PART III

Chapter 7

Changes in Redistribution in OECD Countries Over Two Decades*

This chapter takes stock of tax and transfer redistribution policies in OECD countries over the two decades preceding the global downturn in 2008. It begins by looking at evidence for the inequality-reducing effects of taxes and benefits. It considers trends in aggregate spending and revenues, shows how different components of taxes and benefits have evolved over time, and briefly discusses the influence of cyclical factors on the observed patterns. The chapter then uses household-income data to produce and compare a range of commonly used redistribution and progressivity indicators. Finally, it summarises policy changes and offers a detailed analysis of the role of policy in driving observed redistribution trends.

7.1. Introduction

Have government redistribution policies slowed or accelerated the trend towards greater income disparities, and to what extent? How did policy and economic changes, such as patterns of unemployment, low-wage work and working time, combine to change the redistributive role of the welfare state prior to the onset of the global recession? Did redistribution decline overall, or did the changes mainly affect the type of redistribution taking place, without eroding the overall capacity for reducing inequality? This chapter seeks to answer those questions.

Following common usage of the term, the chapter takes "redistribution" to mean reduction of household income inequality. Tax and benefit payments are said to "redistribute" if they lower inequality, regardless of the extent to which this is achieved through actual or implicit transfers from higher to lower-income groups.[1] As in other parts of this report, changes in the income distribution are analysed here using "snapshots" for individual years. The reference period is the mid-1980s to the mid-2000s.

There exist several recent detailed national studies of redistribution trends (*e.g.* Riihelä *et al.* [2008] for Finland and Adam and Browne [2010] for the United Kingdom). International comparisons tend to focus on specific parts of the tax-benefit system (Heady *et al.*, 2001; Wagstaff and van Doorslaer, 2001; Wagstaff *et al.*, 1999). Multi-country comparative studies that consider the entire tax-benefit system are rare, and mostly limited to a particular point in time (Immervoll *et al.*, 2006).

Point-in-time comparisons are sometimes thought problematic since large institutional differences between countries, notably in terms of the balance between public and private provision or cash transfers *versus* benefits in-kind, make it difficult to interpret country differences in terms of a particular portion of the redistribution system (Blackburn and Bloom, 1994). This is less of an issue when the focus is on comparing *changes* across countries, as overall institutional setups (as well as measurement choices in the underlying data) tend to vary less over time than they do cross-nationally.

This chapter extends and deepens the analysis in OECD (2008), using the OECD's tax-benefit models to show the combined effects of recent policy reforms on different family types and at different points in the earnings and income distribution. It attempts to gauge the effects of taxes and benefits over a longer time period and for as many countries as data permit.[2]

Unlike most existing studies, it explicitly focuses on the non-elderly population (those aged 15-64).[3] Restricting the analysis to the non-elderly avoids some of the problems inherent to comparisons of incomes between people who are at very different stages in their lives. For instance, an essential function of old-age pensions is to redistribute *intertemporally* over the life cycle; a focus on the non-elderly helps in understanding the most important elements of interpersonal redistribution.

It is important to understand the mechanisms that have led to the observed changes in redistribution. A question of considerable policy relevance is to what extent changes can be attributed to direct policy action or to other factors that are not amenable to influence by policy makers. Since tax burdens and benefit entitlements depend on incomes and population characteristics, a given tax-benefit system can become more or less effective at reducing inequalities, even if policy rules remain unchanged. For instance, when unemployment goes up, measured redistribution is likely to increase even with constant benefit amounts per job seeker, simply because more people claim unemployment benefits. Similarly, a progressive income tax will redistribute more if taxable incomes become more dispersed (or very little if everybody earns about the same).

As drivers of distributional outcomes, earnings, labour force participation and family structures are certainly more difficult to control for policymakers than tax-benefit parameters such as tax rates, benefit amounts or entitlement rules. For policy analysis purposes, it is therefore informative to distinguish between changes in redistribution that can be directly attributed to tax-benefit policy reforms (referred to as "direct policy changes" in what follows), and those that have occurred as a result of the evolution of market incomes or population structures (referred to as "income and population changes").

The objective of this chapter is to take stock of tax and transfer redistribution policies in OECD countries and to summarise policy changes in the two decades prior to the onset of the global recession in 2008. The following key findings emerge:

- In most countries, the extent of redistribution - driven by benefits systems - increased overall in the two decades to 2005 although it did not prevent inequality from rising. In fact, market-income inequality grew by twice as much as redistribution.

- From the mid-1980s to 2005, redistribution systems appeared to be more successful at offsetting growing income gaps at the bottom than at the top.

- Benefits had a much stronger impact on inequality than the other main instruments of cash distribution - social contributions or taxes.

- In a number of countries, policy changes resulted in nominally more generous benefit entitlements overall. Benefit recipients in the lowest income groups, however, slipped further down the income distribution as their benefits failed to keep pace with earnings growth.

- The most important benefit-related determining factor in overall distribution, however, was not benefit levels but the number of people entitled to transfers. Receipt of incapacity benefits tended to rise while unemployment benefit receipt fell in a majority of countries in part the consequence of tighter unemployment benefit eligibility rules.

- Income tax reforms did little to ease inequality because the lower income taxes and more progressive taxation have opposite effects on redistribution so partly cancelled each other out.

- Changes in tax burdens and benefit entitlements were mostly regressive between 1995 and 2005, particularly for single individuals and childless families. For families with children, they were less regressive and even progressive in a handful of countries.

- Social security contributions redistributed very little despite their growing importance as a revenue source. They may even have been regressive where contribution ceilings were in place.

● Overall, tax-benefit policies offset some of the large increases in inequality attributable to growing market-income disparities, the main driver of inequality trends between the mid-1980s and the mid-1990s. However, from the mid-1990s to 2005, the reduced redistributive capacity of tax-benefit systems was sometimes the main source of widening household-income gaps.

7.2. Measured changes in redistribution

Taxes and cash benefits are the most direct policy levers for governments to influence distributional outcomes.[4] Their quantitative importance for household economic well-being is summarised in Figure 7.1. Income taxes and social contributions paid by working-age households amount to more than 25% of earned market incomes when averaged across countries. In most countries, average cash benefits received by these households are significantly smaller than average income-tax burdens. Working-age households are thus net taxpayers on average. These taxes go towards financing other public expenditures, such as publicly provided services, current transfers to the elderly and own future pension entitlements.

The extent of interpersonal redistribution is evident from looking at how much is paid and received by different income groups. The poorest 20% are net benefit recipients in almost all countries, with cash transfers adding up to around two thirds of market income on average. For the richest 20%, benefits represent only 6% of market incomes on average and the rich also face higher tax burdens. Relative to market income (labour and capital income taken together), cash benefits differ much more across income groups than taxes and are therefore the main drivers of redistribution from rich to poor. However, even if tax payments are less redistributive directly, they finance transfers and thus serve a crucial redistributive role.

The size of the redistribution system: aggregate expenditures and revenues

Social expenditure levels have increased markedly in most countries over the past decades. Across 29 countries with data for all three periods, the average expenditure-to-GDP ratio grew from 17.0% of GDP in 1985 to 19.3% in 1995 and 20.1% in 2005 (Annex Table 7.A1.1).[5] The only countries with significantly declining public social spending ratios (more than 4 points) are Ireland and the Netherlands. However, almost all countries devoted *declining* shares of total spending to cash benefits that mostly benefit children and working-age individuals.[6] On average the share of these "non-elderly" benefits declined from 26.5% in 1985 to 21.4% in 2005.[7] Despite growing overall public social expenditure, this drop is sufficiently large to translate into a significant reduction of "non-elderly" benefit expenditure relative to GDP on average (from 4.9 to 4.5% across 29 countries). Between the mid-1980s and the mid-1990s, however, sizable reductions were only observed in a few countries (Belgium, France, Ireland, Netherlands) while the majority of countries recorded increases. Most of the drop in "non-elderly" benefit expenditures thus occurred since the mid-1990s, when most OECD countries recovered from an economic downturn, and spending on cyclical income-support measures was high (and GDP low) as a result.

A closer inspection of the time profile of social expenditure levels help shed light on the relative roles of cyclical and structural factors. Immervoll and Richardson (2011) show that, relative to GDP, total social spending goes up significantly during contractions and that spending increases can be large during and after deep recessions, such as in Finland or Sweden in the early 1990s, or in Korea in 1998. However, spending on "non-elderly" cash

Figure 7.1. **Overall amounts of taxes paid and benefits received in the mid-2000s**
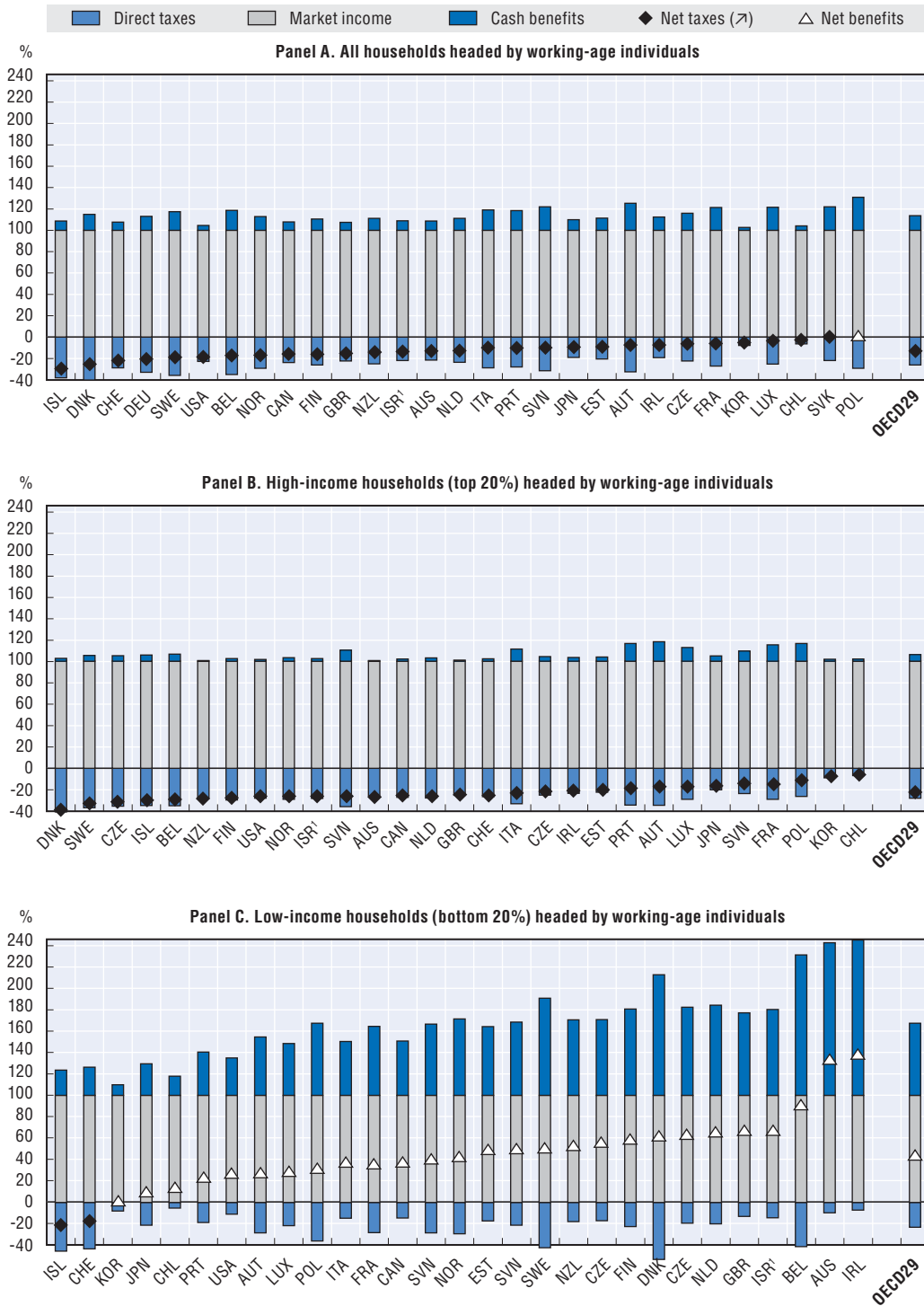
Note: Countries are ranked by the impact of the redistribution system on household income, *i.e.*, by net taxes (taxes *minus* benefits).

1.   Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*.

Source: Calculations from the *OECD Database on Household Income Distribution and Poverty* (*www.oecd.org/els/social/inequality*).

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Table 7.1. Tax revenues: trends and components

| | 1985 | | | | | | 1995 | | | | | | 2005 | | | | | |
| | Total % of GDP | Taxes on personal income | | | | | Total % of GDP | Taxes on personal income | | | | | Total % of GDP | Taxes on personal income | | | | |
		% of GDP	Total	Income tax	Social contributions	Unallocated		% of GDP	Total	Income tax	Social contributions	Unallocated		% of GDP	Total	Income tax	Social contributions	Unallocated
Australia	28.3	12.8	45.2	45.2	0.0	0.0	28.8	11.7	40.6	40.6	0.0	0.0	30.8	12.2	39.7	39.7	0.0	0.0
Austria	40.8	15.9	38.9	22.9	15.9	0.0	41.4	16.6	40.2	20.9	18.3	1.1	42.3	17.2	40.7	22.0	18.2	0.6
Belgium	44.4	21.6	48.7	35.6	13.1	0.0	43.6	19.9	45.7	32.6	13.1	0.0	44.7	19.1	42.6	30.5	12.1	0.0
Canada	32.5	13.1	40.4	35.2	4.8	0.3	35.6	15.4	43.4	37.5	5.4	0.4	33.4	14.3	42.7	35.6	6.5	0.7
Czech Republic	40.4	3.6	8.9	8.9	0.0	0.0	37.5	10.2	27.2	12.8	14.4	0.0	37.6	10.4	27.7	12.2	15.5	0.0
Denmark	46.1	24.7	53.5	50.7	1.7	1.1	48.8	28.1	57.6	53.8	2.2	1.6	50.8	27.1	53.4	49.0	2.1	2.3
Finland	39.7	16.9	42.7	37.4	5.3	0.0	45.7	18.4	40.3	31.1	9.2	0.0	44.0	16.5	37.6	30.7	6.9	0.0
France	42.8	11.5	26.8	11.5	15.3	0.0	42.9	12.0	28.0	11.4	16.6	0.0	43.9	13.2	30.0	18.0	12.0	0.0
Germany	36.1	16.7	46.3	28.7	17.6	0.0	37.2	17.5	47.1	27.5	19.6	0.0	34.8	15.3	44.0	23.3	20.7	0.0
Greece	25.5	8.5	33.4	13.9	15.8	3.7	28.9	9.1	31.6	12.0	17.6	2.0	31.4	10.7	34.1	14.6	19.3	0.2
Hungary	45.2	10.4	23.0	14.8	6.9	1.3	41.3	9.6	23.2	16.1	6.8	0.2	37.3	9.2	24.5	18.0	6.3	0.3
Iceland	28.2	5.5	19.7	19.5	0.2	0.0	31.2	9.8	31.5	31.1	0.3	0.0	40.6	17.0	41.8	34.8	0.0	7.0
Ireland	34.7	12.7	36.6	31.3	5.3	0.0	32.5	11.8	36.2	30.7	5.6	0.0	30.4	10.0	33.1	27.3	5.8	0.0
Italy	33.6	12.5	37.1	26.7	9.9	0.4	40.1	14.9	37.1	26.0	10.7	0.3	40.8	14.1	34.5	25.5	9.4	-0.4
Japan	27.4	10.8	39.6	24.7	14.8	0.0	26.8	10.7	39.8	22.4	17.5	0.0	27.4	10.5	38.4	18.3	20.1	0.0
Korea	15.7	2.2	14.2	13.4	0.0	0.8	18.6	4.0	21.3	19.2	2.0	0.2	23.9	6.1	25.4	13.3	12.1	0.0
Luxembourg	39.4	15.3	38.9	25.6	13.4	0.0	37.1	13.3	35.9	21.7	14.2	0.0	37.6	13.0	34.7	19.0	15.7	0.0
Mexico	15.5	2.9	18.6	0.0	0.0	18.6	15.2	3.6	23.5	0.0	0.0	23.5	18.1	4.1	22.5	0.0	0.0	22.5
Netherlands	42.4	19.5	45.9	19.4	26.5	0.0	41.5	22.5	54.1	18.9	35.2	0.0	38.5	15.9	41.2	18.0	23.2	0.0
New Zealand	31.3	19.0	60.8	60.5	0.0	0.3	36.6	17.3	47.2	45.0	0.0	2.2	37.4	16.3	43.6	41.1	0.0	2.6
Norway	42.6	12.3	28.9	22.5	6.4	0.0	40.9	14.5	35.6	25.9	9.7	0.0	43.5	13.2	30.3	22.2	8.1	0.0
Poland	34.9	7.1	20.2	20.2	0.0	0.0	36.2	8.3	22.9	22.9	0.0	0.0	33.0	11.3	34.3	11.9	22.4	0.0
Portugal	25.2	6.0	23.8	0.0	10.7	13.1	32.1	9.1	28.4	17.3	11.1	0.0	34.7	9.4	27.2	15.6	11.6	0.0
Slovak Republic	..	..	..	..	..	..	36.7	10.0	27.3	11.8	14.2	1.3	31.4	8.4	26.8	8.4	18.0	0.4
Spain	27.6	8.2	29.7	19.4	10.1	0.1	32.1	11.2	34.8	23.6	11.2	0.1	35.7	9.7	27.2	17.9	9.0	0.3
Sweden	47.4	18.9	39.9	38.7	1.1	0.0	47.5	17.8	37.4	33.5	4.0	0.0	49.5	18.5	37.4	31.6	6.0	-0.1
Switzerland	25.5	13.2	51.7	39.2	12.4	0.0	27.7	14.1	51.0	36.3	14.7	0.0	29.2	14.2	48.8	35.7	13.1	0.0
Turkey	11.5	3.8	33.5	27.5	6.0	0.0	16.8	4.6	27.4	21.6	5.8	0.0	24.3	6.5	26.9	14.7	12.2	0.0
United Kingdom	37.0	12.9	34.8	26.0	8.9	-0.2	34.0	12.6	36.9	28.8	8.1	0.0	35.8	13.5	37.6	29.1	8.5	0.0
United States	25.6	12.6	49.3	37.8	11.5	0.0	27.9	13.3	47.9	35.8	12.1	0.0	27.5	12.9	47.0	35.1	11.9	0.0
Unweighted average	*33.3*	*12.1*	*35.5*	*26.1*	*8.1*	*1.4*	*34.7*	*13.2*	*37.0*	*26.1*	*9.8*	*1.1*	*35.8*	*13.2*	*36.2*	*24.3*	*10.6*	*1.2*

Note: Social contributions refer to the amounts paid by households only.
Source: OECD revenue statistics.

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benefits is less cyclical. In about one third of OECD countries, changes in other categories of social spending, including "old-age", "health" and "active labour market programmes", account for a quantitatively bigger share of cyclical increases in social spending (Austria, Belgium, Canada, Chile, Israel,[8] Italy, Japan, Korea, Norway, Poland, Portugal). In a number of countries, government spending on cash transfers to working-age individuals and families has remained more or less constant over the entire period (Austria, the Czech Republic, France, Germany, Greece, Japan, Korea, Portugal, Spain), despite sometimes sizable trend increases in total spending-to-GDP ratios.

A similar comparison can be made on the revenue side. Even if it is not possible to approximate the share of taxes that are paid by "non-elderly" households only, Table 7.1 shows that, like social expenditures, total government revenues have also increased on average across OECD countries (from 33% in the mid 1980s to 36% in 2005). But, unlike in the case of social expenditures, the shares of the total that are typically accounted for in redistribution studies, have gone up as well (from just under 35.5% of total revenues in 1985 to just over 36% in 2005). Some direct taxes are much more progressive than others. It is therefore important to distinguish the trends for personal income tax (PIT) which generally employ progressive tax schedules from social contributions which can be regressive, consuming a bigger part of the incomes of low-to-middle income earners than of higher-income groups.

A closer inspection of annual revenue statistics since the mid-1980s indicates that PIT revenues are significantly more volatile over the period while, because of their flat or regressive rate structure, SSC revenues vary much less over the economic cycle. PIT account for over a quarter of all revenues. The 20-year period up to 2005 has seen its share fall somewhat, but since total government revenues have gone up, PIT revenues as a percentage of GDP have remained constant on average across countries (at 8.7%). In contrast, the share of the less progressive, and possibly regressive, social security contributions (SSC) has increased by more than 2 percentage points, from 8.1% of GDP in 1985 to 10.6% in 2005.[9] Overall, these revenue trends do not point clearly at either more or less redistribution through direct taxes in most countries.

Three main other categories of government revenue – indirect taxes, wealth and property taxes, as well as business taxes – are not accounted for in the assessments of income inequality and redistribution below. It is nevertheless interesting to speculate what aggregate trends in these non-income related taxes imply for the relative tax burdens of different income groups. OECD revenue statistics data show that, among these other taxes, those that tend to be disproportionally borne by higher-income groups (*e.g.*, wealth and property taxes) became less important. Perhaps contrary to common perception, indirect taxes, which consume a greater part of income for lower-income groups, have declined as a share of total tax revenues (from 34% in 1985 to 32% in 2005), despite a significant increase in revenues from value-added taxes (OECD, 2007c). Finally, and unlike contributions paid by employees, payroll taxes and social contributions paid by employers have tended to decline slightly between 1985 and 2005.

Changes in the extent of redistribution: evidence from household income data
Redistribution in the tax-benefit systems as a whole

Chapter 6 has indicated that market incomes of working-age individuals have become more unequal in most OECD countries. Tables 7.2 and 7.3 show inequality trends for

market incomes (Gm, including any private transfers) and disposable incomes (Gd, market incomes plus cash benefits minus income taxes) and confirm these findings in more detail.[10] Over the periods considered, market incomes in "working-age" households have become more unequal everywhere except in the Netherlands and Switzerland.[11] In most cases, market-income inequality increased more strongly during the first half of the two decades. In addition, most of the countries with data going back further have seen large increases in market-income Gini coefficients before the mid-1980s. Only the data for West Germany show a greater increase in market-income inequalities during the more recent period of the mid-1990s to mid-2000s.

Table 7.2. **Redistribution: general country trend**

Inequality before and after taxes and transfers[1]

Countries with full tax and benefit information for mid-1980s, mid-1990s and mid-2000s[2]

		Market income		Disposable income	Redistribution			
		Gm	Change, % of base period	Gd	Gm-Gd	% of Gm [4]/[1]	Change, % of base-period Gm	[6]/[2]
		[1]	[2]	[3]	[4]	[5]	[6]	[7]
12-country average	mid-1980s	36.2		26.7	9.5	26.4		
	mid-1990s	39.2	8.2	27.4	11.7	29.9	6	73
	mid-2000s	39.8	9.8	28.3	11.4	28.7	5	53

Gm = Gini coefficient of inequality of market income.
Gd = Gini coefficient of inequality of disposable income.
1. Households headed by a working-age individual (15-64, except in Sweden where 25 was chosen as the age cut-off in order to minimise the impact of a change in the definition of a household that occurred in the mid-1990s). Gini values (G) are shown in percent. All measures are based on equivalised household income using the square-root equivalence scale. Standard LIS practice was followed for top- and bottom-coding (see *www.lisdatacenter.org*).
2. Australia, Canada, Denmark, Finland, West Germany, Israel (Information on data for Israel: *http://dx.doi.org/ 10.1787/888932315602*), Netherlands, Norway, Sweden, Switzerland, United Kingdom, United States.
Source: OECD Secretariat calculations from the Luxembourg Income Study (LIS).

StatLink *http://dx.doi.org/10.1787/888932537978*

Using the data reported in Table 7.3 (column 2), averaging across years, and extrapolating trends for countries where available data cover only a short period, it can be shown that inequality of market income has, on average, increased by 16% over a ten-year period across the countries shown. This is a very substantial increase over a relatively short period of time and the same order of magnitude as the reduction in inequality among the non-elderly population that is achieved by the entire tax-benefit system in some countries (*e.g.*, Switzerland or the United States). Market-income inequality has been the main driver of inequality trends in disposable incomes,[12] but redistribution policies had a substantial effect as well, especially since the mid-1990s.

The difference between the Gini values for market incomes and disposable incomes is a measure of the overall redistributive effect of taxes and transfers (column 4 in Tables 7.2 and 7.3). Between the mid-1980s and the mid-1990s, redistribution systems compensated nearly three quarters of the increase in market-income inequality (column 7). The upwards trend in market-income inequality then continued after the mid-1990s, but at a much slower pace. Yet, inequality of household disposable income (column 3) rose more quickly in the second decade. Although the rise in market-income inequality slowed significantly, government redistribution became less effective at offsetting growing inequalities. In

Table 7.3. **Redistribution trends: detailed results by country**

Inequality before and after taxes and transfers

		Standard Gini						
		Market income		Disposable income	Redistribution			
		Gm	Change, % of base period	Gd	Gm-Gd	% of Gm [4]/[1]	Change, % of base-period Gm	Compensation ratio ([6]/[2])
		[1]	[2]	[3]	[4]	[5]	[6]	[7]
Australia	1981	0.37		0.28	0.09	24		
	1985	0.39	5	0.29	0.10	26	3	68
	1989	0.40	8	0.30	0.10	24	2	30
	1995	0.43	17	0.30	0.13	29	11	63
	2001	0.44	19	0.31	0.13	29	11	56
	2003	0.42	15	0.30	0.12	28	9	57
Canada	1981[1]	0.34		0.28	0.06	19		
	1987[1]	0.37	7	0.29	0.08	22	5	63
	1991[1]	0.39	13	0.29	0.10	26	10	81
	1994[1]	0.40	16	0.29	0.11	27	13	77
	1997[1]	0.39	14	0.29	0.10	25	9	68
	1998[2]	0.42	21	0.31	0.10	25	12	55
	2000[2]	0.41	19	0.32	0.09	22	7	39
	2004[2]	0.41	19	0.32	0.09	22	7	36
Czech Republic	1992	0.34		0.20	0.13	40	0	
	1996	0.36	8	0.26	0.11	30	−8	−94
	2004	0.41	21	0.27	0.14	33	1	3
Denmark	1987	0.33		0.23	0.10	30		
	1992	0.37	11	0.22	0.14	39	13	126
	1995	0.36	9	0.20	0.16	44	18	195
	2000	0.35	7	0.21	0.14	40	13	197
	2004	0.36	9	0.22	0.14	40	14	151
Finland	1987	0.30		0.20	0.10	34		
	1991	0.31	2	0.20	0.11	35	2	95
	1995	0.37	23	0.21	0.16	43	19	80
	2000	0.39	31	0.24	0.15	39	17	56
	2004	0.39	31	0.24	0.15	38	16	50
Germany	1994	0.37		0.27	0.10	27		
	2000	0.38	4	0.26	0.12	31	5	139
	2004	0.40	9	0.28	0.12	31	7	78
Western Germany	1981[1]	0.30		0.23	0.07	23		
	1984[2]	0.35	17	0.26	0.10	27	9	50
	1989[2]	0.34	11	0.25	0.09	26	5	48
	1994[2]	0.36	19	0.27	0.09	24	6	32
	2000[2]	0.37	23	0.27	0.11	29	12	52
	2004[2]	0.39	28	0.28	0.11	29	14	50
Israel*	1979	0.38		0.29	0.09	24		
	1986	0.43	13	0.30	0.13	30	9	74
	1992	0.42	11	0.30	0.12	29	8	78
	1997	0.46	20	0.33	0.13	28	9	48
	2001	0.49	29	0.34	0.15	30	15	52
	2005	0.48	26	0.37	0.11	23	5	18
Netherlands	1983	0.41		0.28	0.13	32		
	1987	0.40	−3	0.26	0.14	35	3	−103
	1991	0.36	−12	0.26	0.10	27	−8	62
	1994	0.39	−7	0.26	0.13	33	−1	8
	1999	0.33	−22	0.23	0.10	30	−8	39

Table 7.3. **Redistribution trends: detailed results by country** *(cont.)*

Inequality before and after taxes and transfers

		Standard Gini						
		Market income		Disposable income	Redistribution			
		Gm	Change, % of base period	Gd	Gm-Gd	% of Gm [4]/[1]	Change, % of base-period Gm	Compensation ratio ([6]/[2])
		[1]	[2]	[3]	[4]	[5]	[6]	[7]
Norway	1979	0.29		0.21	0.08	28		
	1986	0.28	−5	0.22	0.06	22	−7	157
	1991	0.32	9	0.23	0.09	30	4	46
	1995	0.32	10	0.22	0.10	32	7	72
	2000	0.35	18	0.25	0.10	29	6	34
	2004	0.38	29	0.25	0.13	33	15	51
Poland	1999	0.42		0.29	0.13	31		
	2004	0.47	12	0.33	0.14	29	2	19
Sweden	1981[1]	0.30		0.19	0.12	38		
	1987[1]	0.31	3	0.19	0.12	39	2	54
	1992[1]	0.35	16	0.20	0.15	43	11	70
	1995[1]	0.37	23	0.20	0.18	48	20	87
	2000[2]	0.37	24	0.24	0.14	37	7	30
	2005[2]	0.37	21	0.22	0.15	40	10	46
Switzerland	1982[1]	0.33		0.30	0.03	8		
	1992[2]	0.33	0	0.30	0.03	8	0	−17
	2000	0.32	−4	0.28	0.04	13	4	−101
	2002	0.32	−3	0.27	0.05	17	8	−271
	2004	0.31	−5	0.26	0.06	18	8	−167
United Kingdom (GB only)	1979[1]	0.33		0.26	0.08	23		
	1986[1]	0.43	28	0.30	0.13	30	15	52
	1991[2]	0.43	29	0.33	0.10	24	7	26
	1994[2]	0.46	38	0.34	0.12	27	13	35
	1995[1]	0.46	39	0.35	0.12	25	12	31
	1999[2]	0.46	37	0.35	0.11	24	10	28
	2004[2]	0.45	35	0.35	0.11	23	8	24
United States	1979	0.37		0.30	0.07	20		
	1986	0.41	9	0.34	0.07	18	−1	−7
	1991	0.41	9	0.34	0.07	18	0	−3
	1994	0.45	20	0.37	0.08	18	2	9
	1997	0.45	20	0.37	0.08	17	0	1
	2000	0.44	18	0.37	0.08	17	1	3
	2004	0.45	21	0.37	0.08	18	2	9

Note: See notes to Table 7.2. In case of a statistical break in the series, the superscripts next to the year correspond to different data sources.
Gm = Gini coefficient of inequality of market income.
Gd = Gini coefficient of inequality of disposable income.
* Information on data for Israel: *http://dx.doi.org/10.1787/888932315602.*
Source: OECD Secretariat calculations from the Luxembourg Income Study (LIS).

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absolute terms, redistribution weakened (column 4) despite a continuing widening of the market-income distribution (column 1). Over the two decades as a whole, market-income inequality rose by about twice as much as redistribution (column 7). Taxes and transfers now lower inequality by about 29% (column 5); more than in the mid-1980s, but less than in the mid-1990s.

Country-specific results are presented in Table 7.3. Tax-benefit systems in the Nordic countries, the Czech Republic and Poland achieve the greatest reduction in inequality, lowering the Gini value by 13 points or more in the mid-2000s, while the smallest redistributive effect is seen in Switzerland, the United States and Canada (less than 9 points). The country results for the decade from the mid-1980s to the mid-1990s demonstrate that it is possible for tax-benefit systems to be quite effective at stabilising inequality even during periods of rapidly growing market-income disparities. The extent of inequality cushioning was strongest in Canada, Denmark, Finland and Sweden, where trends towards more extensive government redistribution offset more than 70% of the rise in market-income inequality up until the mid-1990s.

In line with the country average, redistribution in these countries has become less effective at countering growing earnings gaps since then. For instance, in Finland, greater equalisation through taxes and benefits offset more than three quarters of the 23% increase in market-income inequality up until 1995, but by 2004, this has dropped to 50%. In a majority of countries, redistribution has *declined* since the mid-1990s – in absolute terms (column 4) and often more strongly as a percentage of the market-income Gini (column 5).

By contrast, in Germany, where unemployment was high in the mid-90s and in the mid-2000s, the tax-benefit system became more redistributive. The same is true in Norway, although the accelerating growth in market-income inequality nevertheless resulted in a less equal distribution of disposable income. In the United States, the Gini coefficient for market incomes rose by eight points between the late 1970s and the mid-2000s, but redistribution increased only very slightly, offsetting less than one tenth of this increase (column 7). Israel and the United Kingdom are two other countries where only a small part of the increase in market-income inequality has been compensated over the period as a whole.

Due to data limitations, English-speaking countries and Northern Europe are overrepresented in the data discussed so far. Data for ten additional countries are available only on an after-tax basis. Without accounting for taxes, the broad result of rising inequalities despite more government redistribution holds for these countries as well. Only in Austria have benefits become sufficiently redistributive to more than offset the greater inequality in after-tax incomes between the mid-1990s and mid-2000s.

One would expect a positive link between levels of market-income inequality and redistribution even in the absence of any conscious policy effort to counter inequality trends (Musgrave and Thin, 1948; Dardoni and Lambert, 2002): because of the progressivity built into tax-benefit systems, a more dispersed market-income distribution (*e.g.*, due to higher unemployment) "automatically" strengthens the equalising effect of an unchanged policy configuration. For instance, it is interesting to note the very strong increase in total redistribution during the first Thatcher government in the United Kingdom (Table 7.3), which cannot be explained by policy reforms.

Figure 7.2 plots redistribution coefficients (from column 4 in Table 7.3) against market-income inequality and illustrates the mostly positive correlation between the two, both within countries (dashed regression lines) and across all observations (solid line). The scatter plot suggests, however, that this link is stronger in some countries than in others. The flat trend line for the United States is, for instance, consistent with relatively weak automatic inequality-dampening properties of the US tax-benefit system.

Figure 7.2. **Redistribution tends to be higher when incomes are more unequal**
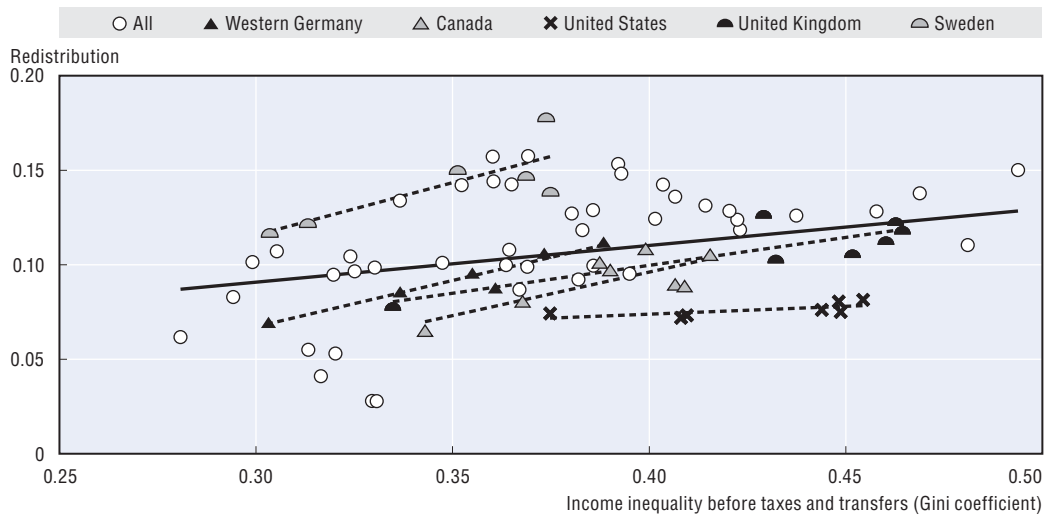
Note: See notes to Table 7.2. Redistribution is the absolute difference between the Gini coefficients before and after taxes and transfers. The data points refer to all observations available for all countries included in Table 7.3.
Source: OECD Secretariat calculations from the Luxembourg Income Study (LIS).

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The sometimes sizable departures from the average correlation suggest that policy interventions have played an important role, in addition to the automatic "brake" that progressive tax-benefit systems have put on inequality trends. The data in Table 7.3 illustrate episodes in a number of countries where reductions in the redistributive capacity of taxes and benefits have sometimes occurred in parallel with increasing market-income inequality (Australia 1985-89, the Czech Republic 1992-96, Finland 1995-2004, Israel 1997-2005, United Kingdom 1986-95, and United States 1979-86 and 1994-97). In these cases, policy reforms have accelerated the trend towards greater income inequality. In a few cases, redistribution has declined by a sufficient margin to push up inequality after taxes and benefits despite a fall in the market-income Gini (Denmark 1995-2000, Israel 2001-05, Norway 1979-86, and the United Kingdom 1994-2004).

Did changes in redistribution affect mainly households with higher or lower incomes?

At the bottom of the income distribution, changes in inequality are driven to a large extent by joblessness and the labour-market situation of low-skilled workers, as well as the availability and generosity of social benefits. At the top, capital incomes and tax policy are more important. In order to gauge how redistribution systems have responded to changes at both ends of the distribution, it is useful to calculate alternative Gini and redistribution measures that put more weight on the situation of low-income groups.[13] Such measures are reported in Table 7.4, alongside a second set of measures that place more weight on high-income groups.

Results show that redistribution systems in most countries were somewhat more successful at offsetting growing income gaps at the bottom than at the top. For instance, in Germany, the tax-benefit system compensated almost 82% of rising income inequalities between 1994 and 2004 when more weight is put on low-income groups ("compensation ratio" in column 3), compared with 73% when income gaps at the top receive more weight. One notable implication of this result is that benefits (which are

Table 7.4. **A higher degree of redistribution at the bottom than at the top of the income distribution**[1]

		More weight on low incomes (S-Gini, v=3)[3]			More weight on high incomes (S-Gini, v=1.5)[3]		
		Change in market-income inequality[2]	Change in redistribution[2]	*Compensation ratio [2]/[1]*	Change in market-income inequality[2]	Change in redistribution[2]	*Compensation ratio [5]/[4]*
		[1]	[2]	[3]	[4]	[5]	[6]
Australia	1981	–	–	–	–	–	–
	1985	4	3	*73*	7	5	*65*
	1989	6	2	*29*	10	3	*30*
	1995	15	10	*71*	19	11	*57*
	2001	16	10	*62*	22	11	*50*
	2003	13	8	*63*	18	9	*51*
Canada	1981[1]	–	–	–	–	–	–
	1987[1]	6	4	*68*	8	5	*59*
	1991[1]	11	10	*86*	15	12	*77*
	1994[1]	15	12	*80*	18	13	*75*
	1997[1]	13	9	*72*	15	10	*66*
	1998[2]	18	10	*59*	25	13	*52*
	2000[2]	14	6	*42*	24	9	*36*
	2004[2]	15	6	*38*	24	8	*34*
Czech Republic	1992	–	–	–	–	–	–
	1996	6	–10	*–166*	10	–6	*–56*
	2004	17	–2	*–11*	24	3	*13*
Denmark	1987	–	–	–	–	–	–
	1992	10	12	*116*	10	14	*133*
	1995	8	16	*196*	9	19	*201*
	2000	6	12	*210*	8	15	*190*
	2004	8	12	*152*	10	15	*152*
Finland	1987	–	–	–	–	–	–
	1991	2	2	*100*	2	2	*92*
	1995	22	19	*88*	24	18	*73*
	2000	29	19	*63*	33	16	*49*
	2004	29	16	*56*	34	15	*45*
Germany	1994	–	–	–	–	–	–
	2000	3	5	*152*	4	5	*127*
	2004	8	6	*82*	9	7	*73*
Western Germany	1981[1]	–	–	–	–	–	–
	1984[2]	16	8	*50*	19	10	*50*
	1989[2]	9	5	*48*	13	7	*49*
	1994[2]	18	6	*31*	20	6	*32*
	2000[2]	21	11	*53*	25	13	*51*
	2004[2]	26	13	*51*	30	14	*47*
Israel[4]	1979	–	–	–	–	–	–
	1986	11	8	*72*	15	11	*77*
	1992	10	8	*78*	11	9	*81*
	1997	17	8	*45*	22	11	*50*
	2001	26	13	*51*	32	17	*52*
	2005	23	3	*13*	28	6	*22*
Netherlands	1983	–	–	–	–	–	–
	1987	–2	3	*–127*	–3	3	*–95*
	1991	–11	–6	*56*	–13	–9	*69*
	1994	–5	–1	*13*	–8	0	*3*
	1999	–20	–8	*39*	–22	–9	*39*

Table 7.4. **A higher degree of redistribution at the bottom than at the top of the income distribution**[1] *(cont.)*

		More weight on low incomes (S-Gini, v=3)[3]			More weight on high incomes (S-Gini, v=1.5)[3]		
		Change in market-income inequality[2]	Change in redistribution[2]	*Compensation ratio [2]/[1]*	Change in market-income inequality[2]	Change in redistribution[2]	*Compensation ratio [5]/[4]*
		[1]	[2]	[3]	[4]	[5]	[6]
Norway	1979	–	–	–	–	–	–
	1986	–4	–6	*151*	–5	–8	*155*
	1991	8	4	*52*	10	4	*39*
	1995	9	8	*83*	12	7	*59*
	2000	14	6	*39*	23	6	*28*
	2004	25	14	*55*	33	15	*45*
Poland	1999	–	–	–	–	–	–
	2004	9	1	*13*	13	3	*22*
Sweden	1981[1]	–	–	–	–	–	–
	1987[1]	2	1	*55*	4	2	*49*
	1992[1]	15	12	*81*	16	10	*59*
	1995[1]	21	21	*98*	25	19	*78*
	2000[2]	19	7	*37*	29	8	*27*
	2005[2]	18	10	*53*	25	11	*42*
Switzerland	1982[1]	–	–	–	–	–	–
	1992[2]	4	–1	*–36*	–3	1	*–28*
	2000[3]	0	5	*–3583*	–8	3	*–40*
	2002[3]	2	8	*524*	–7	7	*–95*
	2004[3]	1	10	*759*	–11	7	*–59*
United Kingdom (GB only)	1979[1]	–	–	–	–	–	–
	1986[1]	26	14	*53*	29	15	*50*
	1991[1]	26	7	*29*	32	7	*23*
	1994[2]	34	14	*41*	43	13	*30*
	1995[1]	35	12	*34*	43	12	*28*
	1999[2]	32	10	*31*	43	11	*26*
	2004[2]	30	9	*29*	40	8	*19*
United States	1979	–	–	–	–	–	–
	1986	7	–1	*–8*	10	–1	*–6*
	1991	8	0	*0*	10	–1	*–6*
	1994	16	1	*7*	23	2	*10*
	1997	14	0	*0*	26	0	*2*
	2000	12	0	*–3*	25	1	*4*
	2004	15	1	*6*	28	2	*9*

Note: Inequality measures that put greater weight on high-income groups need to be interpreted with care as a higher weight exacerbates measurement issues arising from the limited quality of higher-income data drawn from survey sources. These indicators are also more sensitive to the commonly used approach of top coding high incomes at ten times the median.

The first column of the table (change in market-income inequality) corresponds to column 2 in Table 7.3; the second column (change in redistribution) corresponds to column 6 in Table 7.3; and the third column (compensation ratio) corresponds to column 7 in Table 7.3.

1. See notes to Table 7.2.
2. Changes in the percentage of market-income inequality and in redistribution with regard to the base period.
3. S-Gini indicators are a generalised version of the Gini which allows for an "inequality aversion" parameter v (Donaldson and Weymark, 1980; Yitzhaki, 1983). A parameter v=2 corresponds to the standard Gini.
4. Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*

Source: OECD Secretariat calculations from the Luxembourg Income Study (LIS).

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more important for low-income groups) tended to be more responsive to growing inequalities than were taxes (which account for a greater part of incomes in the middle and at the top of the distribution).

Unlike in most other countries, tax-benefit systems in the Czech Republic, Israel, Poland and the United States were relatively less effective at countering growing disparities in the lower part of the income distribution. In these countries, redistribution offset only a relatively small part of the sizable increase in the market-income Gini, and an even smaller part when greater weight is attached to low-income households (13% in Israel and Poland, 6% in the United States, diminished redistribution in the Czech Republic). A possible explanation for this result is that benefits in these countries provide a lesser degree of income protection than in other countries, and that tax policy is therefore a relatively more important driver of inequality outcomes.

A closer look at the role of different parts of the redistribution system

How have the redistributive effects of the different parts of the tax-benefit system changed? Figure 7.3 compares the equalising effects at different stages of the redistribution process, with changes over time shown separately for benefits, social contributions and income taxes. "Benefits" include important tax credits that are akin to cash transfers (such as employment-conditional "in-work" tax credits in the United States and the United Kingdom). "Social contributions" include only that part that is formally paid by households while employer contributions and payroll taxes are not considered. To gauge what drove changes in redistribution, Figure 7.3 also shows changes in both the size and the progressivity of each of the three redistribution instruments. Box 7.1 explains how these indicators were calculated.

Over the whole period, benefits have become *more* important for reducing inequalities in most of the 15 countries studied (top graph of Figure 7.3, Panel A). But since the mid-1990s, benefits became less effective at reducing inequality in half of the countries. Where the redistributive effect of benefits increased strongly, the trend was largely driven by growing average benefit amounts (Finland, Germany, Norway, and Switzerland). This can be seen from the middle graph of Figure 7.3, Panel A, which expresses the size of benefits in terms of a "tax rate" measure (and therefore shows negative values for benefits, see Box 7.1).

The degree of benefit progressivity has changed less in most countries (bottom graph of Figure 7.3, Panel A). In general, where benefits did become more or less targeted towards the poor since the mid-1980s, this did not change the overall trend in redistribution that would result from trends in average benefit rates alone. That said, benefits in the United Kingdom did, however, become less redistributive despite being now more tightly targeted towards the poor. The opposite holds for Germany. The relatively small change in benefit progressivity, and its limited impact on the redistribution properties of cash transfers over a 20-year period, means that benefit size has been the main driver of the redistributive effect of transfers.[14] This also indicates the potential difficulties of maintaining redistribution in a context of declining budgets for social spending.

The orders of magnitude in Figures 7.3, Panels A-C show that benefits have a stronger impact on inequality than social contributions or taxes, despite the bigger size indicator for direct taxes and, hence, their bigger average impact on household incomes. Indeed, the maximum change in redistribution is less than 2 points for taxes and contributions (in

Box 7.1. **Measuring redistribution achieved by individual parts of the tax-transfer system**

Accounting for the integration of individual measures into the overall tax-benefit system

In principle, the redistributive effect of individual parts of the tax-benefit system can be measured in the same way as for all taxes and transfers taken together. For instance, to calculate the redistributive effect of taxes, one could calculate a Gini value of market incomes *minus* taxes and subtract it from the Gini value of market incomes. Likewise, the equalising effect of benefits could be determined by comparing Gini values for net-of-tax incomes on one hand, and net-of-tax incomes *plus* benefits (disposable income) on the other.

Applying this approach in practice is not straightforward, however. The reason is that benefits and taxes interact with each other in different ways across countries. The sequence used for the Gini comparisons of the different tax/benefit elements can make a significant difference for the results. For instance, when benefits are taxable, many benefit recipients with zero market incomes will have positive tax burdens which can make the tax appear regressive. Likewise, determining the redistributive power of benefits based on comparing market incomes and market incomes *plus* benefits can provide a misleading picture if benefit amounts depend largely on after-tax incomes (as is the case when benefits are comprehensively means-tested).

Because the appropriate sequence will depend on the structure of the specific tax-benefit system, choosing an arbitrary sequence, as is sometimes done, is especially problematic in a cross-country context. To address these problems, the measurement approach that is chosen here reflects, as far as possible, the actual legal sequence that is implicit in each country's tax-benefit system:

● In countries where *taxes payable on benefits are quantitatively important* (and tax burdens therefore depend on benefits), the redistributive effect of taxes is assessed against market income *plus* benefits (*i.e.*, by comparing market incomes *plus* benefits *minus* taxes to market income *plus* benefits). Likewise, the redistributive power of benefits is determined by comparing Ginis of market incomes and market incomes *plus* benefits. This approach is used for Canada, Denmark, Finland, Netherlands, Norway, Poland, Sweden, Switzerland and the United Kingdom.

● In countries where *taxes payable on benefits are quantitatively not very important* or where, because of *means testing*, taxes payable on market incomes affect benefit entitlements, the redistributive effect of benefits is assessed against net-of-tax incomes (market income *minus* taxes), *i.e.*, by comparing market incomes *plus* benefits *minus* taxes with net-of-tax income. The redistributive power of taxes is determined by comparing Ginis of market incomes and net-of-tax incomes. This approach is used for Australia, the Czech Republic, Germany, Israel and the United States.

● The redistributive effect of social security contributions is assessed against before-tax incomes, while the redistribution achieved by income taxes is determined relative to before-tax incomes *minus* social contributions.

The chosen measurement approach is particularly suitable for evaluating redistribution *changes* for each of the three types of government programme. Because the ranking of households differs between the baselines used for calculating redistributive effects of the different tax/benefit components, it is, however, not a formal decomposition approach (*i.e.*, the redistributive effect of benefits, social contributions and taxes does not precisely sum up to the overall redistributive effect shown in Figure 7.2). For similar reasons, indicator levels are also not strictly comparable across the three categories.

> Box 7.1. **Measuring redistribution achieved by individual parts of the tax-transfer system** *(cont.)*
>
> **Progressivity and size of a tax or benefit**
>
> *Progressivity* is measured using the Kakwani indicator (Kakwani, 1977), which is the concentration coefficient of the tax (or benefit) *minus* the Gini coefficient of pre-tax (or pre-benefit) income and quantifies the departure of the distribution of a tax or benefit payment from proportionality. A tax or benefit that is distributed in proportion to pre-tax (or pre-benefit) income has zero progressivity and no redistributive effect whatever the size of the tax or benefit. The Kakwani indicator ranges from *plus* 1 (maximum progressivity) to *minus* 2 (maximum regressivity). Note that, in the case of benefits, there is an important difference between a technically correct use of these terms, and frequently used language that refer to inequality-reducing transfers as "progressive". In a technical sense, benefits are normally regressive as social transfers tend to decline at higher income levels. For a given size of the redistribution instrument, the more regressive a benefit, and the more progressive a tax, the bigger is its equalising effect.
>
> The *size* of the tax-benefit instrument is measured as the effective tax rate (or benefit rate): all taxes paid (or benefits received) by the household, divided by the household's pre-tax (or pre-benefit) income, averaged over all households. For benefits, the size indicator is negative (which, in combination with a negative progressivity indicator, results in positive redistribution).

Israel), compared with more than 5 points for benefits (in Finland, Norway, Sweden and Switzerland).

The size of social contributions has increased in just over half the countries shown in Figure 7.3 (Panel B). Due to the frequent use of upper contribution limits and the flat payment schedule below those limits, they are slightly regressive on average (but particularly so in Poland). With contribution burdens approximately proportional to incomes, even sizable changes in the overall contribution burden change the redistributive effect by a relatively small amount (top graph of Panel B). Overall rate structures have essentially remained the same over the period. Where progressivity did change (Finland, Poland), contributions rates are low, so that the redistributive effect of these changes is negligible.

Figure 7.3, Panel C, shows that, in view of the size of average income-tax rates – 20% or higher in about half the countries shown – the extent of inequality reduction is remarkably small when compared to benefits. Despite a flattening of rate structures, income taxes have nonetheless become somewhat more progressive in most countries – consistent with the trend towards greater market-income inequalities, which, in itself, would increase taxation at the top end. Reforms that have broadened the tax base may also have resulted in some tax-burden increases for higher-income groups. Effective income-tax rates faced by all "non-elderly" households, on average, have, however, declined in most countries. Those two trends (somewhat higher progressivity but reduced size) have had opposite effects on the redistributive capacity of income taxes so have partly cancelled each other out. Exceptions to this pattern are Australia and Finland, where both progressivity and average tax rates declined, and Demark (early period) and Germany (later period), where the income tax became significantly more redistributive. In Switzerland and the United Kingdom, reduced progressivity has cut the (already low) redistributive effect of income tax approximately in half.

Figure 7.3. **Drivers of redistribution: progressivity and size of transfers and taxes**
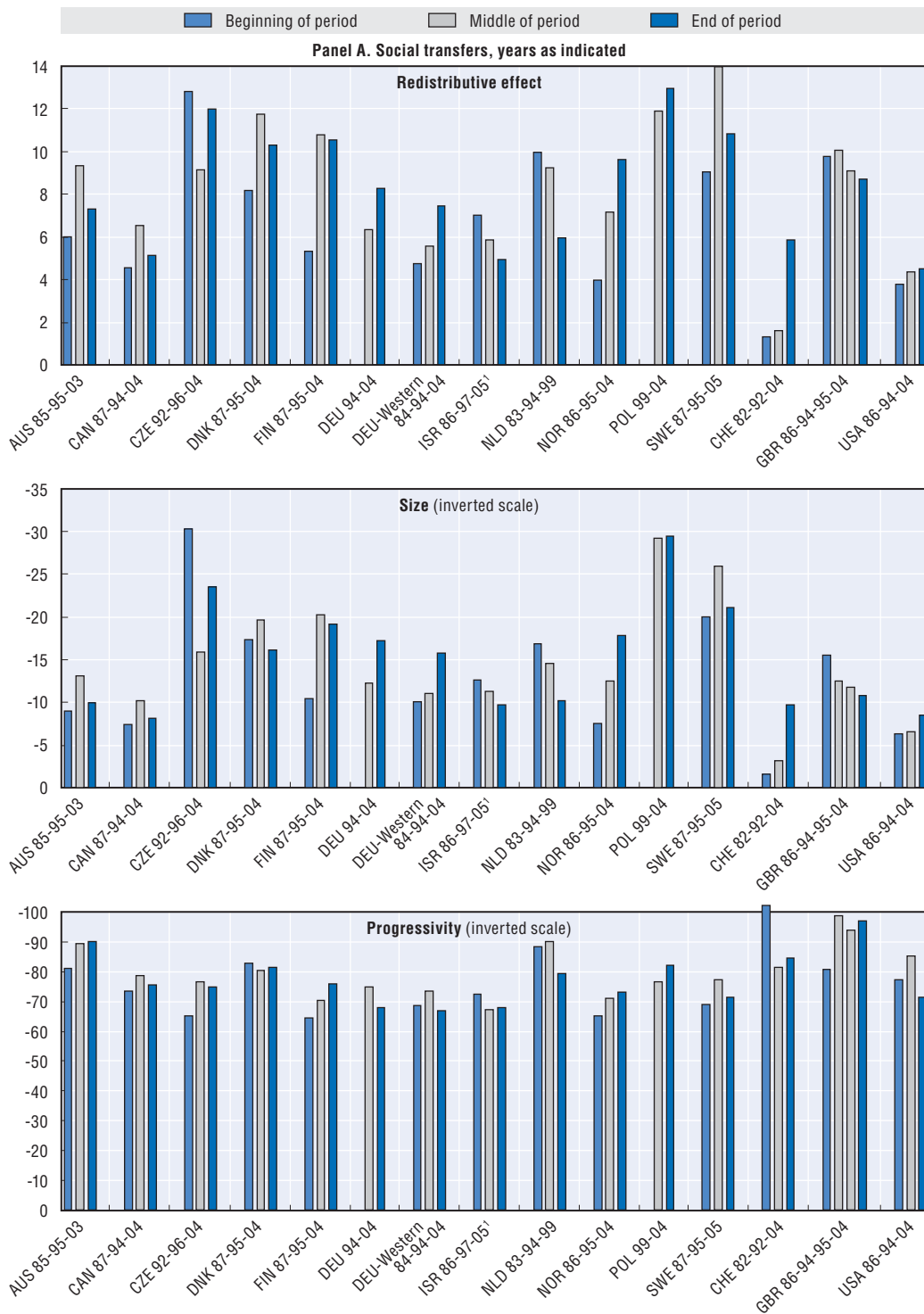
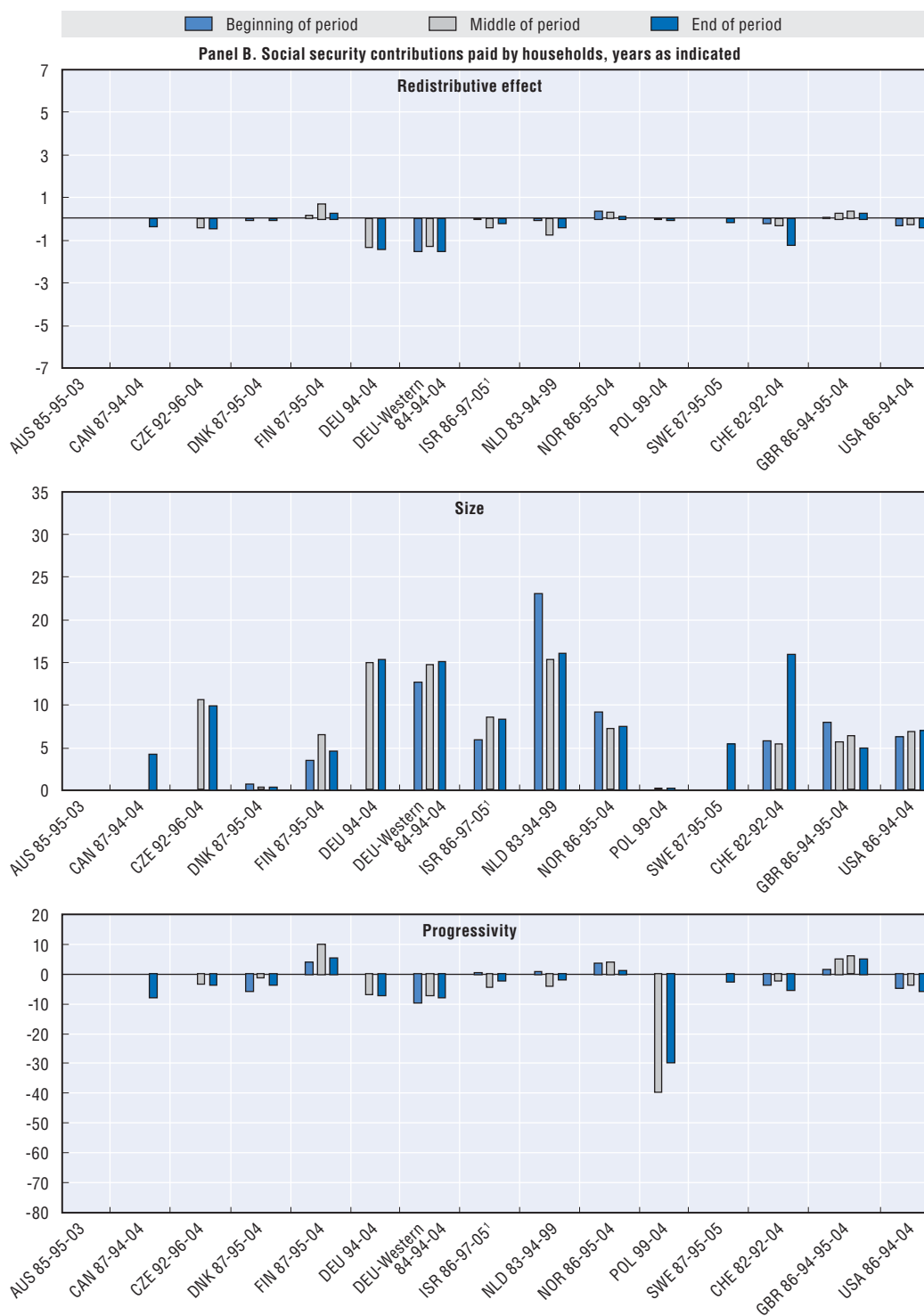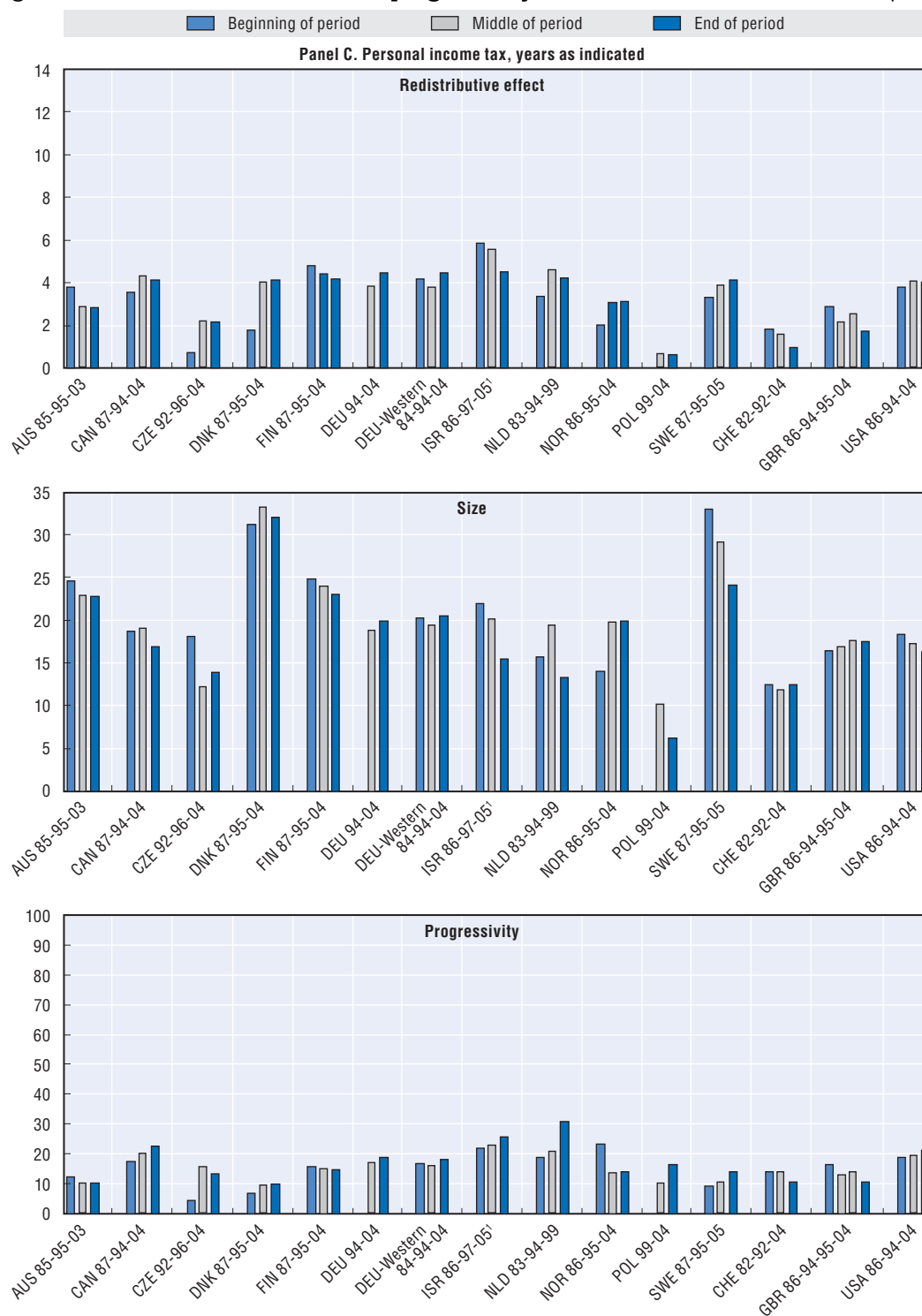Figure 7.3. **Drivers of redistribution: progressivity and size of transfers and taxes** (cont.)

Figure 7.3. **Drivers of redistribution: progressivity and size of transfers and taxes** (cont.)

Panel C. Personal income tax, years as indicated

Note: See Box 7.1 and Table 7.3 for definitions, measurement choices and statistical breaks in the series. The redistributive effect is the difference between the Gini coefficients before and after the respective tax or benefit. "Size" is the average ratio of the respective tax (or negative benefit) over pre-tax/benefit income. Progressivity is the Kakwani measure for the respective tax or benefit.

1. Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*.

Source: OECD Secretariat calculations from the Luxembourg Income Study (LIS).

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7.3. The role of policy reforms

Looking at inequality before and after accounting for taxes and benefits does not allow separating the effects of policy initiatives on the one hand, and changes in market-income inequality (*e.g.*, because of changing employment patterns) on the other. This section attempts to shed more light on the role of specific policy changes.

The reach of benefit systems: more or less encompassing?

Out-of-work benefits, such as unemployment benefits, provide support to people who may otherwise have very low incomes or no income at all. This is the primary reason why the benefit system in its entirety is more redistributive than direct taxes. Unfortunately, detailed benefit recipiency data for all relevant out-of-work benefits are currently not available.[15] However, labour force surveys (LFS) provide useful evidence on the number of people receiving unemployment benefits and their labour-force status. Figure 7.4 shows that unemployment benefit recipiency rates often changed considerably. Rates of benefit receipt rose strongly in Belgium, Germany and Portugal and fell in Italy, United Kingdom and, since the mid-1990s, in Spain, the United States, and in most Nordic countries (not in Norway).

Figure 7.4. **Unemployment benefit recipiency**

Percentage of working-age population
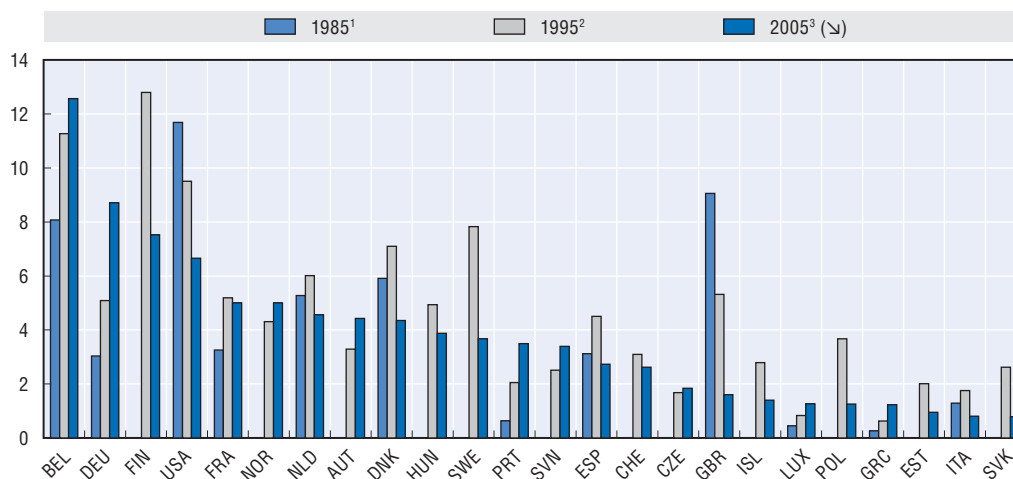
1. Portugal: 1986, Spain: 1987, United States: 1992.
2. Hungary and Switzerland: 1996, the Czech Republic, Estonia, Poland: 1997, Slovak Republic: 1998.
3. Netherlands: 1999, Spain: 2004.

Source: European Labour Force Surveys and US Current Population Survey. For definitions and limitations see Immervoll *et al.* (2004).

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Two important determining factors of these trends are the extent and patterns of unemployment. But in addition, changing eligibility rules, including the enforcement of job-search conditions and other behavioural requirements, also affect recipiency rates. Figure 7.5 indicates that the shares of unemployed reporting benefit receipt have dropped in two thirds of the countries shown, while only a few recorded significant increases. While such changes in recorded benefit accessibility and coverage can result from a changing composition of the unemployed pool (*e.g.,* higher shares of young unemployed), further

Figure 7.5. **Unemployment benefit coverage**

Percentage of ILO unemployed
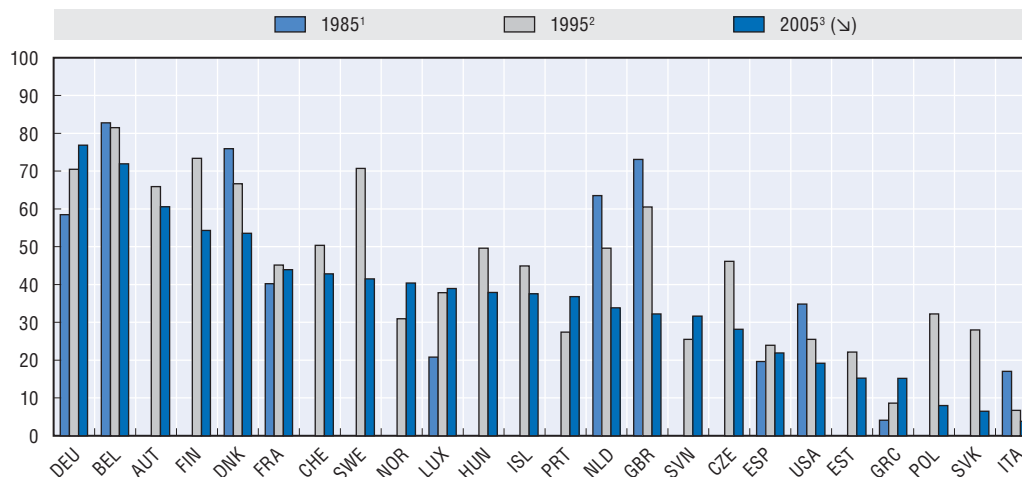
1. Portugal: 1986, Spain: 1987, United States: 1992.
2. Hungary and Switzerland: 1996, the Czech Republic, Estonia, Poland: 1997, Slovak Republic: 1998.
3. Netherlands: 1999, Spain: 2004.

Source: European Labour Force Surveys and US Current Population Survey. For definitions and limitations see Immervoll *et al.* (2004).

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analysis shows that coverage has generally moved in the same direction for those with and without prior work experience (data not shown). Likewise, a changing incidence of long-term unemployment also cannot explain a pattern of declining benefit coverage: between the mid-1990s and the mid-2000s, the proportion of long-term unemployment *fell* significantly in most countries (OECD, 2010).

More likely driving factors of declining coverage rates during this period are short and/or less continuous work histories, as well as, in some but not all countries, increasing shares of temporary employment and other types of non-standard work (OECD 2010). Such workers may be excluded from benefit receipt by law (*e.g.*, the self-employed in most countries, including the so-called "falsely" self-employed) or *de facto* because they are less likely to meet contribution requirements or satisfy other relevant eligibility criteria (*e.g.*, temporary or part-time workers).[16] The summary of policy trends in the next section examines whether policies have adapted to these changes (*e.g.*, by making it easier for non-standard workers to qualify for benefits).

Key features of redistribution systems and major policy changes in selected countries

Table 7.5 summarises in a qualitative way some of the main policy changes between the mid-1980s and the mid-2000s for ten OECD countries. Because the above analysis identified benefits as the main drivers of changes in redistribution, the summary table focuses on the benefit side. In an attempt to highlight the distributional consequences of policy changes, benefit provisions that were made less generous are shown in blue, while grey shaded cells indicate changes that tend to result in higher entitlements.[17] Policy changes for the earlier period of the mid-1980s to mid-1990s and the later period of the mid-1990s to mid-2000s are identified separately.

Table 7.5. **Main changes in generosity of four benefit programmes, mid-1980s to mid-2000s**

	Maximum benefit	Maximum duration	Payment rate	Eligibility[1]	Benefit withdrawal[2]	Other[3]
A. Unemployment insurance						
Australia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Austria	85-95	85-95	85-05			95-05
Czech Republic[4]	95-05		95-05		95-05	
Finland		85-95	85-95-05	95-05	95-05	85-95-05
France		85-95-05		85-05	85-95	95-05
Germany			85-95			85-95
Italy	85-95 95-05	95-05	85-95-05			
Japan	85-95-05	95-05	85-05			
United Kingdom	95-05	95-05	95-05	95-05		
United States	85-95 95-05		85-95-05			
B. Unemployment assistance						
Australia	95-05				85-95	
Austria	85-95					95-05
Czech Republic[4]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Finland	85-95-05				85-95 95-05	85-95-05
France		85-95				
Germany[5]	95-05			95-05	95-05	
Italy	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Japan	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
United Kingdom	95-05					
United States	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C. Social assistance						
Australia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Austria		n.a.	n.a.	n.a.		
Czech Republic[4]	95-05	n.a.	n.a.	n.a.		
Finland	95-05	n.a.	n.a.	n.a.	95-05	
France	95-05	n.a.	n.a.	n.a.	95-05	
Germany[5]	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Italy	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Japan	95-05	n.a.	n.a.	n.a.		
United Kingdom	95-05	n.a.	n.a.	n.a.		85-95
United States		n.a.	n.a.	n.a.		
D. Family benefits						
Australia	85-95-05	n.a.	n.a.		95-05	
Austria		n.a.	n.a.	85-95		
Czech Republic[3]	95-05	n.a.	n.a.			
Finland		n.a.	n.a.			95-05
France	95-05	n.a.	n.a.	85-95		
Germany	95-05	n.a.	n.a.	95-05		95-05
Italy	85-95-05	n.a.	n.a.			
Japan	95-05	n.a.	n.a.	85-05		
United Kingdom	95-05	n.a.	n.a.			
United States	95-05	n.a.	n.a.			

n.a. = not applicable.

1. Employment and contribution conditions for UI and UA, age limits for family benefits
2. Permitted employment/earnings, income disregards and/or benefit withdrawal rates
3. Additional benefit provisions, mainly extra allowances for family members
4. Information only available for 1995 and 2005
5. Unemployment assistance has been merged with social assistance in 2005.
Source: Adapted from Immervoll and Richardson (2011).

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Most countries reduced benefit levels of unemployment insurance, either through discrete policy changes, or by not fully adjusting ("indexing") benefits in line with in-work earnings (Panel A, unemployment insurance). Initial eligibility conditions have also become more demanding in at least three countries, while none appear to have lowered the barriers to access the benefit system. Some countries raised benefit durations and ceilings – in two of them the rise in the first period was followed by a reduction in the second.

For jobseekers not qualifying for insurance benefits, benefit amounts tend to be lower and, because they are means-tested, more targeted to low-income families. Unemployment assistance benefits (Panel B, unemployment assistance) are sometimes only available as follow-up support (Austria, France in 1985 and Germany prior to 2005). In other cases, they may also be payable to jobseekers who do not qualify for insurance benefits in the first place (Finland, France, United Kingdom). In Australia, they are the only form of unemployment benefit. Compared with unemployment insurance, changes since the mid-1980s to unemployment assistance rules were fewer and smaller. Benefit amounts tended to become less generous, while employment or contribution requirements (where they exist) changed little. A major exception is Germany, where unemployment and social assistance for jobseekers were merged into one single programme in 2005. For long-term unemployed with relatively high previous earnings, this resulted in substantially lower benefit amounts. While the benefit can now be received by jobless people without any employment record, this has not made benefits more accessible or generous as these individuals had access to social assistance (paid at comparable rates) before the reform.

Social assistance provisions (Panel C, social assistance) have remained largely unchanged, although benefit levels in a number of countries have not kept up with earnings growth. This concerned the benefit amounts of recipients but also of other dependent family members. However, social assistance programmes are often administered at a regional or local level, resulting in considerable variation in legal rules or guidelines that are difficult to capture in these summary tables.[18] Even where there are legal entitlements, budgetary pressures can make access more difficult in practice and, hence, depress effective take-up rates (*e.g.*, if administrative staff are unable to provide timely service when faced with a steep increase in the number of claims).[19]

Column 5 ("benefit withdrawal") in Panels A through C show that means-tests and rules on permissible work activities for benefit recipients were often made more employment-friendly. Across the three different types of out-of-work support, benefit phase-out rates were frequently reduced, or greater portions of earnings disregarded in the means-test. These changes are not only significant for their effects on work incentives. By extending the benefit withdrawal range higher up the earnings distribution, these reforms strengthen redistribution by reducing net income differentials and, hence, inequality, in some parts of the distribution. At the same time, such reforms could also weaken the financial payoff from increasing earnings further, giving rise to the possibility of so-called "low-income traps" for some recipients. Similar issues can arise for employment-conditional in-work benefits although these transfers are generally more effective at accentuating the income difference between working and not working.[20]

Unlike the three out-of-work benefits above, family benefits (Panel D, family benefits) have become significantly more generous since the mid-1980s in most countries. In Australia, Germany and Japan, benefit amounts per child have risen more strongly than earnings levels,

while the United Kingdom and United States have introduced new child-related tax credits. But while the UK credit also benefits families on the lowest incomes (it is refundable and not counted as income in relevant means-tests), the US credit does not (it is counted as income in means-tests and is only partially refundable). Re-balancing support in favour of families with more children (who are more likely to face low incomes and relative income poverty) tends to make family benefits more redistributive (Austria, Italy). A few countries have increased the maximum age limit for child-related benefit payments and one country (Japan) reduced the limit between 1985 and 1995 (the limit was subsequently raised again though not to its original level).

Personal income taxes (PIT) are the most thoroughly documented element of redistribution policy reforms (Hagemann *et al.*, 1988; Pechman, 1987, 1988; OECD, 1986, 1993, 1995). The most important trends identified in these studies include a flattening of rate schedules and a move towards individual taxation.[21] For a given revenue, less progressive tax schedules unambiguously reduce the redistributive power of income taxes. In particular, lower rates at the top will widen the net income distribution, unless the reform is accompanied by measures that broaden the tax base to an extent that prevents average tax payments for rich families from falling. Reductions in top rates were steepest in Japan, Italy, the United Kingdom and France (Immervoll and Richardson, 2010, see also Chapter 9). The flattening of schedules mostly concerned higher income ranges (Australia, Austria, Finland, France, Germany, Japan, the United Kingdom and the United States). In the Czech Republic (1995-2005) the tax schedule flattened only at very high income levels (in excess of 500% of the average wage). Failure of tax thresholds to keep pace with wage growth has effectively compressed the tax schedule (making it steeper) at low-to-moderate income levels (*e.g.*, Australia and the United States).

While a reduced differential between top and bottom rates makes income taxes less progressive over some income ranges, this does not necessarily render the PIT less redistributive as a whole if a larger number of low-income families is exempt from income taxes altogether (*e.g.*, by widening the zero-rate bracket as in Austria, or by increasing the tax-free allowance as in Italy) (Keen *et al.*, 2000). This is one reason why the progressivity measures reported for most countries above (Figure 7.3, Panel C) did not show a more noticeable fall between the mid-1980s and the mid-2000s. Another reason is that pre-tax income inequality rose substantially in most countries, pushing up the gap between income-tax burdens faced by different income groups. To some extent, this offset the more generous tax treatment of richer households resulting from flatter tax schedules.

Social contributions can be as sizable as income taxes but they do not have a large effect on cross-sectional inequality. Moreover, apart from level changes, relevant rules have changed little over the time period.[22]

Generosity of support for the unemployed

While there was a tendency toward reducing the generosity of unemployment benefits across the OECD countries studied, in six of the eight countries where unemployment benefits appear to have tightened at least one element of unemployment benefits became more generous. In France, for example, the maximum benefit duration in the unemployment insurance programme was reduced while time-dependent reductions in payment rates were abandoned. Similarly, reductions in the value of benefit ceilings occurred in the two countries (Italy and the United States) where statutory benefit replacement rates were made more generous.

Net replacement rates (NRR) are a useful way of quantifying the combined effects of these changes. These indicators express the net incomes of unemployed people relative to those in work. Reductions of NRR points to incomes of the unemployed falling behind relative to those in work. Figure 7.6 provides a strong indication of reduced cash support for the unemployed between 1995 and 2005: seven of the ten countries recorded declining NRRs. The largest falls were recorded in countries where, relative to average earnings, the generosity of both unemployment benefits (unemployment insurance – UI – and unemployment assistance – UA) and social assistance (SA) were reduced: Finland (UI,

Figure 7.6. **Net replacement rates of unemployment support**

Average over a long unemployment spell (60 months of unemployment), in percentage
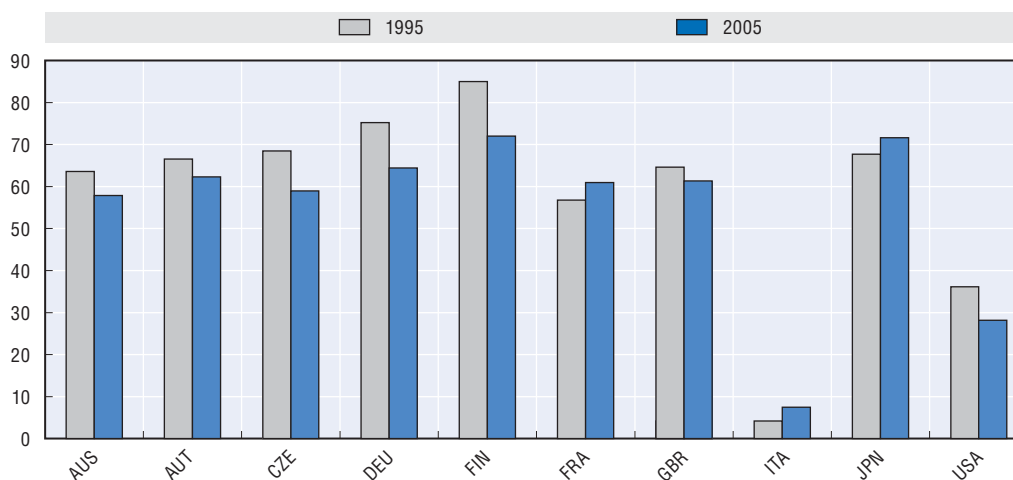
Note: Unweighted average of NRRs in each month of a long unemployment spell (60 months), at two levels of previous earnings (67% and 100% of average full-time wages) and for four stylised family types (single persons, lone parents, one-earner couples with and without children). Calculations consider cash incomes as well as income taxes and mandatory social security contributions paid by employees. Minimum-income transfers and or housing-related benefits are available as income top-ups as applicable. Any behavioural requirements (such as active job-search) are assumed to be met. Net replacement rates are evaluated for a prime-age worker (aged 40) with a "long" and uninterrupted employment record. See OECD (2007a) for full details.

Source: OECD tax-benefit models (*www.oecd.org/els/social/workincentives*).

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UA and SA), Germany (SA and merging of UA and SA) and the Czech Republic (UI and SA). Finland and Germany saw the biggest reductions in net replacement rates. A decomposition of these changes (not reported) shows that in Germany, and to a lesser extent Finland, effective tax burdens on employment incomes were reduced at the same time, which further widened the gap between incomes in-work and out-of-work.

Changes for the unemployed in most countries tended to be less damaging (or, sometimes, more beneficial) for families with children. This is shown in Table 7.6 (Panel A). In Australia, Japan and the United Kingdom, increased out-of-work support for lone parents is evident. In contrast, NRRs for families with children fell more strongly in the Czech Republic, Italy and the United States. Germany and the United States are the only countries where NRRs fell more for lone parent families than for couples with children.

The largest relative income drop was generally faced by long-term unemployed jobseekers who mostly rely on unemployment assistance or social assistance for income

support (Table 7.6, Panel B). Two exceptions are Italy (where long-term unemployed already had little or no cash support in 1995) and Japan (where the duration of unemployment insurance benefits was extended). Importantly, these results are for jobseekers who were entitled to unemployment insurance benefits in the first place. However, because non-standard workers and others with limited or interrupted employment records often have no access to unemployment insurance, NRR trends for these groups will often have been similar to those of the long-term unemployed. In view of the fall in unemployment-benefit coverage rates documented above, minimum-income support for those with no or little other income is likely to have become a more central driver of overall redistribution trends. Income changes for this group are considered in the next section.

Table 7.6. **Net replacement rates of unemployment support**

Panel A. By family type, in percentage

| | No children | | | | Two children | | | | Average | |
| | Single person | | One-earner married couple | | Lone parent | | One-earner married couple | | | |
	1995	2005	1995	2005	1995	2005	1995	2005	1995	2005
Australia	47	40	72	62	58	59	77	71	64	58
Austria	56	51	63	58	70	67	77	72	67	62
Czech Republic	44	39	74	61	70	64	86	72	68	59
Finland	72	57	90	73	82	73	96	84	85	72
France	48	51	53	57	61	66	65	70	57	61
Germany	61	50	73	59	85	74	82	75	75	64
Italy	4	7	4	7	4	8	5	8	4	8
Japan	49	52	67	72	74	80	80	83	68	72
United Kingdom	56	49	67	58	63	65	73	72	65	61
United States	16	13	23	18	52	38	55	44	36	28

Panel B. By unemployment duration, in percentage

| | First year | | Second and third year | | Fourth and fifth year | | Average | |
	1995	2005	1995	2005	1995	2005	1995	2005
Australia	64	58	64	58	64	58	64	58
Austria	68	64	66	62	66	62	67	62
Czech Republic	70	61	68	58	68	58	68	59
Finland	87	76	85	72	84	70	85	72
France	74	72	54	62	51	54	57	61
Germany	76	69	75	65	75	62	75	64
Italy	21	38	0	0	0	0	4	8
Japan	70	73	67	71	67	71	68	72
United Kingdom	65	61	65	61	65	61	65	61
United States	51	42	32	25	32	25	36	28

1. See note to Figure 7.6

Source: OECD tax-benefit models (*www.oecd.org/els/workincentives*).

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Gainers and losers of tax-benefit reforms across the earnings distribution

A way to identify the relative contribution of policy changes and trends in market-income inequality on redistribution would be to calculate tax burdens and benefit entitlements for representative samples of households for different periods. Box 7.2 provides an illustration of such an approach for the United States. Unfortunately, an equivalent analysis is currently not feasible for a larger group of countries as the required microsimulation models are not readily available, or do not cover the time-period of interest. This section therefore applies a less data-intensive approach, which calculates the effect of policy changes on a range of different *model families*, using the OECD's tax-benefit models. While this method does not account for differences in population structure and earnings inequality across countries, it can isolate the effect of policy reforms for selected families and earnings levels. It thus permits identifying "gainers" and "losers" of policy reforms. The advantage of the simulation is that it can hold "everything else" constant (unemployment levels, market-income inequality, household composition, etc.), and focuses on the role of policy changes alone. For instance, it can show whether families at the bottom, middle and top of the income distribution are now better or worse off than they would have been with *unchanged* policies.

In a progressive tax-benefit system, rising nominal earnings levels result in lower net benefits (benefits minus taxes) unless all relevant policy parameters (such as benefit amounts, income limits or tax-band limits) are adjusted for income growth. This leads to "automatic" changes in redistribution mechanisms, if no policy action is taken (OECD, 2008b). In the context of income taxes, the mechanism of automatically increasing revenues is often referred to as "fiscal drag". For simplicity, this term will be used below to refer to changes in either tax or benefit amounts that result from changing earnings levels if tax-benefit systems are kept nominally "frozen". In discussing changes in tax burdens and benefit entitlements, this section distinguishes between the effects of *legislative* policy initiatives on one hand, and the impact of changing earning levels (*fiscal-drag*) on the other. The sum of these two components yields the total "actual" change.[23]

The reasons for distinguishing between policy and fiscal-drag effects is two-fold. First, if average nominal earnings grow quickly, the effect on total government revenue and expenditure can be substantial.[24] One interesting question is to what extent governments rely on the fiscal-drag effect as a way of increasing revenues, or reducing benefit expenditure. Second, fiscal-drag effects can have important distributional implications. For instance, a failure to adjust benefit levels as earnings increase can cause low-income families, who rely on government benefits for much of their income, to drop further down in the income distribution.

The analysis below uses a graphical format to summarise income changes resulting from fiscal drag and discrete policy changes. Figure 7.A1.1 displays changes in net transfers (benefits minus taxes) between 1995 and 2005 as a percentage of household disposable income, for the earnings range of 0% to 200% of the average wage. It decomposes the overall change into a "legislative policy" effect and "fiscal drag" effect, the latter broken down by an inflation and by a real earnings growth effect. A policy change that increases, or decreases, everyone's disposable income by the same proportion has no impact on the income distribution (horizontal line). Downwards (upwards) sloping lines are indicative of progressive (regressive) changes and would tend to cause a narrowing (widening) of the

Box 7.2. **Isolating the direct effect of policy reforms: an illustration for the United States**

Showing the direct effects of policy reforms on measured redistribution requires holding everything else constant. To do this, a redistribution measure is derived which uses the same population and distribution of market incomes before the reform (at time t_0) and after the reform (at time t_1). Such a measure can be calculated using microsimulation models as these models can apply policy rules from different years to the same population.

A tax-benefit function d represents the rules and structure of the tax-benefit system (*e.g.*, benefit eligibility conditions and marginal tax, contribution and benefit withdrawal rates) and a vector p accounts for all monetary parameters (*e.g.*, tax-band limits, tax credits, contribution ceilings, benefit amounts). The distribution of after-tax income can then be represented by $d_i(p_j, y_k)$ for structural policy rules of year i, tax-benefit parameters of year j and nominal incomes of year k. In addition, one can nominally adjust monetary tax-benefit parameters p (or, equivalently, nominal incomes y) by an uprating factor α (*e.g.*, to index benefit amounts and tax threshold to price levels). In this way, the counterfactual situation $d_{t+1}(p_{t+1}, \alpha_{t+1}y_t)$ represents after-tax incomes obtained by applying tax rules and parameters of year $t+1$ on year t household data with incomes nominally adjusted to year $t+1$. If I is the inequality index of interest, then the change between initial and final period is $\Delta I = I[d_{t+1}(p_{t+1}, y_{t+1})] - I[d_t(p_t, y_t)]$. Following Bargain and Callan (2010) and Bargain *et al.* (2011), this change can be decomposed into contributions of changing policy ("direct policy effect") and changing populations ("other effect", *i.e.*, the underlying distribution of pre-tax-benefit incomes):

$$\Delta I = I[d_{t+1}(p_{t+1}, y_{t+1})] - I[d_t(\alpha_{t+1}p_t, y_{t+1})] \text{ (\textbf{direct policy effect})}$$
$$+ I[d_t(\alpha_{t+1}p_t, y_{t+1})] - I[d_t(\alpha_{t+1}p_t, \alpha_{t+1}y_t)] \text{ (\textbf{other effect})}$$

The illustration for the United States is described in more detail in Bargain *et al.* (2011) and uses NBER's TAXSIM model. This model does not simulate benefits and the study is therefore limited to the tax side only. The figure below shows that pre-tax inequality (which includes benefits) has risen substantially. The rise was particularly notable between 1978 and 1992. The Gini coefficient has increased by some 8 points (or 24%) over the period as a whole. In line with the results reported earlier in Figure 7.2, a comparison between pre- and after-tax distributions shows a small increase in redistribution through the tax system, meaning that the tax system has slightly slowed the growth in after-tax inequality.[*]

However, the decomposition reveals that most of the increase in redistribution did not result directly from tax policy reforms but was a consequence of the changing distribution of pre-tax incomes. While the cumulative effect of reforms was small, there are some significant policy effects for individual subperiods. Interestingly, their patterns appear to be roughly in line with popular perceptions regarding the political cycle, with disequalising (equalising) effects observed for policy changes implemented during Republican (Democrat) administrations, 1981-1993 and 2001-08 for the former, and 1978-1981 and 1993-2001 for the latter. There were significant differences between results for the lower and upper parts of the distribution (not reported). Policy reforms enacted in the early and mid 1990s reduced income gaps at the bottom to below their 1978 value. By contrast, no equalising effects of policies can be discerned for the upper part of the distribution. For the period as a whole, tax policy changes appear to have slightly exacerbated trends towards widening income gaps at the top.

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[*] The inequality cushioning effect was, however, much less effective in the upper half of the distribution (about 20% of the increase in the pre-tax P90/P50 ratio) than below the median (about 50% of the increase in P50/P10). This suggests limited success of the income-tax system at moderating growing inequalities at the top of the distribution, as well as considerable effectiveness of the earned income tax credit (EITC) at strengthening redistribution at the bottom.

Box 7.2. **Isolating the direct effect of policy reforms:**
an illustration for the United States (*cont.*)

Inequality before and after tax in the United States:
total redistribution and direct policy effect
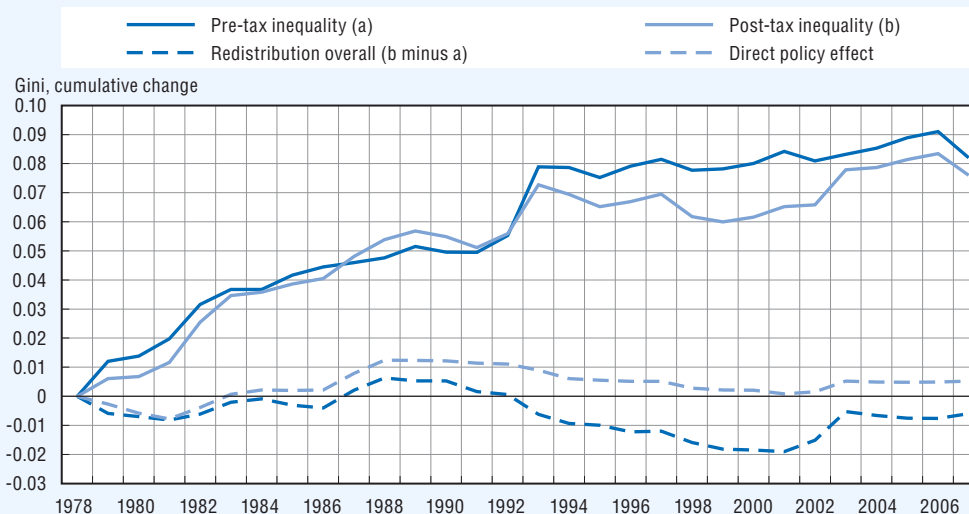
Note: Households with at least one working-age adult (15-64). Incomes are equivalised using the square-root scale.

Source: Bargain *et al.* (2011).

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income distribution, at least within the segment of the population represented in the particular graph.[25] All calculations relate to families who do not receive unemployment benefits that depend on a previous employment history. Instead, and subject to relevant income limits, they may be entitled to means-tested assistance benefits.

Single individuals

The changes in tax burdens and benefit entitlements for single individuals (Figure 7.A1.1, Panel A), coupled with fiscal drag effects, were mostly "regressive" over the 1995-2005 period; among the countries shown, Italy and Japan were the only ones where changes appear to have strengthened redistribution. In many other countries, policy changes (combined, where they exist, with automatic adjustments such as inflation indexing) resulted in more generous benefit entitlements in *nominal* terms. But benefit recipients nevertheless mostly lost ground in the income distribution as minimum-income and cash housing support did not keep pace with earnings growth.[26] Recipients of minimum-income benefits have often seen a considerable worsening of their income position, even relative to people on unemployment support, whose relative incomes declined as well. On the upper end of the income spectrum, tax policy was largely successful at preventing fiscal-drag related tax increases: single higher-income earners frequently saw lower tax burdens in 2005 than in 1995.

Families with children

Patterns of income changes are more complex for families with children (Figure 7.A1.1, Panels B and C). Tax and benefit changes between 1995 and 2005 appeared less "regressive" (or more "progressive") than for single people. In general, earnings growth and inflation have a much greater influence on the workings of the redistribution system when children are present. But although sizable fiscal-drag effects mean that low-income families can face big losses if governments "do nothing" to adjust benefit rules, a few countries (*e.g.*, Australia, United Kingdom) were remarkably successful at protecting low-income families with children from losing ground relative to higher-income groups. Where legislative policy changes were less pro-poor (*e.g.*, Finland, United States), the erosion of benefits due to inflation and real earnings growth did, however, result in sizable losses at the bottom.

Consequences of policy reforms for people's position in the income distribution

By combining the calculated net incomes in 1995 and 2005 with household income data, it is possible to indicate whether particular families experienced gains or losses and what these income changes meant for their position in the overall income distribution. Figure 7.A1.2 shows how much a family had to earn under 2005 and 1995 policies in order to reach different decile groups of the income distribution, plotted on the y-axis. The vertical dashed lines correspond to the earnings decile points in each country. In Australia, for instance, a single person with full-time earnings at half the average wage would be located at the first earnings decile which would put her into the fourth decile of the income distribution.

The spread of income distributions, and the positions of the various family types in them, differ markedly between countries. In the Czech Republic and the United States, full-time earnings around the 10th earnings percentile put a single-person household in the second decile group of the household income distribution, while in Australia, Finland, Italy, Japan and the United Kingdom, full-time work at the same point in the earnings distribution secures a place above the lowest third of the overall income distribution. At the other end of the earnings spectrum, a single paid at the 80th earnings percentile is among the richest (in terms of net income) 20% of households in Australia, Austria, Germany, Japan and the United Kingdom. In the United States, however, someone with earnings among the highest 20% of full-time earners, and no other incomes, only makes it into the top 40% of the household income distribution.

The effects of policy changes between 1995 and 2005 can be seen from the difference between the solid and dashed lines and mirror those shown earlier in Figure 7.A1.1. A net loss is indicated by a solid line that is below (to the right of) the dashed line. This means that the earnings needed to achieve a given position in the income distribution under 2005 tax-benefit rules are higher than they would have been under the (wage-indexed) 1995 system. This is what generally occurred for single low-wage earners. For instance, in the United States, single individuals earning around 30% of the average wage (roughly the level of the federal minimum wage in 2005) would have had to work almost one third longer (or earn one third more per hour) in order to make up for the additional net tax burdens (or the lost net benefit). The additional earnings needed to compensate for lower net benefits at the bottom are even larger in Australia, both because benefit reductions are sizable and because relatively high benefit withdrawal rates mean that the payoff from earning more is limited.

On the other hand, are several examples of net gains for families with children. The most sizable gains are shown for lone-parent and two-parent families in Australia, Italy and Germany. More generous benefits in Germany lift many two-parent families, and some lone-parents, almost a full decile further up in the income distribution, , although gains were smaller for (the large number of) low-paid lone parents.

7.4. Summary and conclusions

Between the mid-1980s and the mid-2000s the benefit system drove changes in overall redistribution and tax reforms did little to reduce inequality. From the mid-1990s, tax-benefit systems grew less effective at reducing inequality.

In the context of rising market-income inequality, tax-benefit systems became more redistributive. Although they did not stop income inequality from rising (market-income inequality grew by twice as much as redistribution), they were able to offset more than half of the rise in market-income inequality up until the mid-1990s in countries such as Australia, Canada, Finland and Sweden. From that time, however, the share that tax-benefit systems offset fell in most countries. In high-inequality countries like the United States, Israel, and the United Kingdom, taxes and benefits compensated only a relatively small part (one fifth or less) of the increase in market-income inequality over the period as a whole.

While growing market-income disparities were the main driver of inequality trends between the mid-1980s and mid-1990s, reduced redistribution was sometimes the main source of widening household-income gaps in the ten years that followed. In fact, income inequality after counting benefits and taxes increased *at a faster rate* after the mid-1990s than in the decade before.

Across countries, cash support for working-age individuals and their families grew in real terms but accounted for a declining share of total social spending (from a country average of 27% in 1985 to 21% in 2005). Countries which achieved large increases in the redistributive effect of benefits did so mainly through growing average benefit amounts, while the degree of benefit targeting ("progressivity") changed less. The relatively small change in benefit progressivity and its limited impact on the redistribution properties of cash transfers highlights the importance of spending levels for inequality outcomes. It also suggests considerable scope for strengthening existing targeting mechanisms (*e.g.* by preventing low-income job seekers from going without support).

The most important benefit-related determining factor in overall distribution, however, was not benefit levels but the number of people entitled to transfers. While receipt of incapacity benefits tended to rise, unemployment benefit receipt fell in a majority of countries. Tighter eligibility rules played a role, as did the sizeable increase in the proportion of non-standard workers. People entitled to unemployment benefits nevertheless saw their benefit generosity drop from the mid-1990s in seven out of ten OECD countries studied here. Large falls were recorded in countries where the generosity of more than one element in the overall support package was reduced (*e.g.* Germany, the Czech Republic and Finland).

Progressive personal income taxes declined as a share of overall revenues. Despite a flattening of rate structures, they nevertheless became more progressive in about one-half of the countries - consistent with the strong trend towards greater market-income inequalities, which, in itself, magnifies tax-burden differences between high-income and low-income taxpayers. Effective income-tax rates faced by all non-elderly households on average declined in most countries. The two trends (greater progressivity but reduced size)

had opposite effects on the redistributive capacity of income taxes. They therefore partly cancelled each other out and produced relatively small changes in overall redistribution.

In summary, changes in tax burdens and benefit entitlements appeared mostly regressive over the 1995-2005 period for single individuals and childless families in particular. Changes for families with children appeared less "regressive" (or more "progressive" in a few countries). In a number of countries, policy changes resulted in more generous benefit entitlements in nominal terms. But benefit recipients nevertheless mostly lost ground in the income distribution as benefits for the lowest-income groups did not keep pace with earnings growth. At the other end of the income spectrum, tax policy resulted in gains or in comparatively smaller losses.

What lessons for future redistribution policies?

Large, persistent losses in low-income groups following recessions underline the importance of well-targeted income-support policies during economic slumps, as well as during recoveries. Redistribution strategies based on government transfers alone would be neither an effective nor a financially sustainable way of restoring incomes at the bottom. A key challenge for policy is therefore to facilitate and encourage employment and earnings growth that benefit low-income groups in particular.

The relative stability of higher incomes, as well as their longer-term trends, are important to bear in mind in policy debates that seek to define a response to growing inequalities. They are also relevant in the context of planning fiscal consolidation strategies. It may therefore be necessary to critically review whether existing tax provisions should be adapted in light of equity considerations and current revenue requirements, in particular where those with high or very high incomes have benefited from declining overall tax burdens.

Redistribution systems were generally effective at slowing trends towards widening income gaps which were due to falling incomes at the bottom. Tax-benefit systems, however, were less successful at offsetting growing inequality in the upper parts of the distribution, which became a more powerful driver of inequality trends in some countries. Redistribution systems will need to adapt to these new challenges.

Notes

1. This definition does not necessarily correspond to the usage of the term in everyday language. When used in a non-technical context, there is generally a presumption that tax-benefit systems reduce inequalities by transferring resources to those in greater economic need (i.e., by taxing people and using the revenue to finance transfers). However, public policies alter income inequality even when no interpersonal transfer takes place. For instance, a progressive tax reduces inequality by itself, even if the proceeds are not used to finance transfers, while a lump-sum tax increases it.

2. Earlier studies that compare changes over time between countries have not considered more recent changes, look at changes over a relatively short period of time, or cover only a few countries (e.g., Bargain and Callan, 2010; Atkinson, 2004; Jäntti, 1997; Fritzell, 1993).

3. Fritzell (1993) studies trends both for the entire population, and for households headed by non-elderly individuals. Jesuit and Mahler (2004) document trends in overall measures of redistribution for the 25-59 age-group but those results do not show what drove the observed trends (for instance, changes are not shown separately for taxes and benefits, and do not distinguish between changes in the progressivity and the size of redistribution instruments).

4. Of course, government policies alter household incomes not only directly (through taxes and transfers), but also indirectly (by creating incentives and constraints for household behaviour). To the extent that the existence of taxes and benefits causes changes in market prices and household

behaviour, redistribution policies have an influence on pre-tax and benefit market incomes (and economic welfare) which is not captured by looking at the amounts of taxes and benefits alone. Such indirect (or "second-round") distributional consequences of tax and transfer policies are considered in a separate OECD study (OECD, 2011).

5. Three caveats need to be made. First, relating public social spending to GDP is not ideal. However, for countries where data are available, they show that long-term trends are similar if expenditure levels are expressed as a percentage of household income, rather than GDP. Second, the data refer to public social spending and exclude private mandatory spending. In some OECD countries, the latter constitutes a more important and rising share of total social spending. In Chile, for instance, private mandatory spending amounted to 0.4% of GDP in the mid-1980s but to 1.4% of GDP in 2005. Third, the coverage of social spending shown may be limited as programmes and services are often provided, and/or co-financed, by local governments. This leads to large gaps in measurement of spending notably in federal states such as Canada.

6. There is only an approximate correspondence between transfers paid to "elderly" and "non-elderly" age groups and the functional classification used in the OECD social expenditure data. A considerable share of spending on old-age benefits is received by those drawing retirement benefits before they reach the age of 65. At the same time, a part of expenditures in the categories "incapacity related", "housing" or "other social policy areas" may provide income support to the elderly.

7. The decline is somewhat smaller, but still substantial, when early retirement benefits are included.

8. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

9. In roughly one third of OECD countries covered in the historical series of the OECD Revenue Statistics, mandatory SSC now account for a similar or higher share of total revenue than the PIT (Czech Republic, Germany, Greece, Japan, Korea, Luxembourg, Mexico, Netherland, Poland, Slovak Republic, and Turkey). Mandatory SSC are much lower than income-tax revenues in Canada and the Nordic countries, while they do not exist in Australia and New Zealand.

10. The Gini measures reported in Chapter 6 refer to working-age individuals and are somewhat different from the ones shown here which refer to individuals in working-age households and thus include children living in the same household as observations in their own right.

11. In Switzerland the subsequent equalising effect on the distribution of disposable income was further strengthened by a trend towards more redistribution.

12. Market-income inequality has also been the main determinant of differences *across* countries. For instance, in the early-mid 2000s, the English-speaking countries, Israel and Poland ranked highest in terms of the inequality indicators of both market and disposable income. That countries with the highest market-income inequality are also those with the highest inequality in disposable income is notable as it contrasts with findings from studies that include the elderly population (*e.g.*, Jesuit and Mahler, 2004).

13. This can be interpreted as choosing a social welfare function that attaches greater importance to the situation of low-income households (see Duclos, 2000).

14. Note that this refers to all cash transfers taken together. Separating out benefits for younger people (Immervoll and Richardson, 2011) shows that benefit rates for the 15-54 year-olds are lower than for the 54-64 year-olds in all countries and much lower in some (Czech Republic, Finland, Poland, Switzerland). This reflects the generosity of disability and early-retirement payments relative to unemployment and family benefits. As a result, the overall finding of a declining redistributive capacity of tax-benefit policies has mainly affected those aged below 55.

15. Measuring the number of individuals receiving out-of-work benefits raises a number of conceptual issues (such as determining the appropriate reference time period and avoiding double-counting, or measuring benefit receipt at the household level see, *e.g.*, Carcillo and Grubb, 2006; Immervoll *et al.*, 2004).

16. Initial employment or contribution requirements for entitlement to unemployment insurance benefits are strictest in the Slovak Republic, Turkey and the United Kingdom, followed by Belgium, Poland and Spain, as well as Austria, the Czech Republic, Denmark, Germany, Italy, Sweden and Switzerland. On the other end of the spectrum, with contribution and employment requirements with six months or less, are Canada, France, Greece, Iceland, Japan, Korea, Netherlands, Norway and the United States. There are no employment or contribution conditions for (means-tested) unemployment benefits in Australia and New Zealand. Benefit rules may however stipulate other

conditions which may preclude access to unemployment insurance for part-time workers, such as minimum requirements on previous earnings.

17. As a general rule, increases/decreases are indicated if the change exceeded 10%. A full and detailed account of the changes in policy parameters is given in Immervoll and Richardson (2011). The paper also lists tax-policy changes since the mid-1980s.

18. Regional or local authorities may also provide supplementary programmes on top of those which are nationally co-ordinated (*e.g.*, General Assistance in US States, see Gallagher *et al.*, 1999). Also, benefit offices and caseworkers sometimes have considerable room for discretion (*e.g.*, by awarding support in special circumstances).

19. For understanding the changing role of SA in government redistribution, it would therefore be particularly important to gauge benefit-claiming behaviour and patterns. Unfortunately, while high-quality data exist for some of the more centralised programmes (*e.g.*, for the US Food Stamp programme, see USDA, 2010), comparable information on SA benefit recipiency patterns is currently not available across countries.

20. Since the mid-1980s, support for low-wage workers has been expanded substantially in the United States (Earned Income Tax Credit) and the United Kingdom (Family Credit, later Working Families Tax Credit, now Working Credit), especially for families with children (both FC and WFTC were only available to families with children). While many other OECD countries have introduced some form of in-work benefit in recent years, their sizes and their redistributive impact are currently small so they are not covered here (see Immervoll and Pearson, 2009).

21. The choice between the different assessment units is relevant for a number of – partially competing – policy objectives. Rosen (1977) has shown that an income tax cannot be progressive and also achieve both horizontal equity with respect to family income (same tax burden for families with the same total income) and marriage neutrality (same tax burden regardless of marital status). However, as long as income taxes are progressive, and ignoring employment gains and behavioural effects, assessing taxes based on family incomes is superior in terms of reducing the inequality of income as measured in this study.

22. A table with summaries of 2005 social security contribution schedules (and also of other benefits and taxes considered in this section) is available in OECD (2007a) and through *www.oecd.org/els/ social/workincentives*.

23. For a formal decomposition, see OECD (2008b).

24. For instance, Immervoll (2005) calculates that at moderate rates of nominal earnings growth, the additional revenue generated by fiscal drag over a four-year period can sum to about one third of total annual receipts if the income-tax schedule is fairly progressive.

25. Very highly "progressive" changes that change the ranking of families can also increase inequality. For instance, if family A with initial income of 95 benefits from an additional transfer of 15, while family B with initial income of 100 receives no increase, then the income gap between the two is doubled.

26. In the case of single individuals in receipt of minimum income benefits the results for Germany over low earnings range between 1995 and 2005 at the bottom end of the earnings distribution are primarily driven by the reduction in housing supplements for recipients of social assistance/ unemployment assistance recipients. In Germany, housing benefit rules are different for recipients of assistance benefits (housing supplement) and for other housing-benefit claimants (standard housing benefit). Information on the limits that authorities use in assessing reasonable housing costs for the purpose of calculating housing supplements is not available for 1995. The results are therefore based on the simplifying assumption that these ceilings are the same proportion of standard housing benefits in 2005 and in 1995.

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ANNEX 7.A1

Additional Tables and Figures

Table 7.A1.1. Public social expenditure: trends and components

	1985 Total (% of GDP)	1985 Cash support — Total (% of GDP)	Incapacity related	Family	Unemployment	Other social policy areas	Housing	Early retirement (Share of total spending)	1995 Total (% of GDP)	1995 Cash support — Total (% of GDP)	Incapacity related	Family	Unemployment	Other social policy areas	Housing	Early retirement (Share of total spending)	2005 Total (% of GDP)	2005 Cash support — Total (% of GDP)	Incapacity related	Family	Unemployment	Other social policy areas	Housing	Early retirement (Share of total spending)
Australia	12.1	3.5	29.1	8.3	8.8	9.8	0.4	1.9	0.0	16.2	5.5	34.1	12.3	13.1	7.3	0.2	1.2	0.0	16.5	4.7	28.4	11.0	12.8	3.3	0.1	1.3	0.0
Austria	23.7	6.4	26.8	11.3	10.4	3.9	0.6	0.6	4.6	26.6	6.9	25.9	10.3	9.9	4.8	0.6	0.3	3.7	27.4	6.1	22.3	8.3	8.7	4.2	0.7	0.4	3.4
Belgium	26.0	9.6	36.8	13.8	9.5	12.5	1.0	0.0	0.0	26.3	8.0	30.5	8.2	7.9	12.3	2.1	0.0	0.0	26.5	7.3	27.4	7.3	6.3	12.6	1.1	0.3	0.0
Canada	17.0	3.8	22.5	6.0	3.5	10.9	0.0	2.0	0.0	18.9	4.0	21.1	6.2	4.2	6.8	1.8	2.1	0.0	17.0	3.0	17.5	5.4	5.2	3.7	1.5	1.7	0.0
Chile	12.3	1.6	13.1	6.1	6.5	0.5	0.0	0.0	20.7	11.4	1.2	10.3	6.4	3.8	0.1	0.0	0.0	14.0	11.2	1.0	8.8	5.2	3.5	0.1	0.0	0.0	11.0
Czech Republic	16.0	4.8	30.1	14.8	15.3	0.0	0.1	0.0	2.0	18.2	4.6	25.2	12.4	10.3	2.0	0.3	0.2	0.0	19.5	4.3	21.8	11.5	6.0	3.2	0.4	0.7	1.2
Denmark	23.2	9.2	39.6	12.3	3.8	18.3	3.3	2.0	2.5	28.9	10.9	37.7	9.6	6.4	15.3	3.8	2.6	3.0	27.2	8.9	32.7	11.2	5.7	10.4	2.8	2.6	1.4
Estonia	..	..	..	..	..	..	..	..	..	14.1	3.3	23.5	9.9	10.8	0.9	1.7	0.1	0.0	13.2	3.3	25.0	12.4	10.9	0.8	0.8	0.1	7.8
Finland	22.6	6.6	29.3	15.7	6.4	5.7	0.7	0.8	0.0	30.9	11.8	38.4	14.0	8.7	12.7	1.5	1.5	1.5	26.1	7.1	27.2	11.2	6.1	7.7	1.1	1.1	2.7
France	26.0	7.7	29.4	8.9	9.0	8.9	0.0	2.6	0.2	28.5	6.0	21.1	5.8	5.4	5.7	1.0	3.2	0.0	29.0	5.9	20.4	5.8	4.8	5.9	1.2	2.8	0.0
Germany	22.5	4.3	19.2	7.3	5.6	4.2	1.6	0.6	3.4	26.8	5.2	19.4	6.8	5.1	5.8	0.7	1.0	2.5	27.2	5.4	20.0	5.4	4.9	6.9	0.5	2.3	2.7
Greece	16.0	2.4	15.2	11.4	1.9	1.9	0.0	0.0	0.0	17.3	2.3	13.1	4.6	4.4	2.3	0.0	1.8	12.9	21.0	2.3	10.8	4.1	3.4	1.9	0.0	1.4	12.4
Hungary	..	..	..	..	..	..	..	..	..	21.3	5.9	27.5	11.2	9.4	3.8	0.2	2.8	1.4	22.8	5.6	24.6	11.3	8.3	2.5	0.2	2.3	3.9
Iceland	13.7	3.2	23.4	5.6	12.6	2.1	3.0	0.0	0.0	15.2	3.9	25.9	7.6	9.7	4.7	3.5	0.4	0.0	16.3	3.9	23.9	10.1	7.7	1.9	3.0	1.3	0.0
Ireland	21.3	8.4	39.3	12.2	6.4	15.7	0.8	4.3	2.7	15.7	5.6	35.9	9.5	10.2	11.5	1.7	3.0	3.3	15.8	5.3	33.3	9.5	14.0	5.7	2.2	2.0	4.1
Israel[1]	..	..	..	..	..	..	..	..	..	16.7	4.7	27.9	8.7	10.2	2.9	6.0	0.1	0.0	16.5	4.3	26.4	12.8	6.1	2.2	5.3	0.0	0.0
Italy	20.8	4.1	19.5	9.4	3.8	6.2	0.7	0.8	0.1	19.9	2.9	14.3	8.8	2.0	3.5	0.0	0.0	0.0	25.0	2.8	11.0	6.7	2.3	2.0	0.0	0.1	0.0
Japan	11.2	1.4	12.6	4.9	2.1	3.7	2.0	2.6	0.0	14.3	1.5	10.3	4.0	1.5	3.6	1.2	0.0	0.0	18.6	1.5	8.2	3.1	1.9	1.8	1.4	0.0	0.0
Korea	2.8	0.4	14.8	9.5	0.0	0.0	5.3	0.0	0.0	3.2	0.4	12.3	9.1	0.1	0.0	3.0	0.0	0.0	6.4	1.0	15.4	6.2	0.2	3.1	5.9	0.0	0.0
Luxembourg	20.2	6.2	30.7	19.0	6.6	4.0	1.1	0.0	0.0	20.8	5.8	28.0	13.8	10.6	2.4	1.0	0.1	0.0	23.0	6.8	29.5	9.9	13.3	4.2	1.4	0.7	6.0
Mexico	1.7	0.0	2.2	1.3	0.0	0.0	1.0	1.2	0.4	4.3	0.5	10.9	1.2	0.0	0.0	9.8	0.0	1.0	6.8	1.0	15.3	0.8	4.9	0.0	9.5	0.0	0.8
Netherlands	25.3	11.8	46.6	21.7	6.8	13.1	3.7	0.6	0.0	23.8	9.6	40.4	20.3	4.1	11.9	2.5	1.7	0.0	20.7	6.4	30.7	15.9	3.1	7.6	2.5	1.6	0.2
New Zealand	17.7	4.8	27.0	8.7	12.9	3.5	1.4	0.8	0.0	18.7	6.5	34.8	14.2	10.5	6.1	0.8	3.2	0.0	18.1	5.8	31.9	15.5	10.4	2.4	0.7	2.9	0.0
Norway	17.8	5.8	32.7	18.7	7.4	2.7	3.1	0.0	0.0	23.3	7.6	32.4	15.6	9.5	4.6	1.9	0.8	0.1	21.7	6.2	28.5	16.6	7.3	2.5	1.4	0.7	0.7
Poland	14.9	4.8	32.3	21.0	11.3	0.0	0.0	0.0	0.0	22.6	8.1	35.7	23.8	4.7	7.2	0.0	0.0	0.3	21.3	4.3	20.4	12.7	4.0	2.5	1.2	0.0	9.8
Portugal	10.1	2.9	29.2	20.2	6.0	2.7	0.3	0.0	..	16.5	3.8	23.3	13.9	3.7	5.5	0.1	0.0	0.7	22.9	4.2	18.4	9.3	3.1	5.1	0.8	0.0	1.1
Slovak Republic	..	..	..	..	..	..	..	..	..	18.8	5.5	29.4	10.1	12.5	2.3	4.4	0.0	0.0	16.3	3.6	22.0	7.9	9.4	1.7	2.9	0.0	0.0
Slovenia	..	..	..	..	..	..	..	..	..	22.4	5.0	22.3	11.5	5.7	3.9	1.2	0.0	9.5	21.9	4.7	21.3	10.0	6.2	2.7	2.4	0.0	11.3
Spain	17.8	5.4	30.5	13.7	1.3	15.4	0.0	0.1	0.0	21.4	6.1	28.7	11.3	1.3	14.8	0.2	1.1	2.1	21.4	5.1	23.8	10.9	2.1	10.3	0.4	0.0	2.5
Sweden	29.5	8.0	27.0	14.0	6.0	2.9	1.9	2.2	0.3	32.0	9.6	29.9	11.3	6.1	7.1	1.9	3.4	0.4	29.1	7.2	24.9	12.6	5.2	4.1	1.2	1.8	0.4
Switzerland	14.7	4.0	27.2	14.3	6.6	1.7	4.6	0.0	0.0	17.5	4.5	25.9	10.9	5.9	6.1	2.8	0.3	0.0	20.2	5.0	24.8	12.2	5.1	4.6	2.7	0.2	0.0

Table 7.A1.1. **Public social expenditure: trends and components** (cont.)

	1985 Total	1985 Cash support for the non-elderly								1995 Total	1995 Cash support for the non-elderly								2005 Total	2005 Cash support for the non-elderly							
	% of GDP	% of GDP	Total	Share of total spending Incapacity related	Family	Unemployment	Other social policy areas	Housing	Early retirement Share of total spending	% of GDP	% of GDP	Total	Share of total spending Incapacity related	Family	Unemployment	Other social policy areas	Housing	Early retirement Share of total spending	% of GDP	% of GDP	Total	Share of total spending Incapacity related	Family	Unemployment	Other social policy areas	Housing	Early retirement Share of total spending
Turkey	3.1	0.9	29.2	2.7	16.9	9.1	0.5	0.0	0.0	5.6	1.0	17.7	2.1	4.4	9.0	2.2	0.0	0.0	9.9	0.2	2.0	1.4	0.1	0.5	0.0	0.0	0.0
United Kingdom	19.4	7.4	38.1	6.9	9.3	10.5	4.8	6.6	0.0	19.9	7.1	35.7	13.2	9.2	4.3	0.0	9.0	0.0	20.6	5.9	28.8	9.4	10.6	1.2	0.8	6.9	0.0
United States	13.1	2.1	16.0	7.6	2.8	3.0	2.5	0.0	0.0	15.4	2.4	15.5	7.6	2.0	2.2	3.6	0.0	0.0	15.8	2.2	13.9	8.0	0.8	1.7	3.4	0.0	0.0
Unweighted average	*17.0*	*4.9*	*26.5*	*11.3*	*6.9*	*6.0*	*1.5*	*0.9*	*1.3*	*19.3*	*5.3*	*25.3*	*10.2*	*6.0*	*6.2*	*1.7*	*1.3*	*1.6*	*20.1*	*4.5*	*21.4*	*8.9*	*5.6*	*4.2*	*1.7*	*1.1*	*2.1*

1. Information on data for Israel: http://dx.doi.org/10.1787/888932315602.
Source: OECD Social Expenditure Database (www.oecd.org/els/social/expenditure).
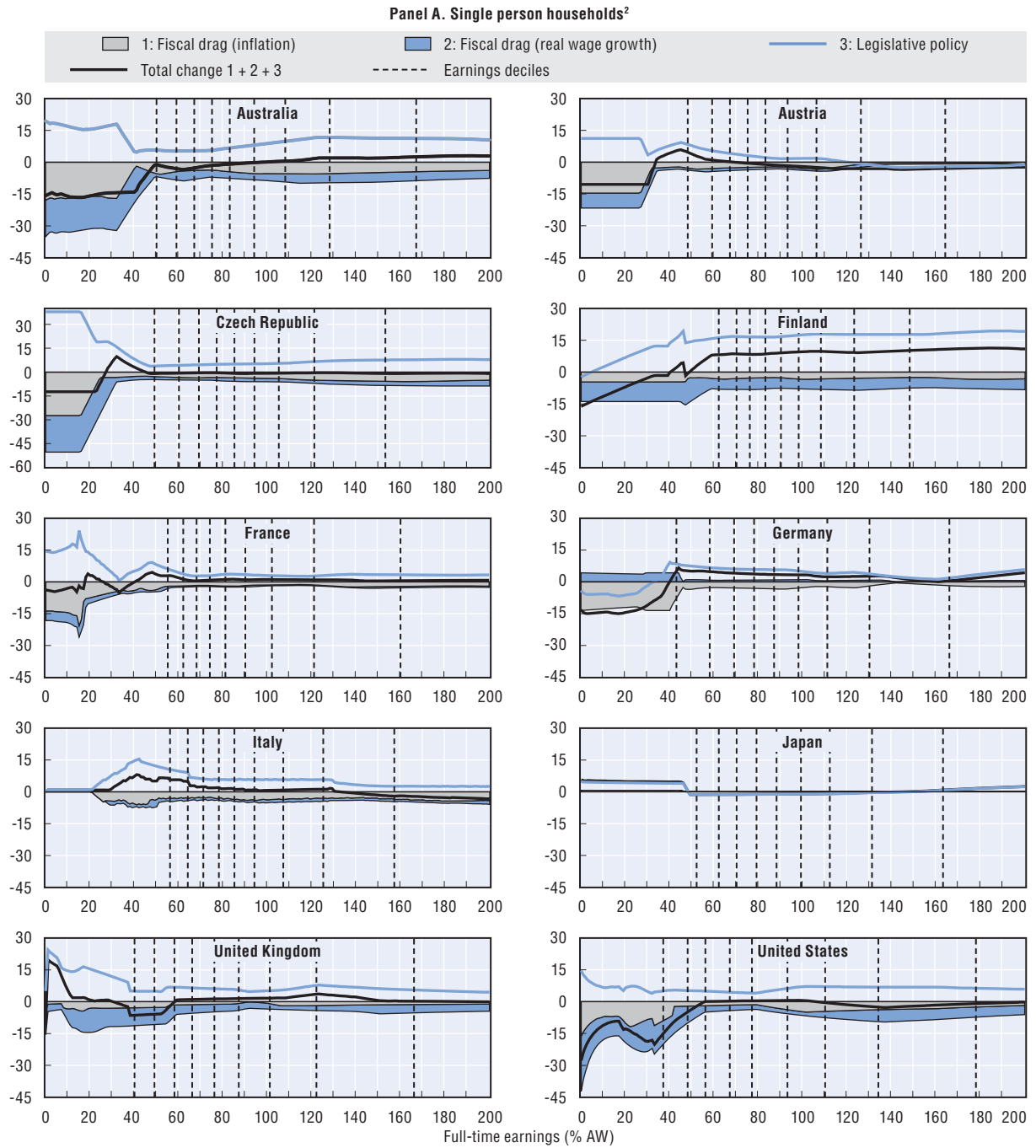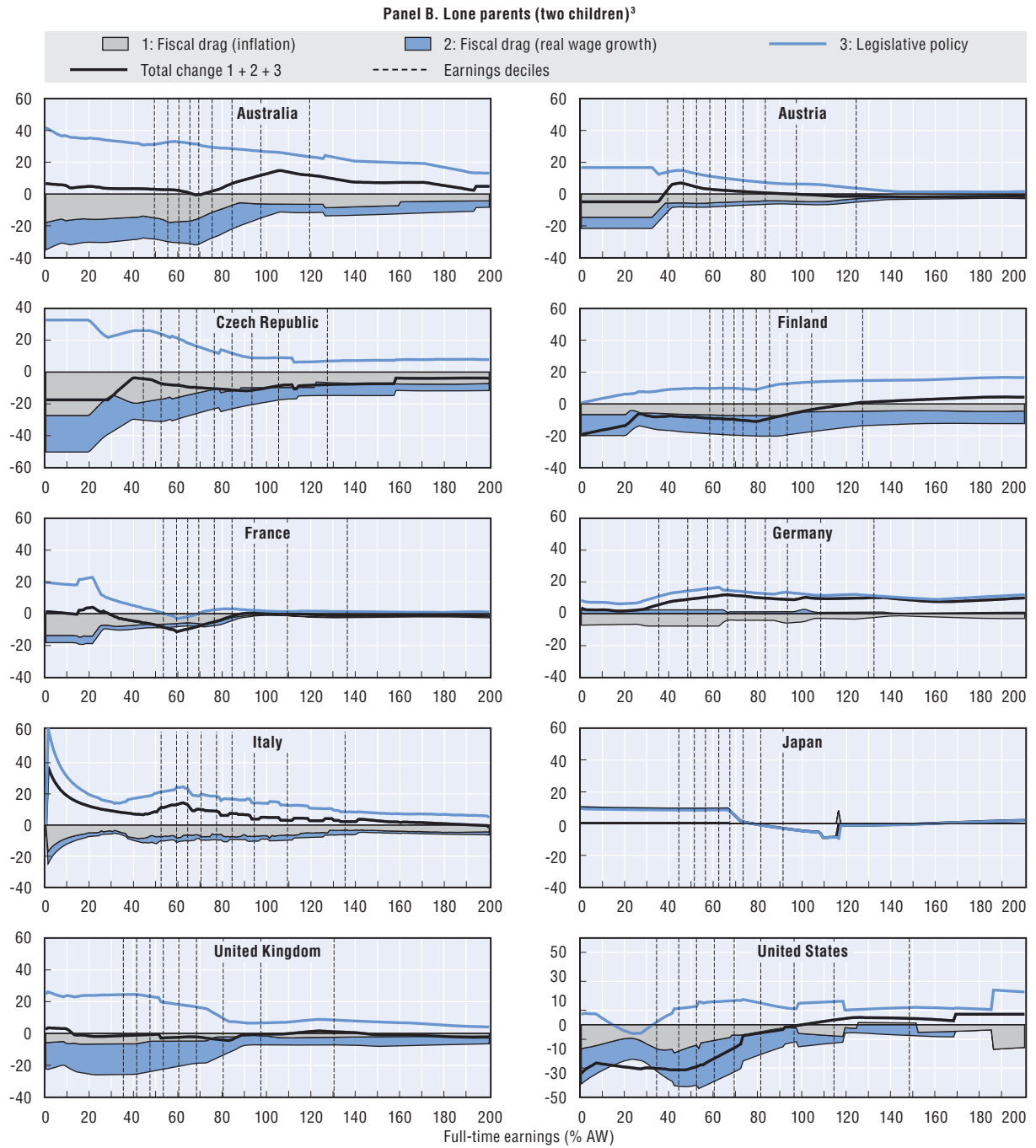
StatLink *http://dx.doi.org/10.1787/888932538073*

Figure 7.A1.1. **Gains and losses in net transfers, percentage of disposable income, 1995-2005: policy changes and fiscal-drag**[1]

Panel A. Single person households[2]

Legend:
- 1: Fiscal drag (inflation)
- 2: Fiscal drag (real wage growth)
- 3: Legislative policy
- Total change 1 + 2 + 3
- Earnings deciles

Full-time earnings (% AW)

Figure 7.A1.1. **Gains and losses in net transfers, percentage of disposable income, 1995-2005: policy changes and fiscal-drag**[1] (*cont.*)

Panel B. Lone parents (two children)[3]

Legend:
- 1: Fiscal drag (inflation)
- 2: Fiscal drag (real wage growth)
- 3: Legislative policy
- Total change 1 + 2 + 3
- Earnings deciles

Full-time earnings (% AW)

Figure 7.A1.1. **Gains and losses in net transfers, percentage of disposable income, 1995-2005:
policy changes and fiscal-drag**[1] *(cont.)*

Panel C. Two-earner couples (two children)[4]
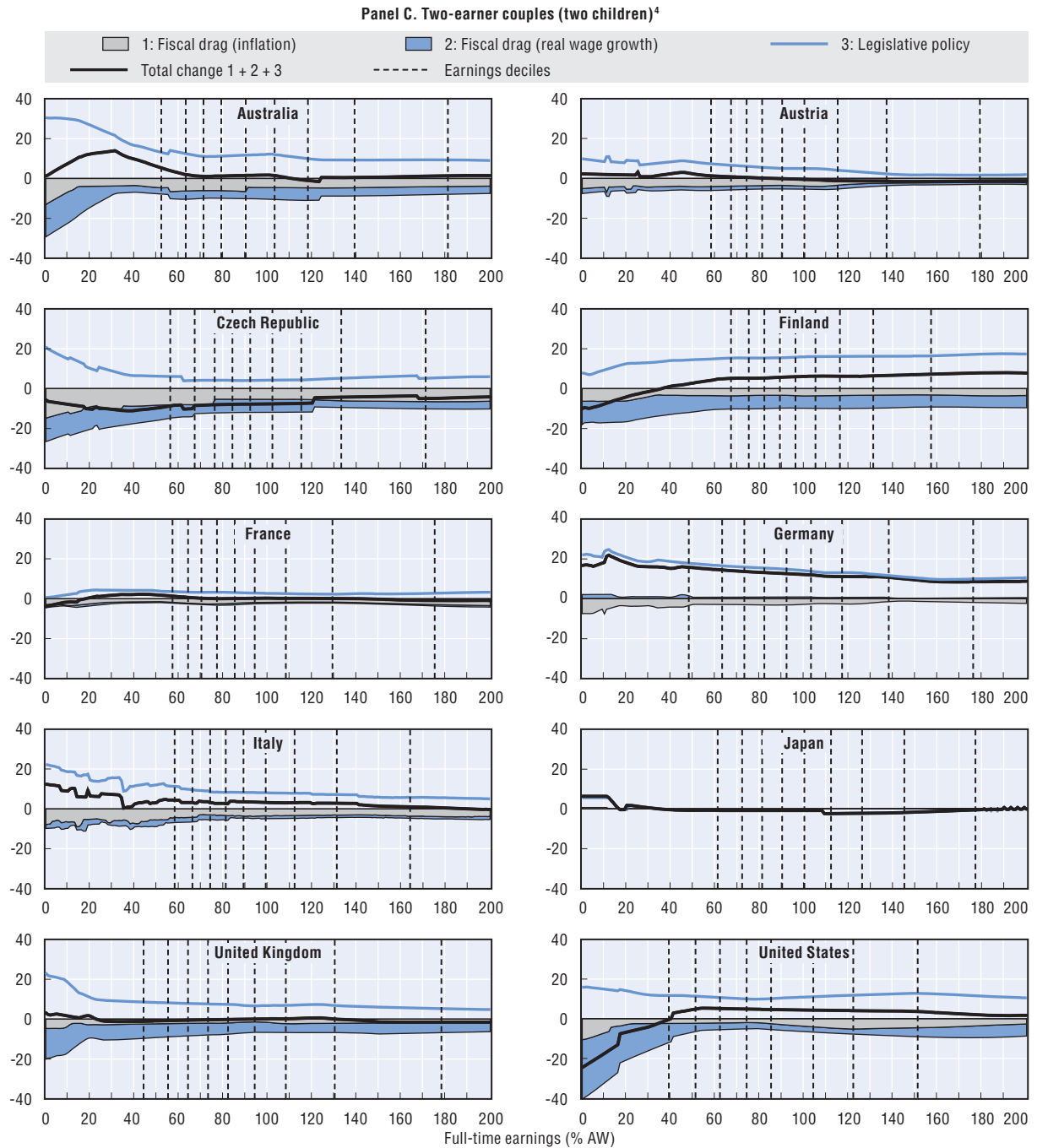
1. Income changes are measured relative to the income the household would have had if the 2005 tax-benefit system was a fully wage-indexed version of the 1995 system. Families are assumed not to receive unemployment benefits that depend on previous employment histories. Instead, and subject to relevant income limits, they may be entitled to means-tested assistance benefits.
2. Earnings deciles relate to the entire earnings distribution (men *and* women).
3. Earnings deciles relate to the earnings distribution of *women* only.
4. Earnings deciles relate to the earnings distribution of *men* only. The woman's earnings are held fixed at the median of the earnings distribution of *women* only.

Source: OECD tax-benefit models (*www.oecd.org/els/social/workincentives*).

StatLink ⬚⬚ *http://dx.doi.org/10.1787/888932536933*

Figure 7.A1.2. **Position in the income distribution under different policy scenarios**[1]

Panel A. Single person households[2]

Figure 7.A1.2. **Position in the income distribution under different policy scenarios**[1] *(cont.)*

Panel B. Lone parents (two children)[3]

Full-time earnings (% AW)

Figure 7.A1.2. **Position in the income distribution under different policy scenarios**[1] *(cont.)*

Panel C. Two-earner couples (two children)[4]

1. Deciles of household disposable income (equivalised using the square-root scale) are for the total population in the mid-2000s. The 1995 series shows where the household would be located in the income distribution if the 2005 tax-benefit system was a fully wage-indexed version of the 1995 system. Families are assumed not to receive unemployment benefits that depend on previous employment histories. Instead, and subject to relevant income limits, they may be entitled to means-tested assistance benefits.
2. Earnings deciles relate to the entire earnings distribution (men *and* women).
3. Earnings deciles relate to the earnings distribution of *women* only.
4. Earnings deciles relate to the earnings distribution of *men* only. The woman's earnings are held fixed at the median of the earnings distribution of *women* only.

Source: OECD tax-benefit models (*www.oecd.org/els/social/workincentives*).

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