the rate used for indexing benefits. Furthermore, actuarially fair reductions are not linear in the number of years of early pension take-up and thus cannot be represented by uniform rates. Rough calculations for the case of Germany indicate that fair reductions should be between 7 percent and 9 percent a year in this country. It may not be appropriate to apply the same result to other countries with different pension arrangements, but only in Finland, Greece, Switzerland, Spain, and the US, annual reductions are likely to come close to being actuarially fair.

[4] Special early-retirement programmes that exist, or existed, in countries with severe umemployment problems are not covered here.

Table 2

Conditions for early retirement

	Early take-up of old-age pensions possible...		
	From age...	With annual reductions by...	Additional conditions
A	61.5 (56.5 for women)	(Depending on age and insurance period)	None
B	60	None	28 years in employment (increased to 35 years until 2005)
CH	63 (61 for women)	6.8 % (3.4 % for women born 1942–47)	None
D	63 (60 for unemployed born before 1952 and women) 62 starting from 2012	3.6 %	35 years of insurance (Unemployed: 15 years, 8 of which during the last 10 years; women: 25 years, 10 of which after age 40) 35 years of insurance
DK	*Folkepension:* 60 *ATP (–2004):* 65	91% (100%) of unemployment benefits at age 60–62 (62–65) 5 %	25 years of contributions to a private early retirement fund None
E	60	8% (7% in cases of unvoluntary withdrawal)	Entitlements built up before 1967 or in cases of heavy or dangerous work
F	–	–	–
GR	60	6 %	15 years of contributions (membership before 1993: 4,500 work days)
I	57	depending on age	35 years of contributions (40 years: no age threshold)
IRL	–	–	–
LUX	57	–	40 years of insurance
NL	–	–	–
P	55	4.5 % (0 % for unemployed aged 60 or above)	30 years of contributions
S	–	–	–
SF	60	*Basic Pension:* actuarial reduction *Supplementary Pension:* 4.8 %	None None
UK	–	–	–
USA	62	6.67 % for the first 3 years (5% for further years)	None

the length of this period on the one hand and monthly or annual benefits at award on the other. Often, the assessment is not based on all the years of insurance but only on a limited number of ("best") years with the highest earnings. In basic pension schemes, benefits are more uniform but never entirely a lump sum. Instead, with shorter insurance periods they are usually reduced pro rata temporis. Table 3 describes in some detail, how pension benefits are being assessed in the different countries. There are some common patterns across countries, mainly relating to the question of whether national pension systems are mainly based on Bismarckian "social insurance" schemes, with earnings-related benefits, or on the Beveridgean model, where flat-rate pensions dominate the picture (cf. Werding 2003 for an extended discussion). But the precise formula

used for assessing pension benefits is nowhere he same.

After award, i.e., during the retirement period, further adjustments in individual amounts of benefits depend on the method of indexation (see Table 4). As a rule, there are annual up-ratings that either correspond to CPI inflation, such that benefits are constant over time on real terms, or follow the growth rate of wages. In the latter case, pensions keep track of increases in the living standard of the active population; at the same time, any growth in productivity or wages does not alleviate financing for current pensions – on a pay-as-you-go basis, as this is mostly done – but leads to higher benefit entitlements which have to be met by current contributions. The countries considered here are about evenly split between these two approaches, additional regulations or discretionary deviations

Table 3

Pension formulae for (standard) old-age pensions at award

	Main determinants	Assessment of monthly benefits
A	Earnings Insurance period Retirement age	**Reference income[a] x years of insurance[b] x 2% x 14/12[c]** a) Average monthly earnings in the "best" 15 years of insurance (indexed to wages) x 15/17.5 b) Up to a max. of 40 years; minus 1.5 years per year of early take up c) 14 monthly payments per year
B	Earnings Insurance period Marital status Sex (until 2009)	**Cumulated reference income[a] x 60%[b] x 1/45[c] / 12** a) For years before 1955: € 10,788; 1955–1980: gross earnings without an upper limit (blue-collar workers, 1955–1957: € 52 per day); starting from 1980: gross earnings below the upper limit b) 75% for beneficiaries with dependent spouses c) For women: 43 (increased to 45 until 2009)
CH	Earnings Insurance period	**G1[a] x Minimum pension (MP, 2001: CHF 1,030, € 700.50)** **+ G2[b] x (reference income[c] + child-rearing credit[d])** a) $G1 = 0.74$ (1.04 if benefit > 36 x MP; 2.00 if benefit > 48 x MP) b) $G2 = 13/600$ (8/600 if benefit > 36 x MP; 0 if benefit > 48 x MP) c) Average annual earnings (indexed to CPI inflation and wages) d) = 3 x annual MP in the year of award
D	Earnings Insurance period	**Individual earnings points[a] x current pension base amount[b]** a) Sum of annual earnings points (ratio of individual gross earnings over average gross earnings of those actively insured in each year) x pension award factor (= 1.0 at the statutory retirement age) b) Variable base amount for assessing monthly benefits (adjusted annually); July 2002 to June 2003: € 25.86 (€ 22.70 in East-Germany)
DK	*Basic pension (Folkepension):* Period of residence Marital status *Supplementary pension (ATP):* Contributions *Premium pension (SP):* Contributions	**Base amount[a] x years of residence[b]/40** a) Depending on marital status; reduced if beneficiaries continue to work b) At age 15–65, up to a maximum of 40 years **Contributions + interest earned** (small benefits are paid out as a lump sum) **Contributions + interest earned = benefit payments for 10 years**
E	Earnings Insurance period	**Cumulated reference income[a] x benefit factor[b]** a) During the last 15 years (indexed to CPI inflation) / 17.5 b) 50% for the first 15 years of insurance + 3% for each year between 15 and 25 years of insurance + 2% for further years; max. 100%
F	Earnings Insurance period Retirement age	**Reference income[a]/12 x t[b] x n[c]/160** a) Average annual earnings in the "best" 20 years of insurance (indexed to wages, 25 years until 2008) b) = 50% at age 65 (50% – 1.25% x no. of quarters missing) c) No. of quarters of insurance (max. 160)
GR	Earnings Insurance period	**Reference income[a] x years of insurance x 1.714% / 12** a) Average annual earnings of the last 5 years of insurance (if membership started in 1993 or later)
I	Contributions Retirement age	**Cumulated contributions[a] x conversion coefficient[b] /12** a) Indexed to average GDP growth in the last 5 years b) Depending on retirement age (between 57 and 65) (This new formula is applied to contributions paid in 1996 or later.)
IRL	*Retirement pension:* Average annual contributions *Old-age (contributory) pension:* Average annual contributions	**Average no. of contributions** — **Pension benefit (2002)** 48 or higher — €147.30 x no. of weeks per month 24 – 47 — € 144.40 x no. of weeks per month **Average no. of contributions** — **Pension benefit (2002)** 48 or higher — € 147.30 x no. of weeks per month 20 – 47 — € 144.40 x no. of weeks per month 15 – 19 — € 110.50 x no. of weeks per month 10 – 14 — € 73.70 x no. of weeks per month

continued: Table 3

	Main determinants	Assessment of monthly benefits
LUX	Earnings Insurance period	**Cumulated reference income[a]/12 x 1.78% x adjustment[b]** **+ CPI x € 36,4716 x years of insurance[c]/40** a) Indexed to CPI inflation b) Standard-of-living adjustment (2002 = 1.257) c) Up to a maximum of 40 years
NL	Period of residence (or employment) Marital status	**Base amount[a] x 0.02 x years of residence[b]** a) Singles: € 912.69 per month; couples, if dependent spouse reaches age 65 before 2003: € 1,258.22 per month (2002) b) Up to a maximum of 50 years
P	Earnings Insurance period	**Reference income[a] x years of insurance[b] x 2% x 14/12[c]** a) Average indexed monthly earnings of the "best" 10 out of the last 15 years of insurance (indexed to CPI inflation) b) With at least 120 days covered with earnings c 14 monthly payments per year
S	*Income pension (Inkomstpension):* Contributions Cohort life expectancy *Premium pension:* Contributions	**Cumulated contributions[a] x life-expectancy coefficient[b] /12** a) Indexed to wages (deduction for administrative costs) b) Based on contingent cohort life expectancy (at age 65) **Contributions + interest earned**
SF	*Basic pension (Kansaneläke):* Period of residence Marital status Supplementary benefits *Supplementary pension (Työeläke):* Earnings Insurance period	**Base amount[a] x years of residence/40** a) Between € 390 and € 464 depending on marital status and community of residence; reduced against other pensions (by 50% in the case of *Työeläke* benefits) **Reference income[a] / 12 x (1.5% x years of insurance at age 23–59** **+ 2.5% x years of insurance at age 60–65)[b]** a) Avearge annual earnings of the last 10 years b) Up to a maximum of 60 percentage points
UK	*Basic pension:* Insurance period Marital status *Supplementary pension (SERPS):* Earnings	**Full weekly flat rate[a] x pension factor[b] x weeks per month** a) Singles: £ 75.50 (€ 124.60); couples: £ 120.70 (€ 199.20; 2002) b) 100% with 44 years of insurance (39 years for women; increased to 44 between 2010 and 2020), 25% with 10 years of insurance, close to linear adjustment with 11–43 (39) years of insurance. **Cumulated reference income[a] x 25%[b] / years of contributions** a) Earnings above the lower earnings limit (indexed to CPI inflation) b) Linear reduction to 20% between 1998/99 and 2009/10. (Formula redefined for the new "S2P" system starting from 2002/03; accrual factors now vary by earnings brackets)
USA	Earnings Insurance period	**Reference income[a] x PIA factor[b]** a) Average indexed monthly earnings in the "best" 35 years of insurance (indexed to wages). b) The first $ 592 of averaged indexed earnings are weighted with 90%, between $ 592 and $ 3,567 the weight is 32%, above $ 3,567 the weight is 15% (earnings thresholds: 2002)

sometimes making sure that pensions are subject to standard-of-living, not just cost-of-living, adjustments even where the basic rule is CPI indexation.

What the standard pension formula often does not reveal is that, in addition to periods of labour force participation with contributions being paid to the pension system, some privileged elements of typical work biographies – in particular, spells of unemployment and child-rearing – may be included in one way or another in the assessment of pension benefits. This is where we will turn before concluding.

Treatment of spells of unemployment and non-participation

In virtually all public pension schemes where benefits are tied to the number of years of insurance, or to wages earned or contributions made during this period, benefit formulae are augmented by specific rules on how to treat certain times of non-employment or non-participation. Important examples are given by periods of schooling or other forms of education or formal training, military services, unemployment, sickness or other

Table 4

Indexation of benefits after award

	CPI indexation	Wage indexation	Remarks
A		J	Net wages
B	J		Max. 2% + annual standard-of-living increase
CH	J	J	Mean
D		J	Gross wages .\. pension contributions .\. rate of subsidised savings
DK			
Basic pension (Folkepension):		J	Up to –0.3%, if $\hat{w} > 2.0\%$
Supplementary pension (ATP):			Only if reserves sufficient
E	J		
F	J		
GR		J	
I	J		100% to 75% of *i*, depending on the amount of benefits
IRL			Discretionary
LUX	J		
NL		J	Bargained wages
P	J		
S	J		+ GDP growth – 1.6%
SF			
Basic pension (Kansaneläke):	J		
Suppl. pension (Työeläke):	J	J	Weighted 80 : 20
UK	J		
USA	J	J	The latter if $i > \hat{w}$

with since the 1970s, rules regarding the inclusion of unemployment spells in the assessment of old-age pensions are obviously important. Where they exist, these rules sometimes limit the maximum period of time to be taken into account (e.g., in Greece) or they are effective only as long as there are entitlements to receive specific types of unemployment benefits (in Austria, Denmark, Germany, or Italy). On the other hand, no such rules exist in some countries even if pension benefits are related to earnings or contributions (in Switzerland, Luxembourg, Sweden, and the US, for instance).

Starting from different levels, there is a uniform trend towards higher female labour force participation across all the countries considered here. Taking into account the changes in the division of labour between men and women within couples and families, pension reforms often aim at establishing models with higher independent, non-derived benefit entitlements for females. As extended periods of child-related non-participation are effectively far more important for the typical biographies of women, rules regarding the treatment of these spells in the assessment of pension benefits are an important element of such models.[5] Where they exist, the relevant rules are often very recent or have been amended during the last few years. Usually, they are neutral in that they can be applied to either parent of a given child (or to both parents for different sub-periods of a parental leave). Again, special rules meant to compensate for benefits foregone are not needed where benefit entitlements are not, or only to a very limited extent, linked to individual earnings

forms of incapacity to work, motherhood, or an extended period of time during which parents may take care of small children. In systems where benefits are tied to residence alone, special rules applying in these cases do not make sense. In systems where benefits are basically a flat rate, defining a maximum time frame to be taken into account in each of these cases suffices. But in systems with earnings-related benefits, both the time to be taken into account and the value to be attached to it needs to be defined. Like the pension formulae themselves, national regulations in these areas are very diverse. We therefore confine our attention to roughly indicating whether or not there are special rules applying in the two cases of unemployment and periods of child-rearing, adding a few remarks on the nature of these rules where appropriate.

In the presence of high-level unemployment that many European countries are continuously faced

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[5] In unfunded pension schemes, rules of this kind may also be important for another reason: since future benefits derived from these schemes are effectively funded through the human capital embodied in current children, including periods of child-rearing in the definition of benefits – irrespective of the labour force participation of care-taking parents – may be appropriate to internalise a potential externality. See, e.g., Cigno (1993) or Sinn (1997) for a discussion of the economic rationale of such policies.

Table 5

Spells of unemployment or child-rearing in the benefit assessment

	Inclusion of unemployment spells...	Inclusion of child-rearing spells...
A	✓ (For periods with unemployment insurance benefits)	✓ (Up to 48 months per child if insured individual ever paid contributions)
B	✓	✓ (Motherhood leave)
CH	–	✓ (Fictitious supplements to wages earned until children reach age 16)
D	✓ (For periods with unemployment benefits)	✓ (36 months per child are being counted as insurance period, with contributions on 100% of average earnings being paid from the general government budget; with less-than-average earnings: increase in earnings – related entitlements built up during the 7 days that follow; increase in survivor benefits)
DK	Basic pension (Folkepension): – Supplementary pension (ATP): ✓ (for periods with benefits from the labour market re-integration programme, contributions being paid by the responsible benefit administration) Premium pension (SP): –	– ✓ (Motherhood leave, with contributions being paid by the responsible benefit administration) –
E	✓	✓ (First year of parental leave per child under 3 is being counted as insurance period)
F	✓	✓ (8 quarters per child taken care of for nine years or more until age 16 are being added to the insurance period; alternatively, up to three years of parental leave can be accounted for)
GR	✓ (For periods with unemployment insurance benefits for up to 200 days during the last 10 years before entering retirement)	✓ (Between 3 and 6 months of parental leave are being counted as insurance period; for mothers, early retirement is possible starting from age 55)
I	✓ (For periods with unemployment insurance benefits)	✓ (Motherhood leave; up to 6 months of parental leave are being counted as insurance period; for mothers, the statutory retirement age is reduced by up to 12 months; alternatively, mothers can opt for an increased "conversion coefficient" ficticiously extending their work record by up to 2 years)
IRL	✓	✓ (For Old-Age (contributory) pensions, the number of qualifying years is reduced by up to 20 years per year of child-care of children under age 12)
LUX	–	✓ (24 months per child are being counted as insurance period, 48 months if at least two other children are living in the household)
NL	–	–
P	✓	✓ (Up to 2 years of parental leave per child can be accounted for)
S	Income pension (Inkomstpension): – Premium pension (Premiereservsystem): –	✓ (up to 4 years of parental leave per child can be accounted for, based on the "best" out of three alternative approaches generating different results for different work records before and during the child-care period) –
SF	Basic pension (Kansaneläke): – Supplementary pension (Työeläke): –	✓ (If parental leave lasts for up to 1 year) –
UK	Basic pension: ✓ (if individuals are actively seeking employment) Supplementary pension (SERPS): –	✓ (The number of qualifying years is reduced to a minimum of 20 years through child-care for children under age 16 as one out of several "home responsibilities") –
USA	–	–

or contributions. Given that, they are basically absent only in Belgium and the US, as well as in the supplementary pension schemes in Denmark, Finland and the UK.

Table 5 summarises the rules regarding the inclusion of unemployment spells and periods of child-rearing in the assessment of old-age pension benefits in all the countries covered here.

Conclusion

Even with detailed information regarding the definition of old-age pension benefits, assessing the generosity of national pension schemes on a comparative basis is not an easy task. A number of difficulties can, in principle, be dealt with using the kind of information provided here, viz. those arising from differing approaches to redistributing income between individuals or households alongside many dimensions – with respect to life-time earnings, timing and length of the insurance period, spells of unemployment and non-participation, plus some other details not fully covered in this survey. Once a set of comparable households of pensioners is defined – comparable, first of all, in terms of household composition, income levels and work records – one could determine the benefit entitlements that accrue in each of these cases and in each country and relate them to earlier household income or wage earnings (thus obtaining "replacement rates" that are corrected for international differences in income or wage levels) or average household incomes of younger cohorts (obtaining "quasi-replacement rates" which then reflect the relative income position of people in retirement vis-à-vis those who are currently active). Considering the various differences in relevant rules, it is unlikely that comparisons of this kind would offer a very clear-cut picture. For example, the ranking of benefit levels may not be invariant with respect to the levels of covered earnings or the total length (and specific nature) of spells of unemployment and non-participation.

So far, detailed calculations regarding old-age pension benefits that are based on more than just one standard biography of pensioners – usually with a next-to complete record of labour force participation – are however lacking. In existing work (see, e.g., OECD 2001 for the most careful approach to doing such calculations for only nine countries), even the coverage of different countries is rather limited. Yet, what the results derived from comparative studies suggest[6] is that, in terms of "quasi-replacement rates" based on total retirement income, pensioners around the world enjoy a relatively uniform standard of living (at between 85 and 100 per cent of per-capita income of individuals in their active period of life). At the same time, the role of public pensions, or the "public–private mix", within total retirement income of typical pensioners may be very different across the countries considered here. This should be kept in mind as the major source of heterogeneity of national pension systems (see, again, Werding 2003) if the information provided in this survey were used to spell out differences in existing public pension schemes in more detail than it is usually done.

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[6] Another potential source of cross-country comparisons regarding pension benefit levels is Eurostat (2000), for a selection of 13 EU countries. Here, results are not based on simulations but on micro-data provided through the European Community Household Panel. Unfortunately, there is no proper distinction between first and second-pillar pensions in this study and, as far as the countries considered overlap, results are not fully in line with those of the OECD project mentioned in the main text. Yet, the general message is about the same.