

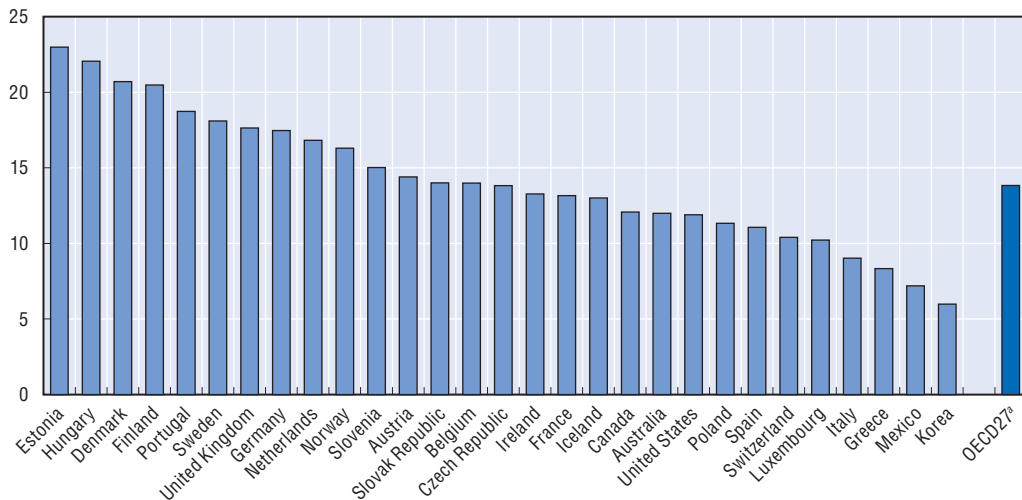
Chapter 1

The Economic Context for Disability Policy

Despite the recent economic downturn, globalization, together with demographic and technology transitions, remain powerful forces of change in the labour markets of OECD countries. This chapter argues that integrating more fully into the labour market people with disability is essential in meeting economic and social challenges arising from these broad drivers of change. The recent economic downturn is further reinforcing this urgent need, as people with disability have been hard hit by job losses and the reduction in job vacancies. This may push them to the margin of the labour market, raising the risk of further structural increases in the disability beneficiary caseload.

Disability policy is an important factor in responding to the short and long-term economic challenges facing many OECD countries. In the long run, the participation of individuals with chronic health problems or disability is essential to address the decline in the effective labour supply associated with population ageing and thus help secure the economic wellbeing of many OECD countries. Disability is not a marginal phenomenon: Across the OECD, one in seven people of working age regard themselves as having a chronic health problem or disability which hampers their daily life, rising to more than one in five in some countries (Figure 1.1).

Figure 1.1. **Disability prevalence at working age is high in most OECD countries**
Self-assessed disability prevalence, as a percentage of the population aged 20-64, late 2000s



a) OECD27 is an unweighted average for 27 countries. Estonia and Slovenia are not included in the OECD average. See Annex 1.A1 on definitions and measurement of disability.

Definitions and sources: Chronic health problem for at least six months limiting daily activities from EU-SILC (Income, Social Inclusion and Living Conditions) 2007 (wave 4), except: Australia: profound/severe or moderate/mild core activity restriction, from SDAC (Survey of Disability and Carers) 2003; Canada: persons with health and activity limitation (from mild to very severe), from PALS (Participation and Activity Limitation Survey) 2006; Denmark, Norway: persons with a long-standing health problem or disability, from LFS (Labour Force Survey) 2005; Korea: persons registered to the local government with their type of disability and level of severity as assessed by a medical doctor, from National Survey on Persons with Disabilities 2005; Mexico: permanent or temporary disability, from ENESS (National Survey of Employment) 2004; Netherlands: suffering from a long-lasting complaint, illness or disability which impedes carrying out or obtaining a paid job (work disabled), from LFS 2006; Poland: persons declaring they are legally disabled, from LFS 2004; Switzerland: persons with reduced capacity due to a long-lasting health problem of more than a year, from LFS 2008; United Kingdom: persons with reduced capacity due to a long-lasting health problem of more than a year, from LFS 2006; United States: work-limiting physical or mental condition from SIPP (Survey of Income and Program Participation) 2008.

This chapter begins by providing the rationale for disability policy as an essential economic objective. It then reviews how developments in the socio-economic context over the past decade have led to deteriorating employment prospects of workers with disability.

In particular, in light of the changing labour market conditions, the chapter investigates the impact of the economic downturn on workers with disability. The final section looks at the impact of other factors, in particular ongoing ageing of the working-age population.

1.1. The importance of workers with disability to the economy and society

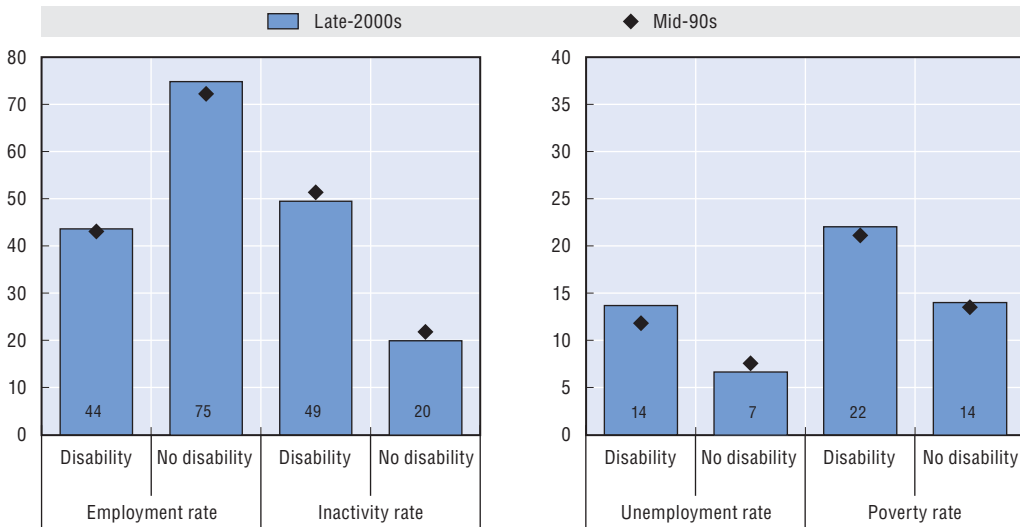
Social and economic inclusion of people with disability

The integration of individuals with disability¹ in the OECD labour markets was difficult even before the onset of the global economic crisis, when for about a decade economic growth was rather strong in many OECD countries and employment rose quite significantly.

Low levels of employment and high rates of unemployment and inactivity reflect the huge labour market disadvantage of people with disability (Figure 1.2). In the late 2000s, just before the onset of the recent economic downturn, their employment rate was only slightly over half and their unemployment rate nearly twice the OECD average for people without disability. Closely related to these poor labour market outcomes, people with disability also experienced poverty more intensely than their peers without disability (see Chapter 2 for more details on outcomes).

Figure 1.2. **Social and economic integration of persons with disability is lagging behind**

Key labour market indicators,^a by disability status, OECD average,^b late 2000s and mid-1990s, percentages



a) Employment rate: employment as a percentage of working-age population; Inactivity rate: inactive population as a percentage of working-age population; Unemployment rate: unemployed as a percentage of the labour force; Poverty rate: percentage of people with disability in households with less than 60% of the median adjusted disposable income.

b) The OECD average is an unweighted average across 27 OECD countries (excluding Japan, New Zealand and Turkey).

Source: See Figure 2.1 except for poverty rate, see Figure 2.6.

Coping with demographic challenges and future labour supply shortages

The difficult labour market integration of people with disability will create bigger problems in the future for many OECD countries given their rapidly changing demographics. Over the next 50 years, all countries will experience a steep increase in the

share of retirees and a large decline in the share of the population of prime-age workers. For example, by 2050, more than one-third of the population is projected to be over age 65 in Italy, Japan, Korea and Spain (OECD, 2006). These developments are likely to lead to a sharp drop in the labour force and consequently could result in slower economic growth.

Population ageing provides a solid argument for enhancing the efforts to mobilise the under-utilised labour potential among workers with disability. This can contribute to raising the productive capacity of the economy and reduce the costs associated with disability benefit programmes. The potential contribution of higher participation rates among workers with disability to offset the negative impact of ageing on the future size of the labour force can be illustrated by comparing a scenario where participation rates by age and gender remain unchanged at their current levels (the “benchmark” scenario) with an another scenario where participation rates for workers with disability gradually increase. The results are compared with alternative scenarios that assume participation rates to increase further among older workers and women, respectively.² The following assumptions are used in constructing the scenarios:

- In the “benchmark” scenario, labour force participation rates by age and gender in each disability group are assumed to remain constant at their 2007 levels.
- In the “disability equality” scenario, labour force participation rates for people with disability are gradually raised to the level of those without disability, assuming that the disability gap in participation rates is closed by 2050.
- In the “later retirement” scenario, labour force participation rates of older workers are assumed to gradually increase to those of workers five years younger; i.e. rates of the age group 60-64 increase to those of the 55-59 group, rates at age 55-59 reach those of the 50-54 group, and rates at age 50-54 reach those of the 45-49 group by 2050.
- The “gender equality” scenario assumes that labour force participation rates of women in each age group gradually converge to those of men by 2050.

Under the *benchmark scenario*, almost two-thirds of the OECD countries will experience a contraction in the labour force over the next 40 years (Figure 1.3). The *disability equality scenario* shows that higher participation rates of workers with disability could play a very significant role in increasing the future labour supply in some countries, including Denmark, Finland, Hungary, Norway and Sweden, but also Poland and the Czech Republic. For example, in Hungary, if the participation rate among people with disability could be raised to that of people without disability, the labour force in 2050 would be greater by 350 000 individuals, or 11%, compared with the benchmark scenario.

In other countries, including Australia, Iceland, Ireland, Netherlands, Portugal, Spain and the United Kingdom, raising participation rates for workers with disability has just as much impact on future labour supply as changing rates for other underrepresented groups. For instance, in the Netherlands, the impact of raising participation rates for either people with disability or women (*gender equality scenarios*) could increase the labour force in 2050 by around 7% compared with the benchmark scenario. The *later retirement scenario* leads to labour force growth similar to the disability equality scenario in most countries, with the exception of those countries in which early retirement is still especially widespread, e.g. Austria, France and Italy.

Figure 1.3. **Higher participation rates for people with disability can help prevent future labour force declines**

Projected labour force according to four different scenarios on age, gender and disability-specific participation rates, 23 OECD countries, 1980-2050 (in thousands)

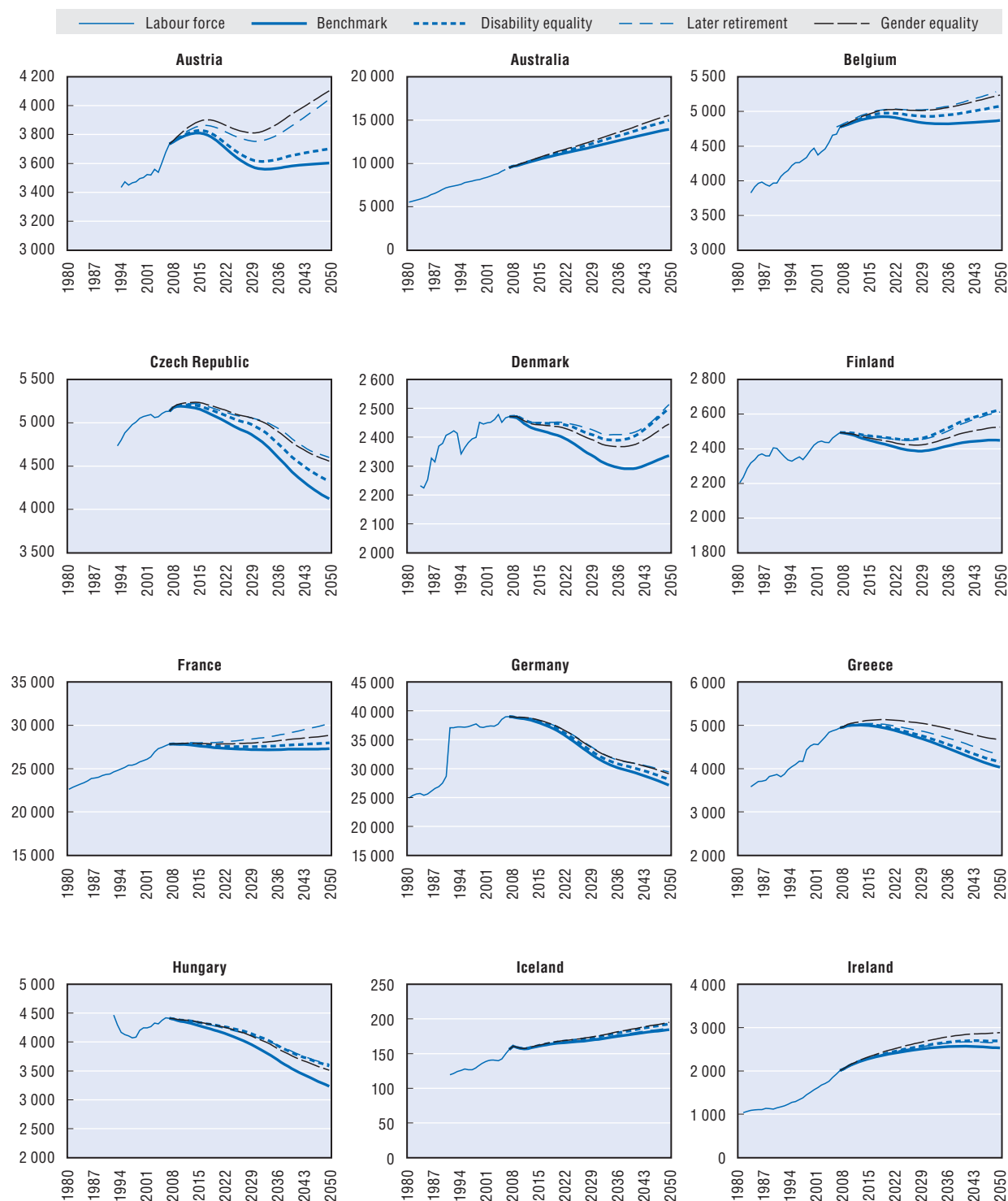
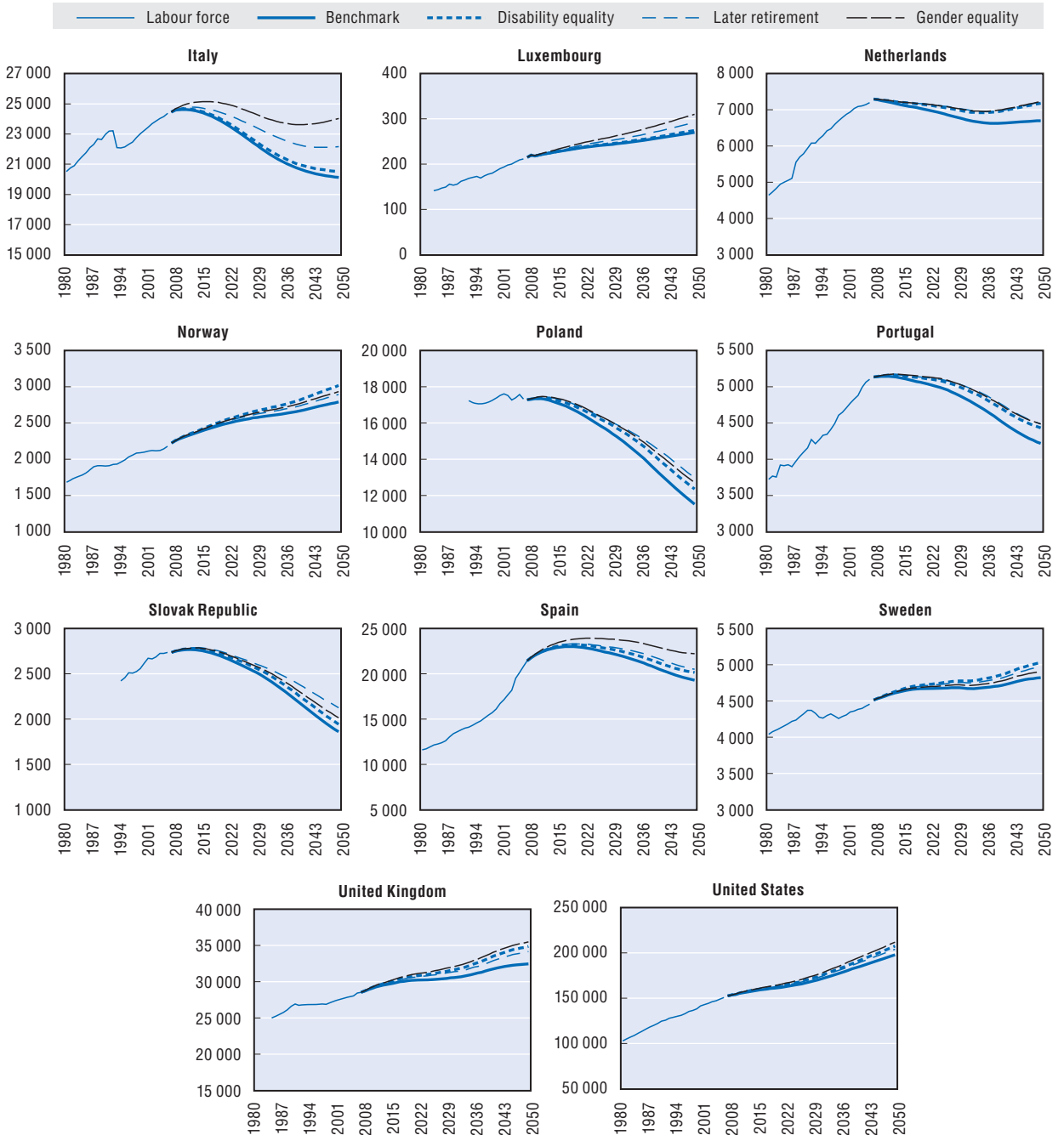


Figure 1.3. **Higher participation rates for people with disability can help prevent future labour force declines (cont.)**

Projected labour force according to four different scenarios on age, gender and disability-specific participation rates, 23 OECD countries, 1980-2050 (in thousands)



Note: Labour force estimates are obtained by multiplying, for each age and gender group separately, population estimates with disability prevalence rates and disability status-specific labour force participation rates.

Source: OECD Population Projections Database for population figures; Figure 1.1 for disability prevalence rates and Figure 1.2 for labour force participation rates.

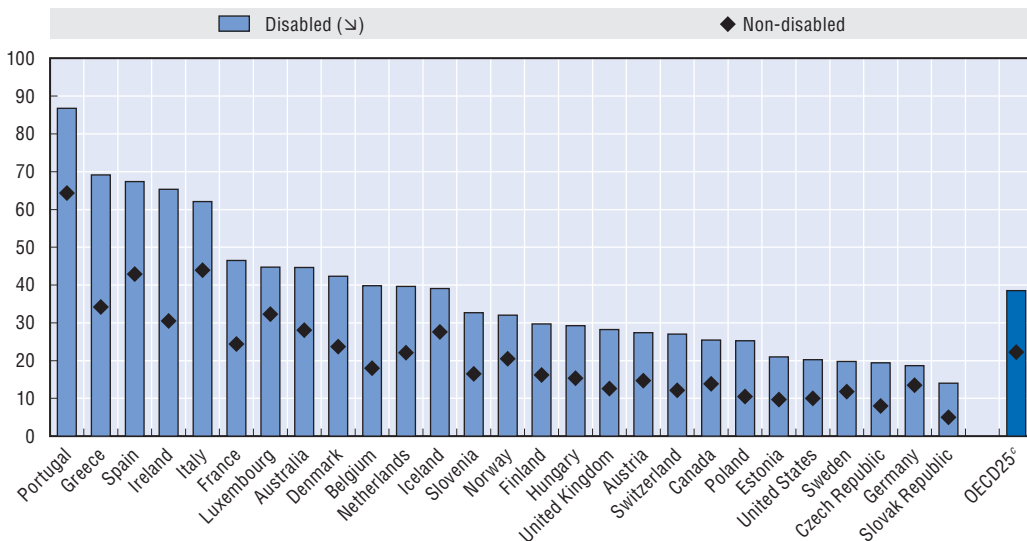
1.2. Workers with disability face greater barriers in the labour market

The changing labour market context

The large systemic changes that have affected the OECD labour markets over the past decades have often created new challenges for workers with disability. In particular, skill-biased technological changes, together with the emergence of new major trade partners in the global economy and the associated shifts in low-skilled activities away from the OECD countries, have had a negative effect on the employment opportunities of low-skilled workers (OECD, 2007). These developments have disadvantaged people with disability more since they have lower average levels of education compared with the rest of the population. On average, in 2007, the share of persons with disability with less than upper secondary education was almost twice the share of those without disability (Figure 1.4).

Figure 1.4. **People with disability have significantly lower levels of education**

Share of the working-age population with low education level,^a by disability status,^b late 2000s



Note: Throughout, (↘) in the legend indicates the variable according to which countries are ranked, in decreasing order.

a) A low education level corresponds to an educational attainment of less than upper secondary (ISCED 0-2).

b) See definitions of self-assessed disability in Figure 1.1.

c) OECD25 refers to an unweighted average for 25 countries. Estonia and Slovenia are not included in the OECD average.

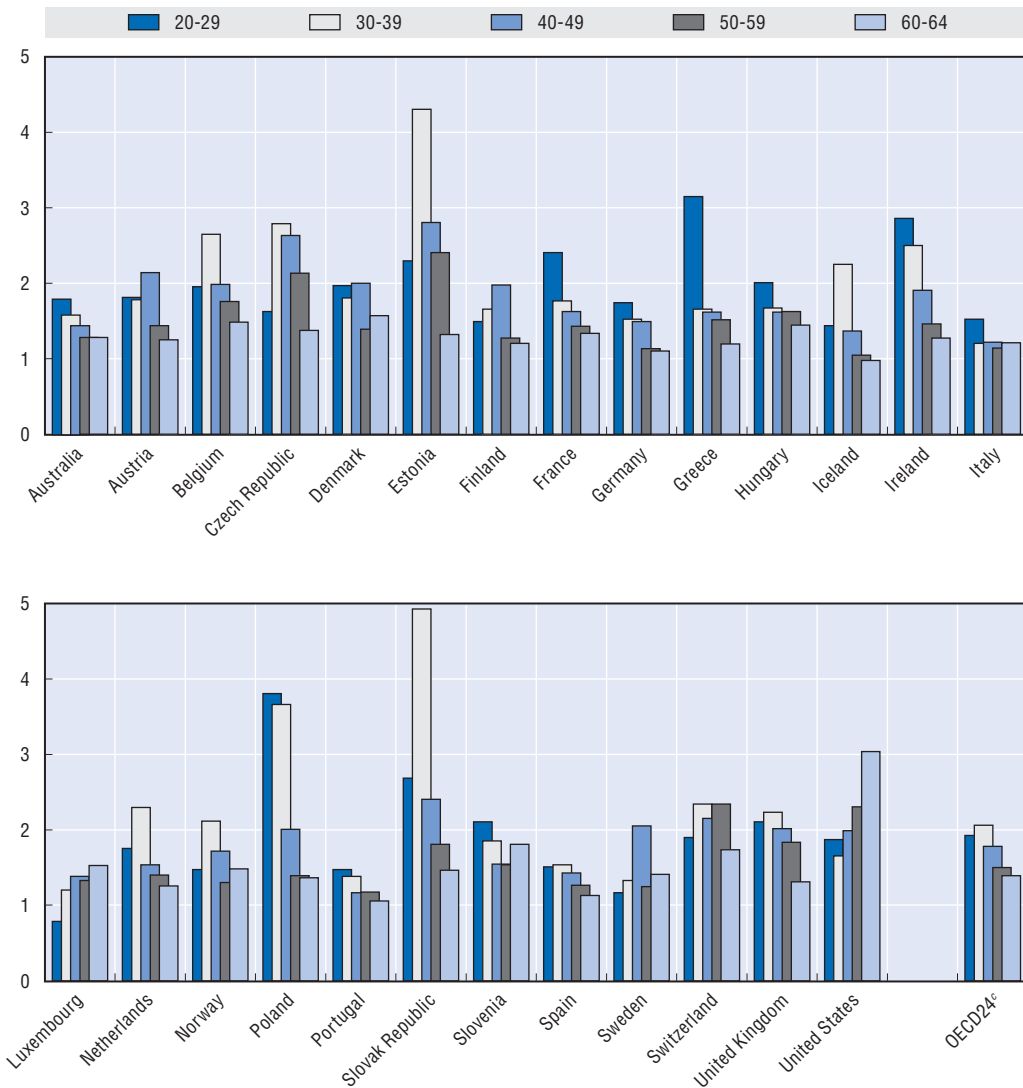
Source: See Figure 1.1.

Most worryingly, the education gap between people with and without disability has worsened for younger age groups. Figure 1.5 shows that the share of people with disability in their 20s and 30s with a low level of education is twice that for people without disability while the gap is smaller between the 50-59 and 60-64 year-olds, relative to the same age groups for people without disability. Only in a few countries, including in particular the United States, has the trend been in the opposite direction and in several countries, e.g. Ireland, Poland and the Slovak Republic, the education gap grew much faster.

As a response to greater competition and more rapid technological changes, working conditions have been changing in OECD countries, with less job security for the growing number of workers on temporary or atypical contracts, heavier workloads and increased

Figure 1.5. **The education gap between people with and without disability has increased over cohorts**

People with disability^a with low education level,^b relative to their peers without disability, by age cohort, late 2000s



a) See definitions of self-assessed disability in Figure 1.1.

b) A low education level corresponds to an educational attainment of less than upper secondary (ISCED 0-2).

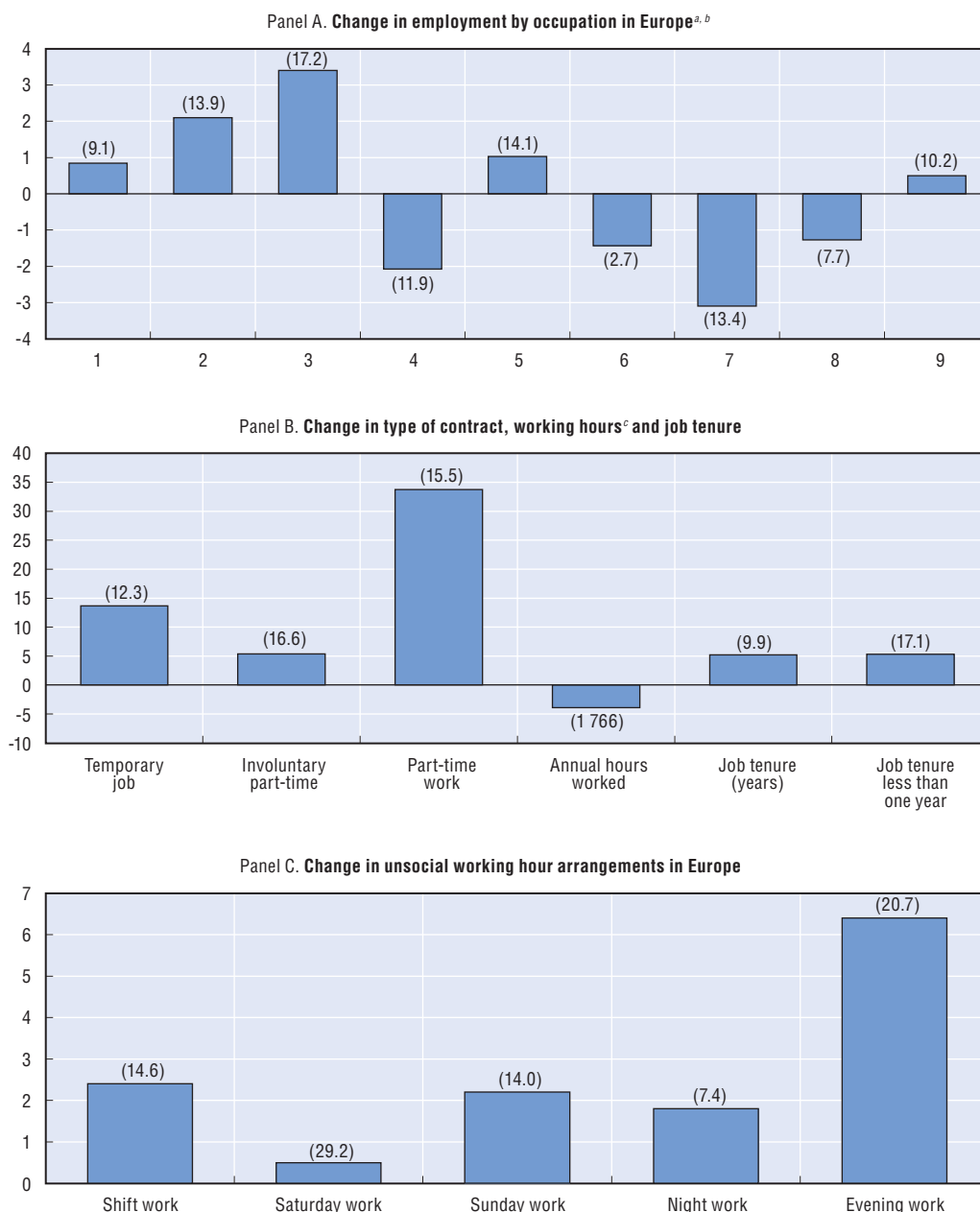
c) OECD24 refers to an unweighted average for 24 countries. Estonia and Slovenia are not included in the OECD average.

Source: See Figure 1.1.

work pressure. These patterns have made access to jobs by individuals with disability more difficult. Figure 1.6 summarises some of these indicators of labour market conditions in the OECD countries. There has been an increase in the share of temporary jobs and more workers have job tenure of less than one year, while average job tenure (now around ten years) has also increased. These indicators suggest a further dichotomisation of labour markets in many OECD countries, with declining job security, more frequent job changes and reduced attachment to a specific employer and the labour market for some groups. At the same time, however, the increase in so-called “non-standard” forms of employment including part-time work may provide more work opportunities for workers with disability.

Figure 1.6. **Trends in labour market and working condition indicators are inconclusive**

Percentage-point change in a range of labour market and working condition indicators, 1995-2008
Unweighted average of a selected set of OECD countries



Note: Values within parenthesis are the OECD average in the last year.

a) Occupation based on ISCO-88, one-digit occupations: 1: Legislators, Senior Officials and Managers; 2: Professionals; 3: Technicians and Associate Professionals; 4: Clerks; 5: Service Workers and Shop and Market Sales Workers; 6: Skilled Agricultural and Fishery Workers; 7: Craft and Related Trades Workers; 8: Plant and Machine Operators and Assemblers; 9: Elementary Occupations.

b) Data refer to EU15 excluding Finland and Sweden.

c) Percentage change for average annual hours worked.

Source: Panels A and C, European Labour Force Survey (EULFS); Panel B, OECD Database on Labour Force Statistics.

Workplace changes and mental health

The self-reported exposure of European workers to a number of working conditions suggests a trend increase in work intensity in the majority of countries (Table 1.1, columns 1-4). This finding is important insofar as work intensity appears to be one of the key factors for perceived stress at work (Table 1.1, columns 8-11). Such, demanding work requirements may be leading to more stress-related working conditions and thus having more individuals seeking disability benefits as a way of escaping rising demands at work.³ Evidence from theoretical and empirical work on occupational health indicates that attention should be paid to the effect of psychosocial factors at work. Psychological demands may include features such as overwork or unrealistic deadlines and might be

Table 1.1. Work-related stress increases with higher work intensity and lower work satisfaction

Percentage of workers reporting specific working conditions and work-related stress, selected European countries, levels in 2005 and trends (percentage changes) 1995-2005

Panel A. Percentage of employed persons reporting specific working conditions, 2005 and changes since 1995 ^a						Panel B. Share of respondents reporting stress at work, according to various working conditions, 2005 ^b							
1. Job involves working at very high speed		2. Job involves working to tight deadlines		3. Satisfied with working conditions in the job		Overall	1. whether the job involves working at very high speed		2. whether the job involves working to tight deadlines		3. whether respondent is satisfied with working conditions in main paid job		
Level	Trend	Level	Trend	Level	Trend		Yes	No	Yes	No	Yes	No	
Austria	36	+++	32	---	89	=	21	31	14	36	14	16	49
Belgium	22	+	25	+++	88	=	22	34	18	37	16	16	59
Czech Rep.	21	+++	43	+++	79	=	16	27	12	20	8	12	23
Denmark	34	+++	35	+++	93	=	29	39	23	34	25	25	68
Finland	36	+	36	=	85	-	25	32	20	34	18	20	48
France	23	=	28	+	81	=	20	33	16	28	15	14	45
Germany	32	+++	27	=	88	=	16	28	10	29	11	12	40
Greece	37	+++	34	+++	57	-	58	67	52	68	54	46	73
Hungary	33	+	35	+++	74	-	26	44	16	36	19	21	40
Ireland	15	-	28	=	87	-	18	27	16	29	11	14	40
Italy	24	+	19	+	76	-	26	42	20	39	23	20	43
Luxembourg	23	+++	25	+++	86	-	30	44	25	42	25	25	60
Netherlands	19	---	25	-	88	=	18	29	15	27	14	12	56
Norway	36		30		93		28	39	21	41	24	26	49
Poland	19	---	24	+++	79	+	36	47	32	48	29	33	45
Portugal	15	---	19	+	85	=	26	31	24	36	22	23	41
Slovakia	21	---	22	+++	79	+	19	33	15	31	15	16	31
Spain	23	+	23	+++	81	=	39	56	31	60	32	34	68
Sweden	34	+++	30	+	85	-	32	49	26	48	26	26	51
Switzerland	25		25		92		18	27	15	31	14	15	52
Turkey	39		41		56		35	41	30	40	29	22	49
United Kingdom	19	-	36	-	92	+	12	18	10	20	6	9	44
OECD22	27		29		82		26	37	21	37	20	21	49
OECD19	26	+	29	+	83	=							

a) “+++” denotes an increase of more than 20%; “+” 5-20% increase; “=” changes between -5% and +5%; “-” more than 5% decrease; “---” more than 20% decrease. For Czech Republic, Hungary, Poland and Slovak Republic trends refer to the period 2000-05; the interpretation of +/- signs is adjusted accordingly (“+++” denotes an increase of more than 10%).

b) Don’t knows/refusal are omitted from calculations. Figures shown are the percentage reporting stress at work of those with (yes) or without (no) demanding or satisfying working conditions.

Source: OECD calculations based on various waves of the European Working Conditions Survey from the European Foundation for the Improvement of Living and Working Conditions.

aggravated by job insecurity because uncertainty about the stability of one's job is also associated with stress (Ferrie *et al.*, 2002, 2005; Siegrist, 1996).

Indeed, one major explanation for the increasing number of inflows into disability benefits on grounds of mental health conditions can be attributed to changes in the workplace that have increased the prevalence of work-related stress. For example, recent longitudinal evidence for selected countries presented in OECD (2008) shows that employees, who change from standard to "non-standard" employment – measured by the type of contract or working hours – generally experience a decline in their mental well-being. However, the same study also shows that employees are better off in terms of mental health than inactives and unemployed: Mental health tends to deteriorate significantly when people leave employment and improve again when people move back into employment (see Annex Figures 1.A2.1 and 1.A2.2).⁴

The impact of the economy on labour market outcomes for people with disability

The role of the business cycle

The recent deep recession and its associated and still ongoing jobs crisis are likely to worsen labour market opportunities for people with disability. Evidence suggests that their employment rates are more adversely affected during economic downturns. Results from country-specific analysis show that a recession hits people with disability harder than people without disability. Burkhauser *et al.* (2001), for example, examined the relative outcomes of workers with disability over the business cycles of the 1980s and the 1990s in the United States and concluded that employment fell more for people with disability than for those without disability. Similarly, for the United Kingdom, Balloch *et al.* (1985) showed that employment opportunities for people with disability decreased during the recession of the 1980s.

Calculations by the OECD Secretariat, based on data for Europe for the period 1994-2001,⁵ suggest that, while having a disability reduces the employment chances significantly at any phase of the business cycle (by 19% for men and by 12% for women, Table 1.2, first row), a larger output gap further contributes to lower employment opportunities for individuals with disability than for those without (see Box 1.1 for technical details, including on the definition of the output gap). Indeed, when economic output falls, for men in general the

Table 1.2. The impact of the business cycle on employment of people with disability is small compared with the effect of disability itself

Regression results: impact of a 1 percentage-point increase in the output gap on employment levels in general and the additional disadvantage for people with disability, percentages

	Employment effect	
	Men	Women
Effect of having a disability	-19.03 (0.000)***	-11.94 (0.000)***
Overall impact of the output gap change on people with disability	-1.12	-2.01
<i>Of which:</i>		
<i>Impact of output gap change on all individuals</i>	-0.72 (0.000)***	-1.15 (0.000)***
<i>Additional impact of the output gap change on those with disability</i>	-0.39 (0.001)***	-0.86 (0.000)***

*** Significant at 1% level. The output gap is the percentage difference between potential and actual output.

Source: OECD calculations based on ECHP 1994-2001.

probability of being employed decreases by 0.7% for each percentage-point increase in the output gap, plus another 0.4% if it is a worker with a disability. The overall impact of the economic cycle on the employment rate of men with disability would, therefore, be 1.1% (Table 1.2, second row). This is a relatively small effect compared with the 19% impact on the employment rate stemming from having a disability. The impact of the economic cycle on women with disability is roughly twice as much as for their male counterparts.

Box 1.1. How labour market outcomes of workers with disability are affected by the economic cycle

The following model has been estimated pooling all the countries' observations together to assess the potential impact of economic conditions on labour market outcomes of people with disability;

$$\Pr(e_{ijt} = 1 | X_{ijt}) = \Phi(X_{ijt}\alpha + gap_{jt}\beta + disab_{ijt}\lambda + gap_{jt} * disab_{ijt}\delta + country)_j + \varepsilon_{jt}$$

where i , j , and t are the respective individual's, time and country's notations; e is a dummy variable coded as one if the person is employed (the same equation is used if the individual is unemployed). This implies that the probability of being employed or unemployed is a function of a set of controls X (including demographic variables and educational attainment) and of the output gap of the country interacted with a disability variable. The latter is set at 1 if the person reports having any chronic physical or mental health problem, illness or disability, and 0 otherwise. The output gap, or GDP gap, is defined as the percentage difference between potential output or GDP and actual output or GDP (a positive output gap indicates a situation where the growth of *aggregate demand* is outpacing the growth of *aggregated supply*).

The parameter δ captures the additional effect of the economic cycle on the employment (unemployment) probability of persons with disability as compared with those without disability. Countries fixed effects have been included in order to exclude country-specific effects (e.g. institutional factors and other unobservable variables). The parameters have been estimated using the full ECHP sample for the 1994-2001 period.

Policy lessons from past crises

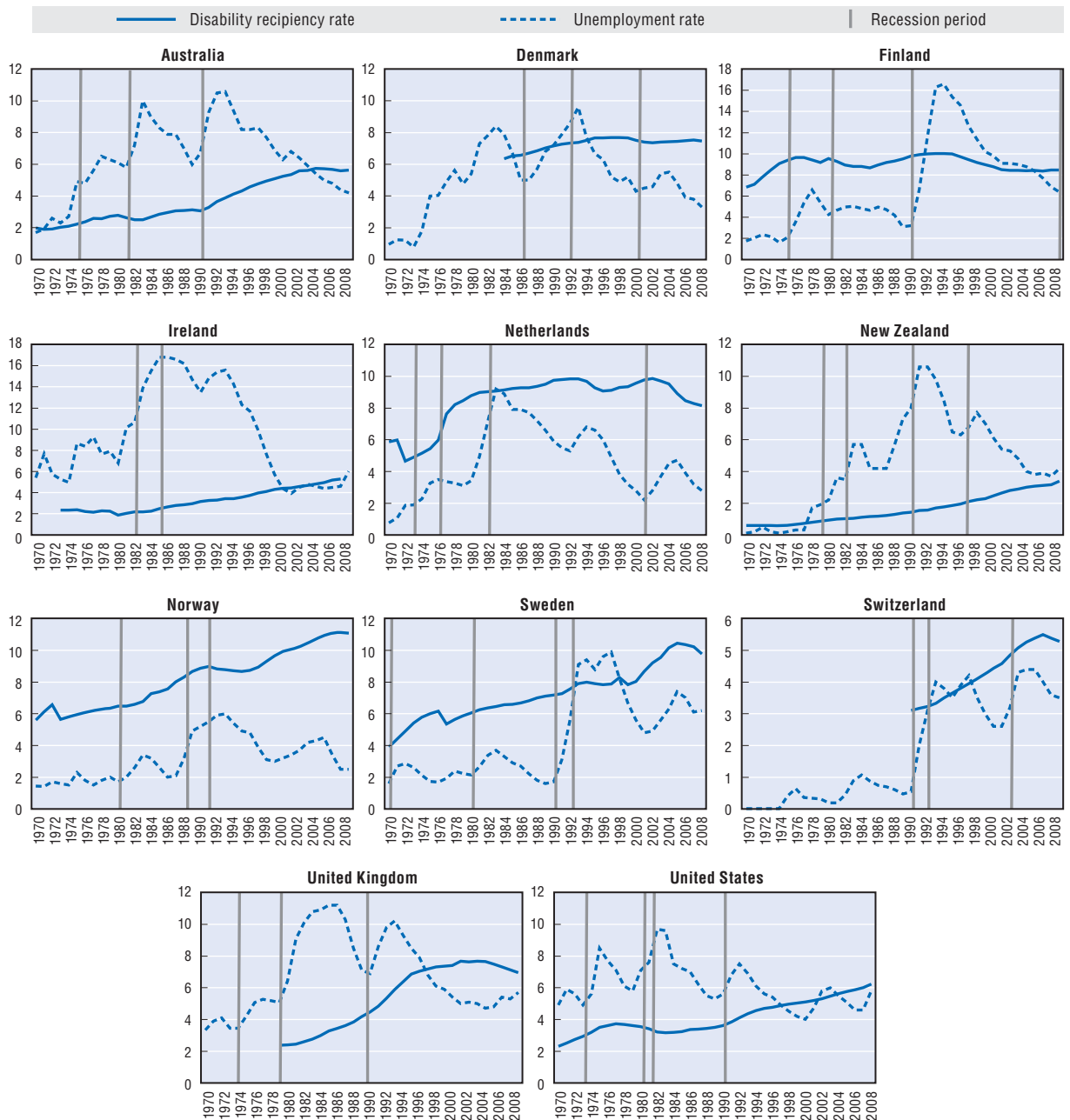
The pressures to mitigate the short-run labour market effects of the crisis increase the risk that governments might repeat the policy mistakes of the past. Indeed, past episodes of recessions point to several useful insights. Figure 1.7 shows the trends in disability benefit and unemployment rates and the peak recession years in selected OECD countries. Three main conclusions can be drawn from these charts.

At the onset of a recession, disability beneficiary rates tend to increase.... Virtually all recessions were initially associated with increases in both unemployment and – typically with some time lag – disability beneficiary rates. Compared to the cyclical fluctuations of the unemployment rate, there is very little cyclical movement in disability beneficiary rates in all countries. In some countries, including Australia and the United Kingdom, the recession of the 1980s had a very significant impact on the disability beneficiary rate.⁶

... but even when economic growth resumes, many people do not move off disability benefit rolls. Disability beneficiary rates did not drop again during the subsequent economic expansion, when job growth was substantial and unemployment was falling

rapidly. With fewer job opportunities, more people are likely to resort to disability benefits in economic downturns, while the low exit rates from those benefits induce “ratchet” effects by which benefit rolls remain at a higher structural level after each period of high inflows resulting from an economic downturn.

Figure 1.7. Following the peak of a recession, disability benefit reciprocity rates tend to increase
Long-run trends in unemployment and disability reciprocity rates in 11 OECD countries, 1970-2008



Source: OECD calculations based on data provided by national authorities and OECD *Economic Outlook* 2009.

Disability can become a substitute to persistent long-term unemployment. When the economy picked up again and unemployment fell, many countries have seen a simultaneous rise in disability reciprocity rates. It appears that in the past decades in many OECD countries labour market problems have gradually been shifted from unemployment to sickness and disability.⁷ This can be explained to a certain extent by the inability of some of the long-term unemployed and discouraged inactives to find employment when the economy is in boom, thus, to some extent reflecting “substitution” between benefit schemes. The relative generosity of disability programmes, as well as increasingly stricter work requirements in unemployment and social assistance programmes, and gradual retrenchment of early retirement systems, has contributed to rising numbers of people drawing disability benefits as a benefit of last resort.⁸

1.3. Trends in disability benefit rates, the business cycle and population ageing

How strongly are trends in disability beneficiary rates driven by the economic cycle?

Figure 1.8 shows the long-term structural trend of the disability beneficiary rate in ten OECD countries (dotted line) and the cyclical deviation from the structural trend (black line) resulting from changes in the output gap (grey line). The shaded (blue) area highlights the duration of a recession (peak-to-trough). The following findings emerge.

First, the responsiveness of the disability rate with respect to changes in the output gap varies across countries. In some countries, including for example Norway, Sweden, Switzerland and the United Kingdom, falls (rises) in the output gap translate almost instantly into corresponding cyclical increases (decreases) from the structural trend in the disability benefit reciprocity rate. In other countries, this reaction is less pronounced and sometimes absent altogether – like in the recession in Finland in the early 1990s which was apparently absorbed by trends in unemployment.

Secondly, the impact of the economic cycle in most episodes and countries is very small, typically in the range of plus or minus 2-5%. Only the recessions in Ireland in 1979/1980, in the Netherlands in the early 1970s and in Sweden in the late 1970s witnessed a cyclical reaction in the order of close to 10%; even this increase, however, only implies a change in the reciprocity rate of around 0.2-0.3 percentage points.

Thirdly and most importantly, in several cases recessions have contributed to structural increases in the level of disability benefit reciprocity. This was most pronounced in both the United Kingdom and the United States in the aftermath of the deep recession around 1990, but it is also apparent in several other countries and episodes, *e.g.* Sweden around 2001, Switzerland around 2002 and New Zealand around 1998. Hence, recessions often translated into a structural problem for the disability benefits system, with the beneficiary rate remaining high after economic recovery.

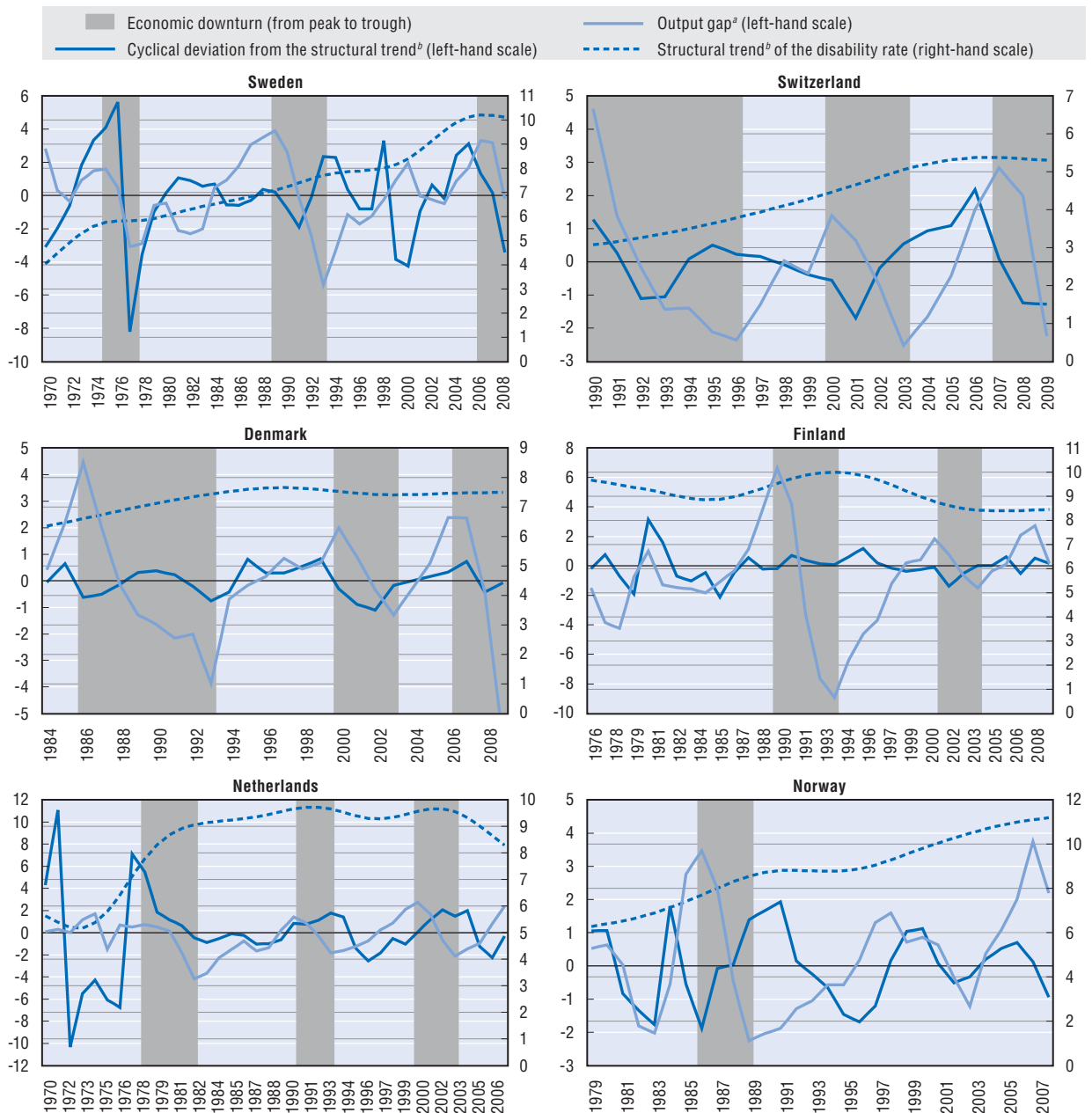
Finally, there is little indication that the very recent turnaround in the long-term trend increase in disability benefit reciprocity rates in some countries, like the Netherlands, Sweden, Switzerland and the United Kingdom, has any association with the variations in the output gap.

Effects of population ageing on trends in disability beneficiary numbers

Given that the business cycle explains so little of the overall trend, what else drives the trends in disability beneficiary rates? One other argument sometimes brought forward to explain the increasing number of people on disability benefits is population ageing. As

Figure 1.8. **The economic cycle is only one and often not the main factor explaining fluctuations in the disability beneficiary rate**

Structural trend increase in disability reciprocity rates and cyclical deviations from the trend caused by output gap changes, 1970-2008

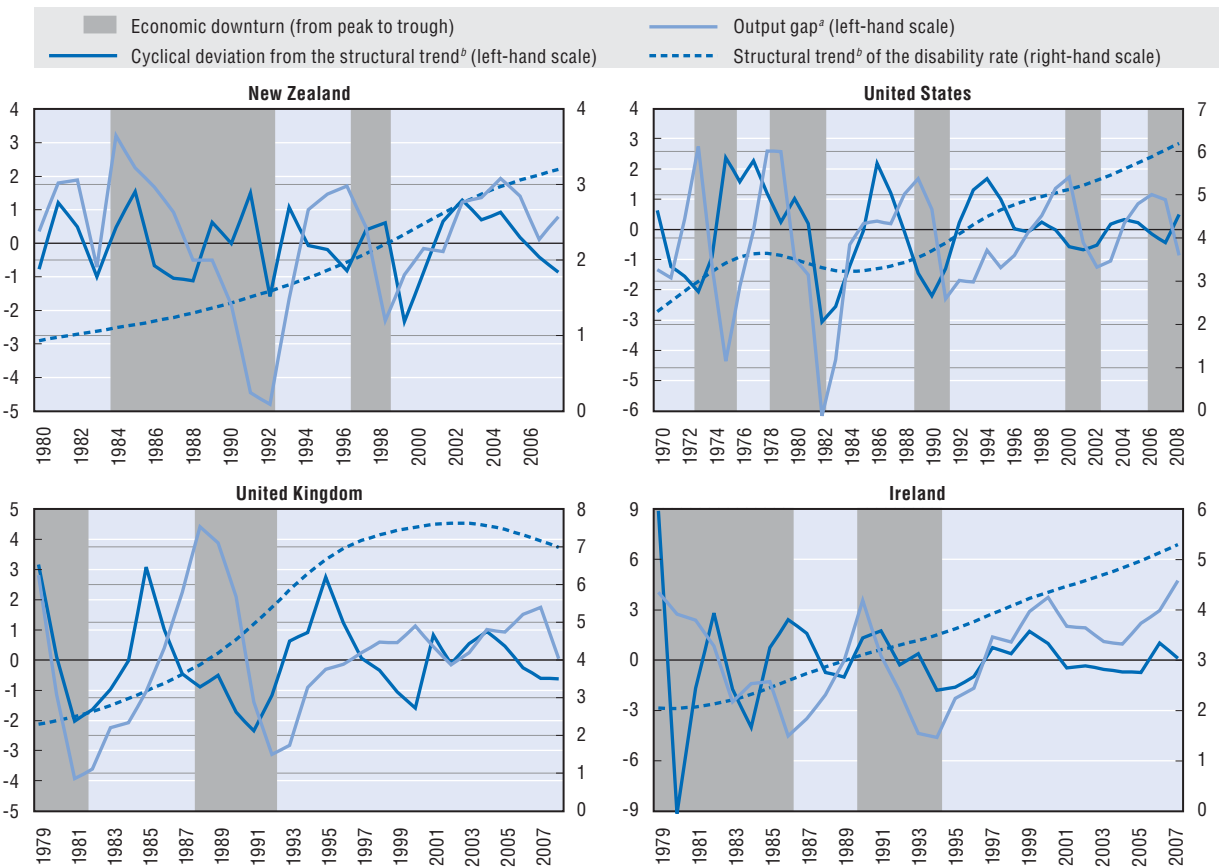


shown below, in all OECD countries disability prevalence increases strongly with age: People aged 50-64 years have more than twice the probability of reporting a chronic health problem or disability than the total working-age population (Figure 1.9). Other things being equal, a higher share of people over age 50 among the working-age population should therefore translate into higher disability beneficiary rates.

The “pure” effect of ageing is explored by comparing actual beneficiary trends with an estimated historical beneficiary series for each country, which is obtained by multiplying

Figure 1.8. **The economic cycle is only one and often not the main factor explaining fluctuations in the disability beneficiary rate (cont.)**

Structural trend increase in disability reciprocity rates and cyclical deviations from the trend caused by output gap changes, 1970-2008



- a) The gap is expressed as a percentage of potential output. This latter is calculated by means of a Cobb-Douglas production function, with labour, capital, their respective productivity and total factor productivity as function's inputs.
- b) The trend and the cyclical fluctuations of disability rate have been established by the Hodrick-Prescott filter.

Source: OECD calculations based on data provided by national authorities and *OECD Economic Outlook 2009*.

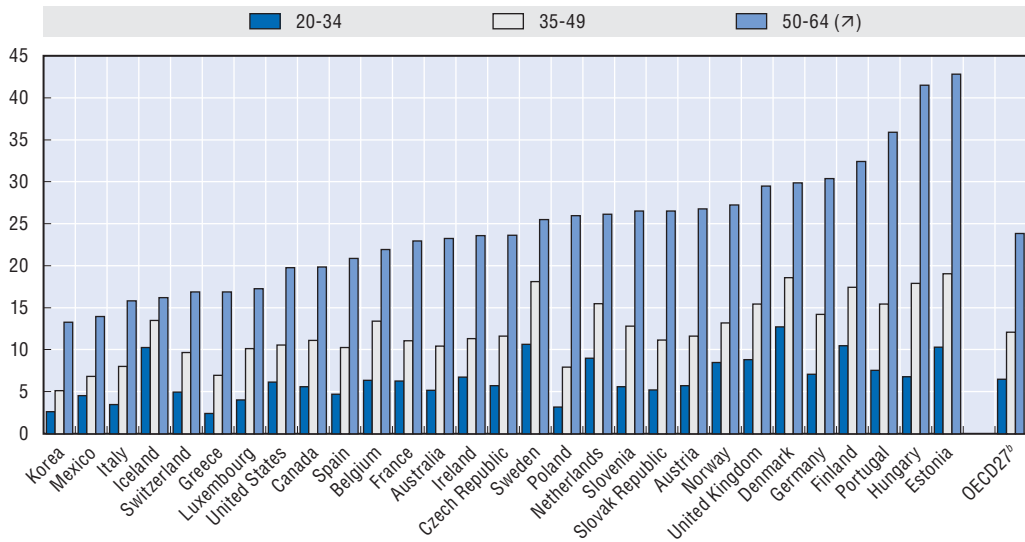
constant age and gender-specific beneficiary rates for 1990 (or the earliest available year) by population numbers for subsequent years in each age and gender group. The difference between the estimated and the actual beneficiary numbers is the part of the trend resulting from changes in reciprocity rates and therefore not explained by changes in the size of the population “at risk” but by behavioural change, effects of policies, or both.

In half of the OECD countries, only a small part of the strong increase in disability beneficiaries in the past decades can be explained by changes in the population age structure (Figure 1.10, Panel A). The annual average growth rate of disability beneficiaries was typically three times higher than the growth in the size of the population at risk, caused by the relatively larger increase in the number of older workers with a higher risk of becoming disabled.

In the other half of the countries, actual beneficiary trends diverged very sharply from the continuously increasing disability beneficiary trends projected for the past one to two decades by demographic change alone (Figure 1.10, Panel B). In most of these countries, beneficiary numbers are now lower – sometimes much lower – than could have

Figure 1.9. **Disability prevalence increases sharply with age which is critical in view of population ageing**

Self-assessed disability^a prevalence, as a percentage of the population, by age group, late-2000s



a) See definitions of self-assessed disability in Figure 1.1.

b) OECD27 refers to an unweighted average for 27 countries. Estonia and Slovenia are not included in the OECD average.

Source: See Figure 1.1.

expected otherwise. In several cases, including Finland, Luxembourg, the Netherlands, Poland, Portugal and the United Kingdom, increases in beneficiary numbers went hand-in-hand with population trends for a while before falling sharply, in response to policy reform. In some countries, such as Canada, Mexico and Spain, observed trends were consistently flatter than projected by ageing of the working-age population.

1.4. Conclusion

The economic and social context in which disability policy operates has evolved rapidly during the past decade. These changes are creating both opportunities and challenges for people with disability across OECD countries. The argument is twofold. On the one hand, the shrinking and ageing populations projected for most OECD countries over the coming decades mean that increasing labour force participation rates among people with disability will be important in securing future labour supply. On the other hand, changes in technology and globalisation may have affected labour markets in ways that are further deteriorating the employment prospects for people with disability and contributing to the high disability beneficiary caseloads in OECD countries.

At the same time, it appears that both the business cycle and population ageing can only explain a small part of observed trends in beneficiary numbers. In most countries, changes in labour supply and labour demand factors dominated. Nevertheless, employment opportunities for people with disability tend to drop significantly during economic downturns and do not recover in the subsequent recoveries. These findings highlight the importance of reforms aimed at promoting the participation of people with disability in the labour market. The remainder of this report addresses the policy reforms needed to achieve this.

Figure 1.10. Demography explains only some of the change in disability beneficiary trends

Disability beneficiaries, actual and estimated numbers, 1990-2008 (index: earliest year = 100)
 Estimated numbers are based on constant age and gender-specific beneficiary rates^d in each country

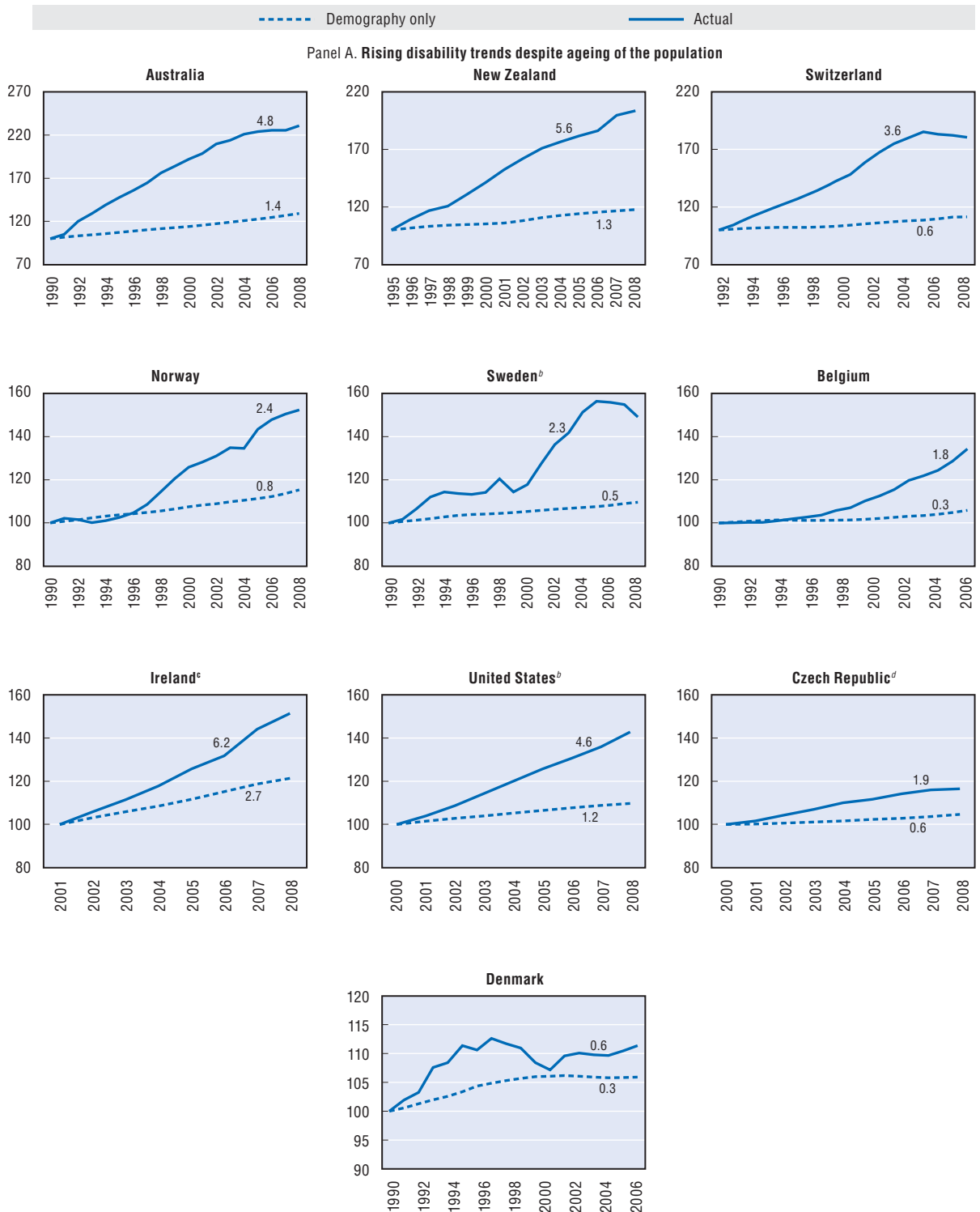
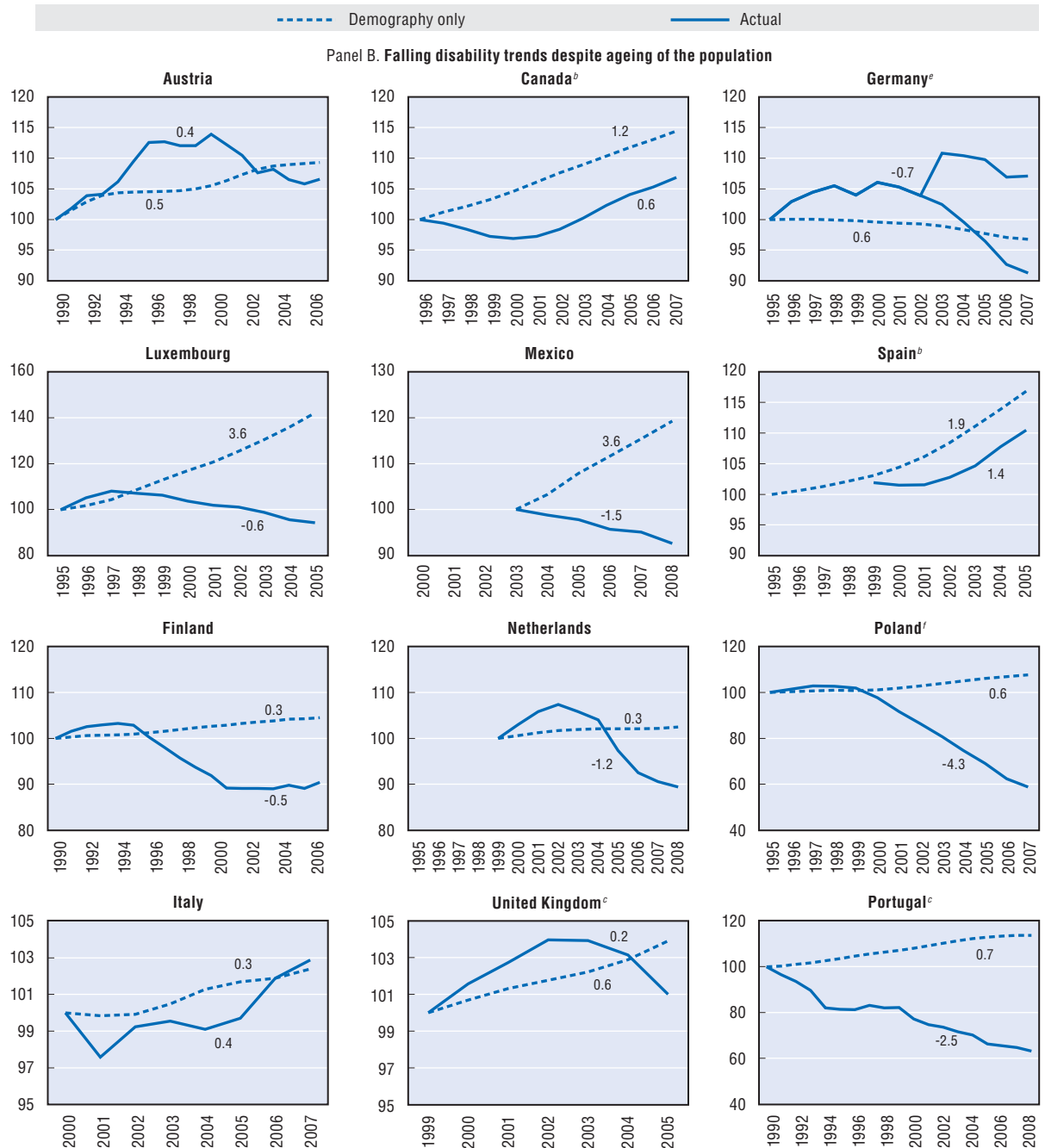


Figure 1.10. **Demography explains only some of the change in disability beneficiary trends (cont.)**

Disability beneficiaries, actual and estimated numbers, 1990-2008 (index: earliest year = 100)
 Estimated numbers are based on constant age and gender-specific beneficiary rates^d in each country



Note: The numbers shown in the charts give the average annual growth rates over the period in question.

a) The dotted lines labelled "demography only" show estimated numbers of beneficiaries under the assumption of constant age- and gender-specific beneficiary rates; the solid lines show the actual number of beneficiaries. Data refer to the age group 20-64, with the exception of Denmark which covers ages 18-64.

b) Contributory pension only for Canada (with a shift during this period from contributory to non-contributory benefits), Spain, Sweden and the United States.

c) Both contributory and non-contributory pensions for Ireland, Portugal and the United Kingdom.

d) The Czech Republic includes both full and partial pensions.

e) German projections are based on total population and not by gender. The thin black line excludes social assistance for persons with reduced earning capacity (GRUSI).

f) Poland covers the FUS scheme only.

Source: OECD Population Database and beneficiary data from National Insurance Administrations.

Notes

1. The population with disability – disability prevalence – is identified through *self-assessment* (people reporting that their activities of daily living are hampered by a long-standing or chronic health problem or disability), based on national population surveys. While survey questions are similar if not identical, cross-country comparability is restricted due to the subjective element of self-reporting and cultural differences in the interpretation of the questions (see Annex 1.A1).
2. These illustrative scenarios do not argue for what proportion of women, older workers and people with disability could realistically be brought into work but rather highlight the possible contribution of different underrepresented groups to potential labour supply growth.
3. An elevated risk of stress has been linked to an imbalance between a high level of psychological demands and a low level of decision latitude, and the risk is further enhanced by a lack of support in the workplace (Karasek, 1979).
4. Results presented in Annex 1.A2 are based on a fixed-effects regression model described in detail in OECD (2008) using longitudinal data for five OECD countries (Australia, Canada, Korea, Switzerland and the United Kingdom). Controlling for individual factors, the analysis finds strong similarity in outcomes across countries in terms of the mental-health improving effect of employment. In all countries, effects are larger for men than for women.
5. Appropriate data for a larger set of countries are only available for the period 1994-2001. The latter was a period of relatively strong and gradual economic expansion in most of the countries covered.
6. Case study evidence, such as that presented in Beatty and Fothergill (1996, 2005), suggests economic transformation is a key factor behind the observed increase in disability benefit rolls in the United Kingdom, particularly job destruction in mining and heavy manufacturing. It is uncertain whether job destruction in heavy industry is as important a factor in the current downturn; it is still too early to know what kind of economic transformation the current crisis will lead to.
7. Norwegian researchers estimated that enterprise closures and downsizing account for some 30% of the total inflow into permanent disability benefits (Rege et al., 2009; Bratsberg, et al., 2010).
8. Autor and Duggan (2003), for example, argue that increased flows onto disability, and increased non-participation, can be explained by the low increases in unemployment rates in the United States during and after the 1980 and 1991 recessions. This followed a “clear reduction in the demand for low-skilled workers, and a loosening of disability insurance restrictions”. Kooing and Vuuren (2006) suggest that hidden unemployment in disability rolls was still relevant during the 1990s and early 2000s in the Netherlands.

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ANNEX 1.A1

Defining and Measuring Disability

Identifying disability is not straightforward. In contrast to the contingency “unemployment”, for instance (which is defined as “not having a job but searching and being available for work”), disability status is rarely dichotomous and much more a matter of degree. Much like the concept of social exclusion, disability is understood as a multidimensional and dynamic phenomenon, including the person’s physical and/or mental impairments, the functional limitations arising from them and the interaction with the society and the environment – as reflected in WHO’s International Classification of Functioning and Disability (ICF). Distinguishing the four layers of this classification – impairment, functional limitation, resulting handicap and, lastly, supportive and protective factors – is not easy and not always possible. Definitions of disability often mix these concepts in different ways.

Disability can be defined or measured in two different ways: as a *self-assessed* status or a *legal* status based on administrative definitions, *e.g.* benefit eligibility. Often, and perhaps inaccurately so, these two definitions are referred to as “subjective” *versus* “objective” disability. Both subjective and objective disability may be reported in error. This is plausible in the case of self-assessed disability: Responses may, *inter alia*, depend on employment or benefit outcomes one wishes to explain. However, administrative records may also be reported with bias – as has, for example, been shown for Sweden by Johansson and Skedinger (2005), who find systematic over-reporting of disability in administrative data, explained by incentives for caseworkers to inflate their placement success.

No one of the above disability definitions and measures is “superior” to the others; their use depends on the topic being investigated (*e.g.* benefit expenditures *versus* income adequacy), but occasionally also on data availability. Throughout the report, several of the measures are analysed. In general, when mention is made of “disability prevalence”, this refers to self-reported disability status, while “disability benefit reciprocity” (or new disability benefit claims) is calculated from administrative records. Other legal definitions – such as those used in several countries to determine eligibility for certain types of in-kind benefits, including to count for the mandatory disability employment quota – are not used.

Self-assessed disability status is measured via household surveys. Assessment is generally based on answers to questions concerning the “existence of long-lasting health problems or disability which limits daily life activities”, thus, largely following the functional impairment level of the ICF classification. The exact formulation of the question used in different countries and surveys, however, will often vary. “Long-lasting”, for

instance, is usually defined as a problem lasting at least 12 months, but in some cases six months are used as a threshold.

Benefit reciprocity status is usually measured through administrative records but in some cases also through population surveys. The latter estimates are used for linking benefit information with labour force and income information. Results between the two sources are likely to differ, for at least two main reasons: Administrative records typically count cases rather than persons, which in a situation of multiple benefits can lead to double counting. On the other hand, surveys are based on responses on benefit status, which some people may not wish to reveal.

Benefit reciprocity status is a stricter definition than disability prevalence, because it goes beyond a person's functional limitation. It also takes some of the social and environmental context into account, as it is generally based on the reduction in a person's work or earnings ability. As such, it aims but often fails to take into account that the same degree of "biological" difference does not necessarily imply the same degree of disability or disadvantage or work capacity reduction.

Disability benefit reciprocity figures in this report reflect the aggregate of all disability benefits granted under contributory and non-contributory schemes (with Belgium, Canada, France, Germany, Greece, Ireland, Japan, Korea, Poland, Portugal, Spain, the United Kingdom and the United States having both types of schemes), full and partial disability benefits, as well as early retirement schemes specific to disability or reduced work capacity (the latter exist in Austria, Denmark, Finland and Germany). Non-contributory schemes also include regular social assistance schemes provided these schemes have a specific disability component (as is the case, for instance, in Canada and the United Kingdom). To improve comparability across countries, persons receiving sickness benefits for more than two years are also counted towards disability benefit reciprocity (which matters for Ireland, New Zealand and Sweden). Where persons can receive more than one disability benefit, the overlap has been taken into account where possible.

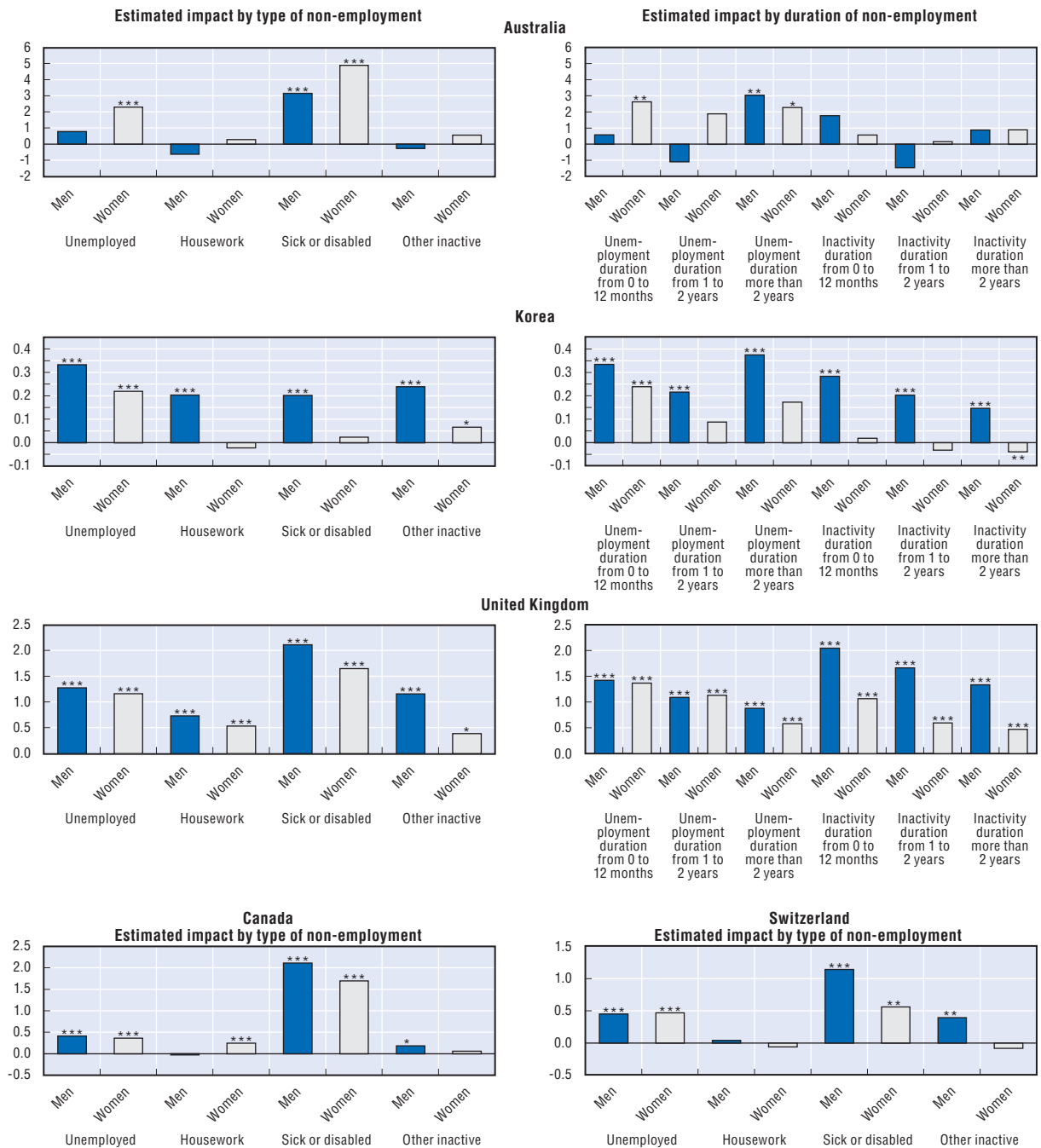
Not included in the disability benefit reciprocity figures used in this report, largely due to data limitations, are recipients of i) workers' compensation schemes; ii) private disability insurance benefits; and iii) special disability benefit systems for civil servants (which exist *e.g.* in Austria, Belgium, France and Germany). The varying importance across countries of these types of benefits poses some limitations on the comparability of the resulting beneficiary figures.

ANNEX 1.A2

Additional Supporting Evidence

Figure 1.A2.1. **Leaving employment leads to higher mental distress...**

Fixed-effects regressions^{a, b}



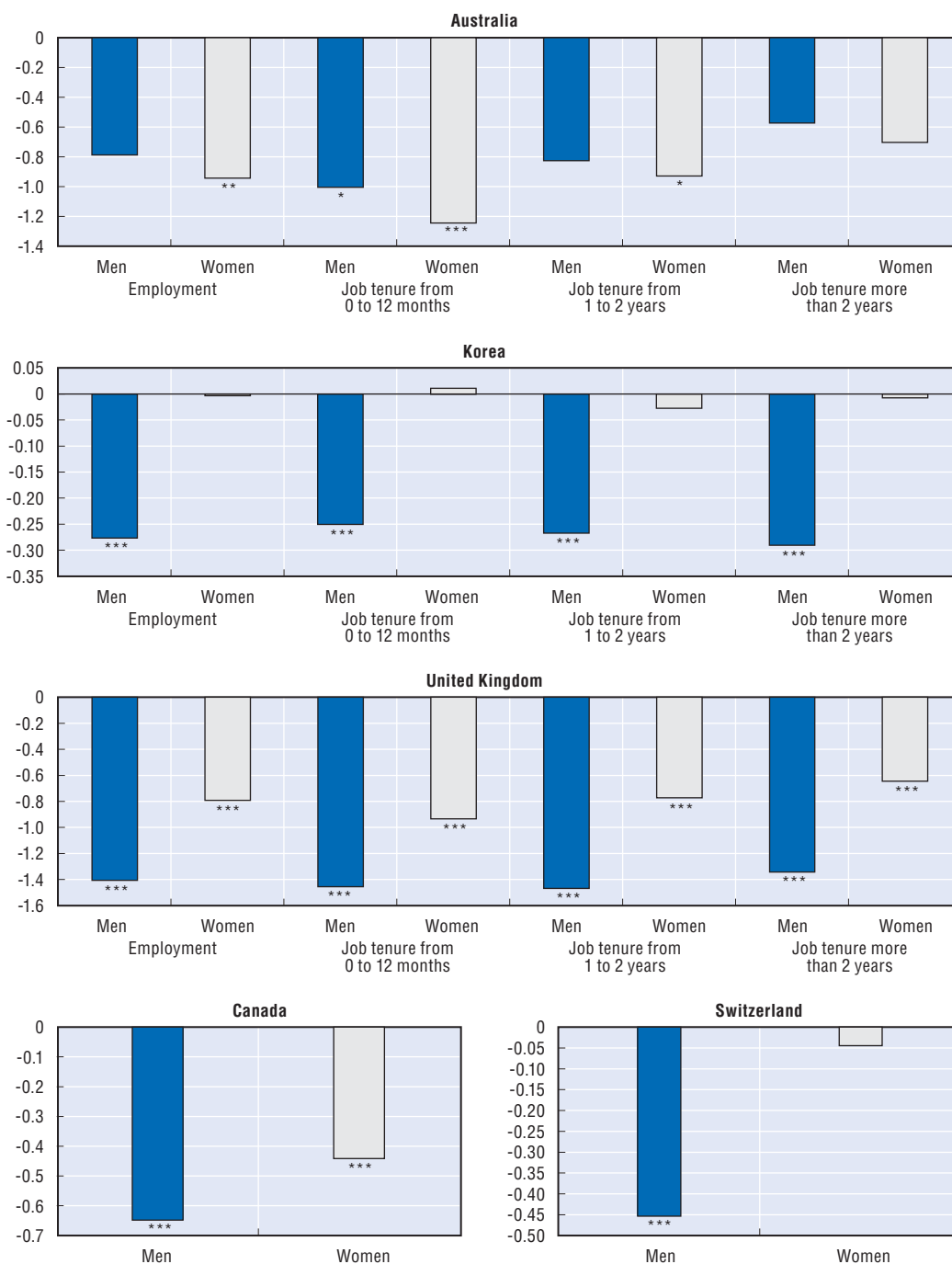
*, **, *** statistically significant at the 10%, 5%, and 1% level, respectively.

a) Sample includes persons aged 15-64 who are never enrolled in school or retired during the period analysed of the survey.

b) Regressions including controls for life events except for Korea.

Source: OECD estimates based on the HILDA for Australia; the NPHS for Canada; the KLIPS for Korea; the SHP for Switzerland; and the BHPS for the United Kingdom. See *OECD Employment Outlook 2008* for details on the dependent and control variables.

Figure 1.A2.2. ... while finding a job results in improved mental health

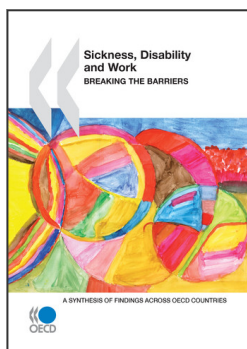
Fixed-effects regressions^{a, b}

*, **, *** statistically significant at the 10%, 5%, and 1% level, respectively.

a) Sample includes persons aged 15-64 who are never enrolled in school or retired during the period analysed of the survey.

b) Regressions including controls for life events except for Korea.

Source: OECD estimates based on the HILDA for Australia; the NPHS for Canada; the KLIPS for Korea; the SHP for Switzerland; and the BHPS for the United Kingdom. See *OECD Employment Outlook 2008* for details on the dependent and control variables.



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