Essays on trends in income distribution and redistribution in affluent countries and China

Wang, C.

3 Income redistribution in 20 countries over time ▪

ABSTRACT

In most OECD countries, the gap between rich and poor has widened over the past decades. The present study analysed whether and to what extent direct taxes and social transfers contribute to this trend. The study contributes to the literature by disentangling several parts of fiscal redistribution in a comparative setting. We used micro-data from the Luxembourg Income Study to examine household market inequality and redistribution from transfers and taxes for 20 countries from the mid-1980s to the mid-2000s. The contribution of each programme was estimated using a sequential accounting budget incidence decomposition technique. We observed a sizeable increase in primary household inequality, but tax-benefit systems have offset two-thirds of the average increase in primary income inequality. The public old-age pensions attributed 60 per cent to the increase in redistribution, while social assistance accounted for 20 per cent. Direct taxes slowed down redistribution by 16 per cent.

Key words: inequality, redistribution, social income transfers, welfare states, OECD countries

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3.1 INTRODUCTION

In most OECD countries, income inequality has risen over the past two or three decades (OECD, 2008, 2011). The widening of the income distribution has been driven mainly by greater inequality in market income from the mid-1980s to the mid-1990s. Market income inequality also rose from the mid-1990s to the mid-2000s, but at a slower pace. Several explanations of income inequality have been introduced by comparative researchers in sociology, economics and political science (among others Atkinson, 1996; Brandolini and Smeeding, 2009; Chevan and Stokes, 2000; Gustafsson and Johansson, 1999; Kuznets, 1955; McCall, 2001). One of the main driving forces behind the disposable income distribution is the reduction of inequality through the tax-transfer system (Atkinson and Brandolini, 2001; Brandolini and Smeeding, 2007, 2009; Caminada and Goudswaard, 2001, 2010; Danziger, Haveman and Plotnick, 1981; Gottschalk and Smeeding, 1997, 2000; Smeeding, 2000, 2004). The overall redistributive effect can be divided into redistribution by transfers and by taxes, or even into more detail (Caminada and Goudswaard, 2001; Caminada, Goudswaard and Wang, 2012; Ferrarini and Nelson, 2003; Fuest, Niehues, and Peichl, 2010; Kristjánsson, 2011; Plotnick, 1984; Wang, Caminada, and Goudswaard, 2012). In the mid-2000s, the average redistributive effect achieved by public cash transfers was twice as large as that achieved through household taxes, although the United States, for example, stands out for achieving a greater part of redistribution by taxes (OECD, 2008, 2011; Whiteford, 2010; Wang et al, 2012). The tax and transfer system was able to offset part of the rise in market income inequality over the last 25 years.

The present study examined in detail changes in the redistributive effects of taxation and income transfers to households. The extensive literature on 'welfare state retrenchment' that has emerged over the last decades seems to imply that welfare states have become less redistributive. However, recent studies and data show, to the contrary, that most welfare states became more redistributive in the 1980s and 1990s (see also Kenworthy and Pontusson, 2005). Welfare states have not compensated completely for the rise in inequality of market income among households, but most have done so to some degree. By and large, welfare states have worked the way they were designed to work. It is markets, not redistribution policies that have become more inegalitarian. It should be noted here that because tax-benefit systems are generally progressive, one could expect that higher market income inequality automatically leads to more redistribution, even without policy actions (Immervoll and Richardson, 2011).

Under the circumstance of increasing income inequality and public expenditure cuts in the 1980s and 1990s, attention needs to be paid to the design of welfare states. How good is the tax-benefit system as a whole and its programmes in narrowing income distribution? What is the trend of redistribution over time?

In a recent study, Immervoll and Richardson (2011) examined the impact of tax and transfer systems on income inequality in the past 25 years and across countries. They found that in most countries tax-benefit policies offset some of the large increases in market income inequality, although such policies appear to have become less effective at doing so since the mid-1990s. However, Immervoll and Richardson's analysis did not cover the total population, but was restricted to the working-age population. They excluded the largest government transfer programme – public pensions. Especially this programme has a strong redistributive impact (Wang et al, 2012).

Mahler and Jesuit (2006) divided government redistribution into several components: the redistributive effects from unemployment benefits, pensions and taxes, and performed an empirical exercise with LIS-data from about 1980 through the early 2000s. Their study provided relatively new insights. However, the data used were not very recent and only two specific social programmes and direct taxes were included in the analysis. There have also been other cross-national studies examining redistributive effects, which, however, have often been based on smaller and/or less disaggregated datasets (see. e.g. Goñi, López, and Servén, 2008; Lefèbvre, 2007; OECD, 2008).

This study makes a contribution in the area of measurement, a topic that is often undervalued in the literature. We computed the changes in the redistributive effects of different social programmes and direct taxes among the total population over time (cf. Wang et al, 2012). At the programme level, we examined the redistributive trends of sickness benefits, disability benefits, state old-age and survivors benefits, child/family benefits, unemployment compensation benefits, social assistance cash benefits, other social insurance benefits, mandatory payroll taxes and income taxes. We used the data from the Luxembourg Income Study (LIS) and analysed the tax-benefit distributional effects across 20 LIS countries from the mid-1980s to the mid-2000s. The redistributive effect of each programme was measured sequentially using a budget incidence approach. Our contribution to the literature is that we provide trends of the redistribution across countries at programme level. We did not analyse the causes of changes in the redistributive impact of social programmes and taxes.

The article is organised as follows. It begins by presenting our research method and data. It then presents the results of a cross-country comparison. In the subsequent section, we decompose total redistribution through the tax-benefit system into the redistributive effects of 11 social transfers and several direct taxes from the mid-1980s to the mid-2000s in a comparative setting. The final section concludes the article.

3.2 RESEARCH METHOD

3.2.1 Data from Luxembourg Income Study (LIS)

The growing interest in national and cross-national differences in earnings and income inequality (over time) has produced a wide range of studies (see Brandolini and Smeeding, 2007; Gottschalk and Smeeding, 1997; Immervoll and Richardson, 2011; Lambert, Nesbakken and Thoresen, 2010; OECD, 2008, 2011). An important development was the launching of LIS in which micro datasets from various countries were 'harmonised'; see survey information LIS at http://www.lisdatacenter.org/.[1] Consequently, it is possible to study income inequality across countries and over time (see Atkinson, Rainwater and Smeeding, 1995). LIS micro data seem to be the best available data for describing how income inequality and the redistributive effects of direct taxes and transfers vary across countries and over time (Nolan and Marx, 2009; Smeeding, 2004), providing the information of 11 different benefits and several income taxes and social contributions in a comparative setting.[2]

There exist several detailed national studies of redistribution trends. International comparisons tend to focus on specific parts of the tax-benefit system. Multi-country comparative studies that consider the entire tax-benefit system are rare. Point-in-time comparisons are sometimes thought problematic as 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. However, this was less of an issue when we focused 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.

From nearly 300 variables in the LIS dataset, we chose those related to household income (all kinds of income sources), total number of persons in a household and household weight (in order to correct for sample bias or non-sampling errors) to measure income inequality and redistribution across countries. In line with LIS convention and the work of Mahler and Jesuit (2006), we eliminated observations with zero or a missing value of disposable income from LIS data. The present study used the data of 20 LIS countries, with at least

1 In mid-2011 the LIS unveiled an entirely new harmonisation template dividing the income concept for post-tax and post-transfer income into two variables: income for post-tax and post–transfer income including non-monetary household income besides cash household income (DHI), and disposable income including only cash household income (DPI). This article used the template generating the income concept DPI.

2 LIS surveys do not take into account indirect taxes in the trajectory primary to disposable income, such as sales or value added taxes which are generally considered more regressive than direct taxes.

three data points (around 1985, 1995 and 2005).[3] We distinguished two groups of countries (based on data quality). For 12 countries, full information was available on the whole trajectory from primary income to disposable income: Australia, Canada, Denmark, Finland, Germany, Israel, Netherlands, Norway, Sweden, Switzerland, the United Kingdom and the United States. For another 8 countries, data was available only on an after-tax basis: Belgium, France, Ireland, Italy, Luxembourg, Mexico, Poland and Spain.

First, we present a global picture of redistribution for all 20 countries over time; then we move to a more elaborated decomposition analysis of redistribution over time for 12 countries for which full information is available. Our analysis concentrates mainly on these 12 countries with full information of transfers and direct taxes within the trajectory from primary income to disposable income for the period around 1985–2005.

We used the Gini coefficient as an overall measure of income inequality.[4] Household weights were applied for the calculation of Gini coefficients; the equivalence scale is the square root of the number of household members (LIS' equivalence scale). Another measurement decision made in the present study concerned top and bottom coding. We bottom-coded datasets at 1 per cent of equivalised mean income and top-coded at 10 times the median of non-equivalised income for the nation sample (cf. Gottschalk and Smeeding 1997, p. 661).

3.2.2 Measuring the redistributive effects of direct taxes and social transfers

Usually, the impact of social policy on income inequality is calculated in line with the work of Musgrave, Case and Leonard (1974), that is, statutory or budget incidence analysis. A standard analysis of the redistributive effect of taxes and income transfers is to compare pre-tax-transfer income inequality and post-tax-transfer income inequality (OECD 2011). Our measure of the redistributive impact of social security on inequality was straightforwardly based on formulas developed by Kakwani (1986) and Ringen (1991):

> *Redistribution by direct taxes and social transfers = primary income inequality – disposable income inequality.*

3 Wang and Caminada (2011b) assembled a database for all 171 datasets in LIS (all 36 countries from wave 0 to wave VI), allowing researchers to make comparisons of redistribution in a straightforward manner (see Leiden LIS Budget Incidence Fiscal Redistribution Dataset, posted at the website of LIS cross-national data center Luxembourg, http://www.lisdatacenter.org/resources/other-databases/).

4 It could be argued that the Gini coefficient is rather sensitive to the middle part of the income distribution compared with other indicators. We reported a sensitivity analysis using other inequality indicators.

This formula was used to estimate the reduction in inequality produced by direct taxes and social transfers. Primary income inequality was measured by a summary statistic of pre-tax, pre-transfer incomes and disposable income inequality was measured by the same summary statistic of disposable equivalent incomes. When calculating inequality indices for both primary and disposable income, we ranked people by their primary and disposable incomes, respectively, so that the re-ranking effect was included in our results (see Plotnick, 1984; the same method was applied by Immervoll and Richardson, 2011, and by Wang and Caminada, 2011a). Table 3.1 presents the framework for accounting income inequality and redistribution through various income sources.

Table 3.1 The income inequality and redistribution accounting framework.

Income components	Income inequality and redistributive effect
Gross wages and salaries + Self-employment income + cash property income + Occupational and private pensions + Private transfers + Other cash income = Primary income	Income inequality before social transfers and taxes
+ Social security cash benefits	-/- Redistributive effect of social transfers
= Gross income	= Income inequality before direct taxes
-/- Pay Roll (Mandatory payroll taxes) -/- Income taxes	-/- Redistributive effect of direct taxes
= Disposable income	= Income inequality after social transfers and taxes

Note: For 12 countries (Australia, Canada, Denmark, Finland, Germany, Israel, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom and the United States), complete information was available for the entire tax-benefit system in LIS. For another 8 countries (Belgium, France, Ireland, Italy, Luxembourg, Mexico, Poland and Spain), we used net wages and salaries instead of gross wages and salaries where gross variables were not available for all data years in LIS.
Source: Wang and Caminada (2011b)

The budget incidence analysis is not without problems; see a critical survey of efforts to measure budget incidence by Smolensky, Hoyt and Danziger (1987). The pre-transfer inequality was compared with the post-transfer inequality keeping all other things equal. Household and labour market structures were assumed unchanged, thus disregarding any possible behavioural changes that the situation of absence of social transfers would involve (Frick, Büchel and Krause, 2000) and inducing a behavioural feedback to the redistributive system (Bergh, 2005). However, behavioural responses could obviously be important. It is likely that in the absence of social transfers, more people will work (more), thereby earning higher incomes. Kim (2000b) showed that both the generosity and efficiency of the tax/transfer system could influence the level of pre-tax-transfer income inequality. There is also empirical work

addressing these problems, using various measurement strategies (see. e.g. Jesuit and Mahler, 2010). Budget incidence calculations can therefore be seen only as an approximation of the redistributive effects because of the assumption that agents behave similarly in situations with and without social transfers and social security. This implies that estimates for redistribution through taxes and transfers should be regarded as upper bounds. Despite this problem, literature on public finance has for decades contained analyses of statutory and budget incidence (see e.g. Gillespie, 1965; Kakwani, 1977a, 1977b; Musgrave and Tun Thin, 1948; OECD, 2008, 2011; Reynolds and Smolenskey, 1977a, 1977b).

We sequentially decomposed the Gini coefficient in order to calculate the partial redistributive impact of transfers and direct taxes (see Wang and Caminada, 2011a, for details). The results obtained for the specific transfers and taxes were corrected for the ordering effect.[5] The sequential accounting decomposition approach was advocated by Kakwani (1986), among others, and was followed by Mahler and Jesuit (2006), Immervoll et al (2005) and Whiteford (2008). Other techniques for the decomposition of the Gini coefficient by income source can be found in the literature as well (see e.g. Kim, 2000a, and Lerman and Yitzhaki, 1985). In the literature, two techniques for decomposing inequality are distinguished; *sequential accounting decomposition and factor source decomposition*. When comparing both techniques, they lead to the same estimates of disposable income inequality, but to contradictory results with respect to the importance of benefits for redistributing income (see Fuest et al, 2010, and Kanbur, 2006). Inequality analysis based on the *sequential accounting decomposition* technique (as applied in the present study) suggests that benefits are the most important factor in reducing inequality in the majority of countries. The *factor source decomposition* technique, initiated by Shorrocks (1982), suggests, however, that benefits play a much smaller role, and that taxes and social contributions are more important contributors to income inequality reduction. Fuest et al (2010) explained these partly contradictory results. The most important difference between the two techniques is that the accounting technique applies tax benefit instruments sequentially, whereas the decomposition technique accounts for them simultaneously (see also Kammer and Niehues, 2011). We followed the sequential decomposition

5 The ordering of programmes has an influence on the results when using the sequential accounting decomposition method. The partial redistributive effect of a specific social transfer will be highest (smallest) when computed as the first (last) social programme. We corrected for this effect as follows. We considered every specific social transfer as the first programme to be added to primary income, and every direct tax as the first tax to be subtracted from gross income. In that case, the sum of all partial redistributive effects amounts to a little over 100 per cent. We therefore rescaled the redistributive effects of each programme by applying an adjustment factor, which is defined as the overall redistribution (100%) divided by the sum of all partial redistributive effects of all programmes (a little over 100%).

technique, which fits in with a strand of empirical literature, among which is the recent OECD-work.

3.2.3 Measuring change over time

In line with Kenworthy and Pontusson (2005), we believe that it is more informative to measure changes in inequality in absolute terms (the ending value minus the beginning value) rather than in percentage terms (absolute change divided by the beginning value). Absolute measures of change may be easier to interpret than relative measures. The problems with relative measures are especially complex when comparing changes over time in redistribution, as the relative measure becomes 'percentage change in percentage change'. It is straightforward to measure redistribution as the absolute difference between inequality before and after direct taxes and transfers, and to measure change in redistribution as the difference in these amounts between two points in time.

3.2.4 Focus on total population – including public pension schemes

Unlike most existing studies, this study explicitly focused on the total population instead of the non-elderly population (those aged 15–64) only. Indeed, restricting the analysis to the non-elderly would avoid some of the problems inherent to comparisons of incomes between people who are at different stages in their lives. For instance, an essential function of old-age pensions is to redistribute intertemporally over the life cycle, in which case a focus on the non-elderly helps in understanding the most important elements of interpersonal redistribution. However, in our view the largest government transfer programme, public pensions, should not be excluded from the analysis. Public pension plans are generally seen as part of the safety net, generating large antipoverty effects. Therefore, state old-age pension benefits were included in our analysis on redistribution. Occupational and private pensions are not redistributive programmes per se, although they also have a significant effect on redistribution among the elderly (Van Vliet et al, 2012). The standard approach treats contributions to government pensions as a tax that finances the retirement pensions paid out in the same year, while contributions to private pensions are effectively treated as a form of private consumption. This

may affect international comparisons of redistribution effects of social transfers and taxes.[6]

Overcoming this bias requires a choice: Should pensions be earmarked as market income or as a transfer? We dealt with this bias rather pragmatically by following the LIS Household Income Variables List: Occupational and private pensions were earmarked and treated as market income.

3.3 EMPIRICAL RESULTS

3.3.1 Trends in the distribution of primary and disposable income in LIS countries

This section reviews the evidence on cross-national comparisons of primary and disposable income inequality across 20 nations over time. In order to give a general idea, the countries are clustered around 1985, 1995 and 2005, respectively, showing the average trends of inequality and redistribution (see Table 3.2).

6 The sequential accounting budget incidence technique does not take into account the extent to which public pensions can substitute for private arrangements (see e.g. Whiteford, 2008). In public pension systems, pensioners are assigned zero primary incomes. Therefore, compared with countries with more weight on private arrangements, inequality in primary incomes and redistributive effects might be overestimated.

Table 3.2 Trends in income inequality and redistribution, from around 1985 to around 2005.*

	Gini Primary Income					Gini Disposable Income					Absolute Fiscal Redistribution			
	around 1985	around 1995	around 2005	Change 85-05	%	around 1985	around 1995	around 2005	Change 85-05	%	around 1985	around 1995	around 2005	Change 85-05
Australia (85-03)	0.420	0.464	0.461	0.041	10	0.293	0.308	0.312	0.019	6	0.126	0.156	0.149	0.023
Belgium (85-00)	*0.414*	*0.462*	*0.542*	*0.128*	*31*	*0.227*	*0.266*	*0.279*	*0.052*	*23*	*0.187*	*0.195*	*0.263*	*0.076*
Canada (87-04)	0.393	0.424	0.433	0.040	10	0.288	0.289	0.318	0.030	11	0.105	0.136	0.114	0.010
Denmark (87-04)	0.398	0.421	0.419	0.021	5	0.254	0.218	0.228	-0.026	-10	0.144	0.203	0.191	0.047
Finland (87-04)	0.332	0.384	0.464	0.132	40	0.209	0.217	0.252	0.044	21	0.123	0.168	0.212	0.089
France (81-05)	*0.364*	*0.487*	*0.449*	*0.085*	*23*	*0.288*	*0.288*	*0.281*	*-0.007*	*-3*	*0.076*	*0.199*	*0.168*	*0.092*
Germany (84-04)	0.444	0.450	0.489	0.044	10	0.265	0.270	0.278	0.013	5	0.179	0.180	0.210	0.031
Ireland (87-04)	*0.500*	*0.493*	*0.490*	*-0.010*	*-2*	*0.328*	*0.336*	*0.312*	*-0.017*	*-5*	*0.172*	*0.157*	*0.178*	*0.006*
Israel (86-05)	0.449	0.474	0.491	0.041	9	0.308	0.336	0.370	0.062	20	0.142	0.139	0.121	-0.021
Italy (86-04)	*0.425*	*0.454*	*0.503*	*0.078*	*18*	*0.306*	*0.338*	*0.338*	*0.032*	*10*	*0.119*	*0.116*	*0.165*	*0.046*
Luxembourg (85-04)	*0.377*	*0.388*	*0.452*	*0.075*	*20*	*0.237*	*0.235*	*0.268*	*0.031*	*13*	*0.140*	*0.153*	*0.184*	*0.044*
Mexico (84-04)	*0.446*	*0.487*	*0.476*	*0.031*	*7*	*0.445*	*0.477*	*0.458*	*0.013*	*3*	*0.001*	*0.010*	*0.018*	*0.017*
Netherlands (83-04)	0.435	0.420	0.459	0.023	5	0.260	0.257	0.263	0.003	1	0.176	0.162	0.196	0.020
Norway(86-04)	0.352	0.400	0.430	0.078	22	0.233	0.238	0.256	0.023	10	0.119	0.162	0.174	0.055
Poland (86-04)	*0.365*	*0.527*	*0.527*	*0.163*	*45*	*0.271*	*0.318*	*0.320*	*0.050*	*18*	*0.094*	*0.208*	*0.207*	*0.113*
Spain (80-04)	*0.416*	*0.501*	*0.441*	*0.025*	*6*	*0.318*	*0.353*	*0.315*	*-0.003*	*-1*	*0.098*	*0.148*	*0.126*	*0.028*
Sweden (87-05)	0.428	0.460	0.442	0.013	3	0.218	0.221	0.237	0.019	9	0.211	0.239	0.205	-0.006
Switzerland (82-04)	0.381	0.376	0.395	0.015	4	0.309	0.307	0.268	-0.042	-13	0.071	0.068	0.128	0.056
UK (86-04)	0.476	0.503	0.490	0.014	3	0.303	0.344	0.345	0.041	14	0.173	0.158	0.145	-0.028
USA (86-04)	0.434	0.473	0.482	0.047	11	0.338	0.365	0.372	0.034	10	0.096	0.108	0.109	0.013
Mean-20	0.412	0.452	0.467	0.054	13	0.285	0.299	0.304	0.019	7	0.128	0.153	0.163	0.036
Mean-12	0.412	0.437	0.454	0.043	10	0.273	0.281	0.292	0.018	7	0.139	0.157	0.163	0.024
Mean-8	*0.413*	*0.475*	*0.485*	*0.072*	*17*	*0.303*	*0.327*	*0.321*	*0.019*	*6*	*0.111*	*0.148*	*0.164*	*0.053*

* The exact years for which data are available vary slightly across countries.

Note: For 12 countries, complete tax and benefit information was available in LIS. For the remaining 8 countries (in *italics*), net wages and salaries were used because gross variables were not available for all data years in LIS.

Source: Wang and Caminada (2011b), and own calculations.

On average, income inequality increased markedly. This increase was stronger during the first decade. The widening of income gaps was driven by rising inequality in the distribution of primary income, which was partly offset by public cash transfers and households direct taxes. In the second decade, the rising of primary income inequality and disposable income inequality were in parallel.

Primary-income inequality has been the main driver of inequality trends in disposable incomes (OECD, 2011, pp. 268–271), but did redistribution policies have a substantial effect as well? Between the mid-1980s and the mid-2000s, redistribution systems compensated two-thirds of the increase in primary-income inequality. The upward trend in primary-income inequality continued after the mid-1990s, although at a lower rate. In absolute terms, redistribution increased across countries. Over the two decades as a whole, primary-income inequality rose by about 0.054, while redistribution rose 0.036. Direct taxes and transfers now reduced inequality by about 35 per cent, which is more than in the mid-1980s (31%).

Country-specific results are also presented in Table 3.2. Tax-benefit systems in Belgium[7], Finland, Germany, Poland and Sweden achieved the greatest reduction in inequality, lowering the Gini value by 20 points or more in the mid-2000s, while the smallest redistributive effect was seen in Mexico, the United States and Canada (less than 12 points).

Through the entire period, disposable income inequality became significantly larger in Belgium, Finland and Israel, whereas it decreased in Denmark, France, Ireland, Spain and Switzerland. In the period 1985–1995, higher disposable income inequality was 'caused' mainly by higher primary income inequality (although primary income inequality declined in Ireland, the Netherlands and Switzerland). In this period, government redistribution offset the widening of income gaps through public cash transfers and household taxes either in full (e.g. Canada, Denmark, France and Germany) or in part (in all other countries studied).

Cross-country variance has increased since the mid-1990s. Primary income inequality increased markedly in Belgium and Finland, and to a lesser extent in Germany, Israel, Italy, Luxembourg, the Netherlands, Norway and Switzerland, while it was almost stable in Australia, Canada, Denmark, Ireland, Poland and the United States. Primary income inequality decreased in France, Mexico, Spain, Sweden and the United Kingdom between 1995 and 2005. Disposable income inequality increased in all countries except for France, Ireland, Mexico, Spain and Switzerland. A large part of this rise of income inequality was offset by redistribution through direct taxes and transfers. Israel was an outlier due to both increasing primary income inequality and declining redistribution since

7 Belgium (2000) seems to be an outliner. We noticed that there are many zeros of net wages and salaries in the dataset.

equality. In contrast to the results in Immervoll and Richardson (2011), we did not find that tax-benefit policies had become less effective in redistribution since the mid-1990s when the total population (instead of the working-age population) was taken into account. Thus, the claim that reduced redistribution is a main driver of widening income gaps since the mid-1990s must be toned down.

3.3.2 Redistributive effects of direct taxes and transfers over time

Table 3.3* highlights that the trend of overall redistribution was mainly caused by transfers. From the mid-1980s to the mid-1990s, total redistribution increased, driven by the stronger redistributive effect of transfers. The average total redistribution increased by 0.036 point in 20 LIS countries from around 1985 to around 2005.

Table 3.3 Redistribution across 20 LIS countries over time, from around 1985 to around 2005.*

	Redistribution				Partial effects: change 1985-2005	
Country	around 1985	around 1995	around 2005	Change 1985-2005	from transfers	from taxes
Australia (85-95-03)	0.126	0.156	0.149	0.023	0.030	-0.007
Belgium (85-95-00)	*0.187*	*0.195*	*0.263*	*0.076*	*0.014*	*0.063*
Canada (87-94-04)	0.105	0.136	0.114	0.010	0.007	0.003
Denmark (87-95-04)	0.144	0.203	0.191	0.047	0.033	0.014
Finland (87-95-04)	0.123	0.168	0.212	0.089	0.098	-0.009
France (81-94-05)	*0.076*	*0.199*	*0.168*	*0.092*	*0.075*	*0.017*
Germany (84-94-04)	0.179	0.180	0.210	0.031	0.023	0.008
Ireland (87-95-04)	*0.172*	*0.157*	*0.178*	*0.006*	*0.005*	*0.002*
Israel (86-97-05)	0.142	0.139	0.121	-0.021	0.000	-0.021
Italy (86-95-04)	*0.119*	*0.116*	*0.165*	*0.046*	*0.046*	*0.000*
Luxembourg (85-94-04)	*0.140*	*0.153*	*0.184*	*0.044*	*0.007*	*0.037*
Mexico (84-96-04)	*0.001*	*0.010*	*0.018*	*0.017*	*0.017*	*0.000*
Netherlands (83-94-04)	0.176	0.162	0.196	0.020	0.020	0.000
Norway(86-95-04)	0.119	0.162	0.174	0.055	0.051	0.004
Poland (86-95-04)	*0.094*	*0.208*	*0.207*	*0.113*	*0.108*	*0.005*
Spain (80-95-04)	*0.098*	*0.148*	*0.126*	*0.028*	*0.026*	*0.001*
Sweden (87-95-05)	0.211	0.239	0.205	-0.006	-0.003	-0.002
Switzerland (82-92-04)	0.071	0.068	0.128	0.056	0.077	-0.021
UK (86-95-04)	0.173	0.158	0.145	-0.028	-0.012	-0.015
USA (86-94-04)	0.096	0.108	0.109	0.013	0.013	0.000
Mean-20	0.128	0.153	0.163	0.036	0.032	0.004
Mean-12	0.139	0.157	0.163	0.024	0.028	-0.004
Mean-8	*0.111*	*0.148*	*0.164*	*0.053*	*0.037*	*0.016*

* The exact years for which data are available vary slightly across countries.
Note: For 12 countries complete tax and benefit information is available in LIS. For the remaining 8 countries (in *italics*), net wages and salaries were used because gross variables were not available for all data years in LIS.
Source: Wang and Caminada (2011b), and own calculations.

From the mid-1980s to the mid-1990s, total redistribution increased in all countries except the Netherlands and the United Kingdom. Redistribution by transfers also increased in all countries except Italy, the Netherlands and the United Kingdom. Redistribution achieved by the tax system fell in all countries but rose in Canada, Denmark, Finland and the United States.

From the mid-1990s to the mid-2000s, the patterns of redistribution across countries were more diverse, both in overall redistribution and in tax and transfers redistribution. In this decade, total redistribution fell in many countries but increased significantly in Belgium, Finland, Germany, Italy, Luxembourg and the Netherlands, and to a lesser extent in Ireland and Norway. The trends of transfer redistribution across countries followed the total redistribution pattern.

3.4 Decomposition of the redistributive effect of social transfers and direct taxes across LIS countries from the mid-1980s to the mid-2000s

3.4.1 Relative redistributive effects

How have the redistributive effects of the different parts of welfare states altered over time and across countries? This section shows trends of detailed redistributive effects across a selection of those 12 LIS countries with complete information on taxes and benefits. We decomposed the trajectory of the Gini coefficient from primary to disposable income inequality in several parts (see Caminada et al, 2012). We calculated the following (partial) redistributive effects over time, based on the LIS household income components list: sickness benefits, occupational injury and disease benefits, disability benefits, state old-age and survivors benefits, child/family benefits, unemployment compensation benefits, maternity and other family leave benefits, military/veterans/war benefits, other social insurance benefits, social assistance cash benefits, near-cash benefits, mandatory payroll taxes and income taxes.

As explained earlier, we included state old-age pension benefits in the analysis because they are part of the safety net and generate significant reduction in poverty and income inequality. Occupational and private pensions were not taken into account.

It should also be noted that the finer is the breakdown among programme types in LIS, the greater are the problems of comparability across countries. The reason is that many narrowly based programmes can supplement or substitute for one another, with the result that essentially the same redistributive process can be categorised differently from one country to another, depending on the design of the programme. For example, state support for children can be realised through flat-rate family allowances, tax credits, means-tested public assistance or some combination of these.

To illustrate the idea of decomposition from primary to disposable income inequality, Table 3.4 reports the trends of redistributive effects of the different parts of tax-benefit system averaged for 12 LIS countries from the mid-1980s to the mid-2000s.[8]

Table 3.4 Decomposition of disposable income inequality for 12 countries from the mid-1980s to the mid-2000s: averages by periods.

	Gini around 1985	Gini around 1995	Gini around 2005	Change 85-05
(a) Gini primary income	0.412	0.437	0.454	+0.043
(b) Gini disposable income	0.273	0.281	0.292	+0.018
Overall redistribution (a-b)	0.139	0.157	0.163	+0.024
Partial effects	Share	Share	Share	Change
Transfers	71%	73%	77%	+7 points
Sickness benefits	2%	1%	2%	+1 points
Occupational injury and disease benefits [a]	5%	0%	1%	-4 points
Disability benefits [b]	5%	6%	8%	+3 points
State old-age and survivors benefits [c]	34%	31%	38%	+4 points
Child/family benefits [d]	6%	7%	6%	0 points
Unemployment compensation benefits [e]	6%	8%	5%	0 points
Maternity and other family leave benefits [f]	1%	1%	2%	+1 points
Military/veterans/war benefits	1%	1%	1%	0 points
Other social insurance benefits [g]	2%	4%	3%	0 points
Social assistance cash benefits [h]	9%	8%	8%	-1 points
Near-cash benefits [i]	1%	4%	3%	+2 points
Taxes	29%	27%	23%	-7 points
Mandatory payroll taxes [j]	1%	1%	0%	-1 points
Income taxes	28%	26%	22%	-6 points
Overall redistribution	100%	100%	100%	

a) Short-term occupational injury and disease benefits, Long-term occupational injury and disease benefits; Occupational injury and disease benefits.
b) Disability pensions; Disability allowances; Disability benefits.
c) Universal old-age pensions; Employment-related old-age pensions; Old-age pensions for public sector employees; Old-age pensions.; Early retirement benefits; Survivors pensions; State old-age and survivors benefits.
d) Child allowances; Advance maintenance; Orphans allowances; Child/family benefits.

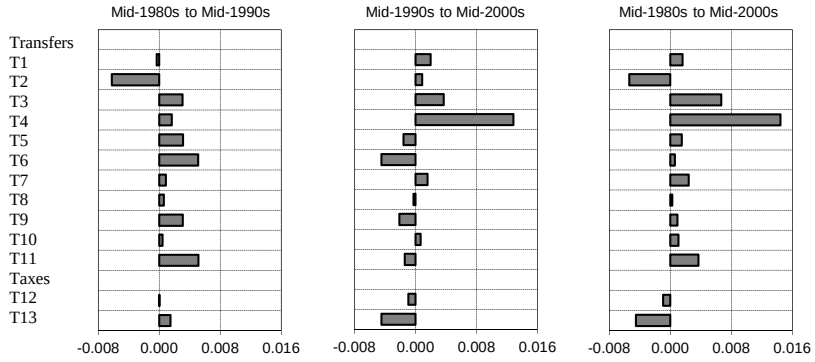
8 It should be noted that our results are hardly affected by the ordering effect. The partial redistributive effect of a specific social transfer will be highest (smallest) when computed as the first (last) social programme. A sensitivity analysis showed that changing the order of adding a specific benefit to primary income (or subtracting tax from gross income) did change the partial effect of this transfer (or tax) in total redistribution only slightly. Considering a specific social transfer as the last (instead of the first) programme to be added to primary income distribution changes the computed partial redistributive effect up to 1%-point at the highest.

e) Unemployment insurance benefits; (Re)training allowances; Placement/resettlement benefits; Unemployment compensation benefits.
f) Wage replacement; Birth grants; Child care leave benefits; Maternity and other family leave benefits.
g) Invalid carer benefits; Study grants and scholarships; Child care cash benefits; Other social insurance benefits.
h) General social assistance benefits; Old-age and disability assistance benefits; Unemployment assistance benefits; Parents assistance benefits; Social assistance cash benefits.
i) Near-cash food benefits; Near-cash housing benefits; Near-cash medical benefits; Near-cash heating benefits; Near-cash education benefits; Near-cash child care benefits; Near-cash benefits.
j) Mandatory contributions for self-employment; Mandatory employee contributions.
Note: 12-country-average; Australia, Canada, Denmark, Finland, Germany, Israel, Netherlands, Norway, Sweden, Switzerland, the United Kingdom, and the United States.
Source: Own calculations based on LIS.

3.4.2 Absolute change redistributive effects

From a policy perspective, comparisons of absolute changes in redistribution are often more appealing than comparisons of shares. Figure 3.1 highlights differences in redistributive effects of 13 transfers and direct taxes on the average level of 12 LIS countries across different periods.

Figure 3.1 Trends in the redistributive effects of 13 types of transfers and direct taxes for 12 countries (point changes in the Gini coefficient)



T1 Sickness benefits
T2 Occupational injury and disease benefits
T3 Disability benefits
T4 State old age and survivors benefits
T5 Childfamily benefits
T6 Unemployment compensation benefits
T7 Maternity and other family leave benefits
T8 Militaryveteranswar benefits
T9 Other social insurance benefits
T10 Social assistance cash benefits
T11 Near cash benefits
T12 Mandatory payroll taxes
T13 Income taxes
Source: Own calculations based on LIS.

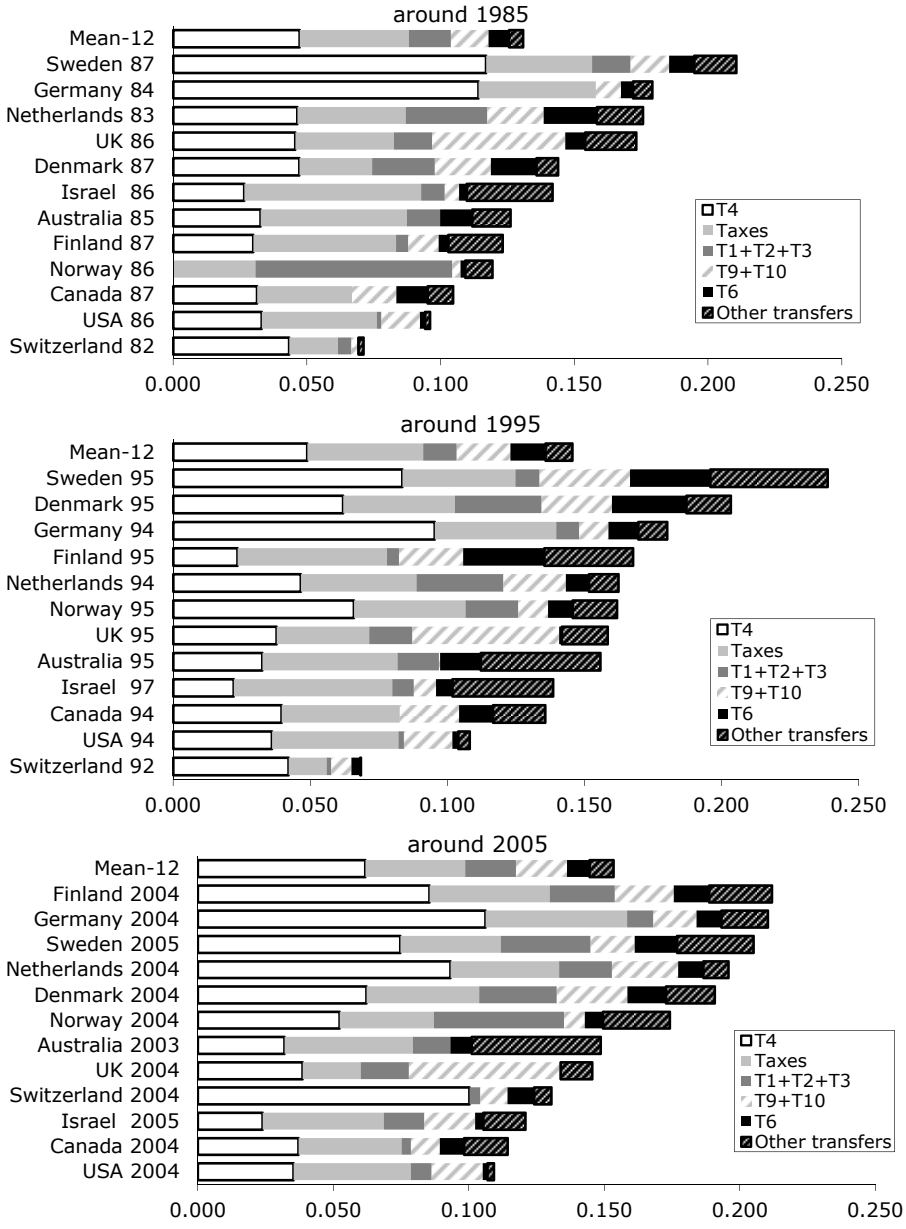
In the decade from the mid-1980s to the mid-1990s, the dominant pattern was that of more redistribution. This was especially evident for state old-age and survivors benefits, unemployment compensation benefits, near cash benefits and child and family benefits. Less redistribution was generated by occupational injury and disease benefits. In this decade overall redistribution increased by 0.017 point for our 12-country-average.
In the second decade between 1995 and 2005, redistribution as a whole was rather stable. We observed a decline especially for unemployment compensation benefits and income taxes. However, redistribution increased in this period rather strongly for state old-age and survivors benefits, and to a lesser extent for disability benefits. The average change in total redistribution during this decade was only 0.006 point.

Over the entire period 1985–2005, there was more diversity in patterns. A significant increase of redistribution could be attributed to the state old-age and survivors benefits and disability benefits, whereas less redistribution came via occupational injury and disease benefits, mandatory payroll taxes and income taxes. The cumulative change in total redistribution during the entire period was around 0.024 points.

With respect to trends in the redistributive effects of several social programmes across countries, the results were diverse. Figure 3.2 presents how the redistributive effect of each social programme changed over time across 12 LIS countries. Countries were ranked in order of their redistribution from highest to lowest. Here, we focused on only five grouped social transfer schemes and on taxes:

a) T4: state old-age and survivors benefits;
b) T1+T2+T3: benefits for sickness, occupational injury and disease, disability;
c) T9+T10: social assistance cash benefits, near-cash benefits;
d) T6: unemployment compensation benefits;
e) Other transfers (child/family benefits, maternity and other family leave benefits, military/veterans/war benefits, other social insurance benefits); and
f) Taxes (income taxes and mandatory payroll taxes).

Figure 3.2 Decomposition of redistribution of social transfers and direct taxes in 12 LIS countries 1985-2005.



Source: Own calculations based on LIS.

State old-age and survivors benefits attributed most to redistribution in the majority of the countries (around one-third of redistribution). From the mid-1980s to the mid-1990s, the main pattern was a stable or declining contribution of these programmes to redistribution, except for Canada, Denmark, Norway and the United States. In the last decade, the pattern changed: redistribution increased in seven countries and decreased in Canada, Norway and Sweden. The contribution of the old-age and survivors programme increased during this decade. Overall, state old-age and survivors benefits accounted for around 60 per cent of the total increase in redistribution among our 12-country-average between 1985 and 2005.

Social assistance benefits, the main form of income support for jobseekers who do not qualify for other benefits, represented a relatively high share of total redistribution compared with other benefits because this programme is specifically targeted to low-income groups. Higher levels of inequality reduction in the mid-1990s were achieved compared with earlier years in all countries. During the period 1995–2005, redistribution fell only in Canada, Finland, Norway and Sweden. Overall, social assistance and near-cash benefits accounted for 20 per cent of the total increase in redistribution among our 12-country-average between 1985 and 2005.

The redistributive effect of benefits for sickness, occupational injury and disease, and disability varied across countries. Throughout the entire period, it rose in Canada, Germany, the United Kingdom and the United States, and declined in the Netherlands and Norway. Other countries experienced an increase (decrease) before the mid-1990s and then a decrease (increase) until the mid-2000s. Overall, benefits for sickness, occupational injury and disease, and disability accounted for around 12 per cent of the total increase in redistribution.

During the first decade, the redistributive effect of unemployment compensation benefits increased in most countries except for the Netherlands and the United Kingdom, while it declined slightly in most countries in the period 1995–2005 (with the Netherlands, Switzerland and the United States as exceptions). The overall contribution of unemployment benefits to the total increase in redistribution was modest.

Among the other transfers, there was a sharp increase in redistribution for Australia and Sweden in the period 1985–1995 due to child/family benefits, maternity and other family leave benefits, military/veterans/war benefits, and other social insurance benefits in those countries. This variety of family-related benefits accounted for 22 per cent of the total increase in redistribution among our 12-country-average between 1985 and 2005.

Direct taxes attributed less to redistribution in the period 1985–2005, on average. However, cross-country differences were large. In Australia, Finland, Israel, Sweden, Switzerland and the United Kingdom, the redistributive capacity of taxes declined, whereas in Canada, Denmark, Germany and Norway there was more redistribution.

3.4.3 Sensitivity analysis

The literature shows that different indicators of income inequality are sensitive to different parts of the income distribution (among others, see Atkinson et al, 1995; Föster, 2000; Hauser and Becker, 1999; Lambert, 1993). In order to offer a broader picture of the redistributive effect of income transfers, we employed not only the Gini coefficient, but also other widely used indicators, namely Atkinson's index (á=1.0 and á=0.5), Mean Log Deviation and Theil index. Indicators more sensitive to the middle part of the income distribution are the Gini coefficient, Atkinson's index (á=0.5) and Theil index, while Atkinson's index (á=1.0) and Mean Log Deviation are relatively more sensitive to the changes in the lower tail of the income distribution.

We performed a sensitivity analysis for four countries (Germany, the Netherlands, Sweden and the United States) from around 1985 to around 2005 (see Caminada et al, 2012, for details). We found that all indicators followed the same pattern in each country, as far as the total redistribution was concerned; the largest redistribution was given by Mean Log Deviation, the lowest by the Atkinson's index (á=0.5). For the partial redistributive effects at a given moment in time, we found some differences for the various indicators. The highest redistribution always came from state old-age and survivors benefits, but the share of direct taxes and social assistance benefits changed slightly depending on the indicators used. The trends of decomposed redistribution were again quite similar.

To sum up, in most cases the empirical result was hardly affected by using different global income inequality indicators. However, especially when the social programme was targeted towards a certain group, for instance the lower tail of the income distribution, the results varied slightly, depending on the indicator used.

3.5 Conclusion

Different welfare systems and different social policies lead to varying outcomes in changes of income inequality. The present study investigated income distribution and redistribution attributed to social transfers and direct taxes across 20 LIS countries from around 1985 to the mid-2000s, based on the micro household income data from LIS. We provided trends of primary and disposable income inequality, overall and disaggregated redistributions by social programmes in a comparative way, across many more countries than have been studied before, offering an accurate, detailed picture of redistribution of incomes through direct taxes and transfers across social welfare states.

We applied a sequential budget incidence analysis and found that the welfare states on average reduced inequality by one-third around 2005. Social benefits had a much stronger redistributive impact than taxes. As far as social

programmes were concerned, public pensions accounted for the largest reduction in income inequality, although the pattern was diverse across countries. To a lesser extent, social assistance, disability and family benefits also contributed to smaller income disparities.

We observed a sizeable increase in primary household inequality in all 20 countries over the last 25 years, with the exception of Ireland. In most countries, the extent of redistribution had increased as a whole, too. Tax-benefit systems have offset two-thirds of the increase in primary income inequality.

In contrast to earlier studies (Immervoll and Richardson, 2011; OECD, 2011), we did not find that tax-benefit policies had become less effective in redistribution since the mid-1990s. Among the total population, both primary income inequality and redistribution continued to rise after the mid-1990s. As a result, the tax-benefit systems in the mid-2000s were even more effective at reducing inequality compared with the mid-1990s.

We found that within rising overall redistribution, the public old-age pensions and the survivors scheme attributed 60 per cent to the increase of redistribution during the entire period 1985–2005. Social assistance accounted for 20 per cent, and the benefits for sickness, occupational injury and disease, and disability accounted for around 12 per cent of the total increase in redistribution among our 12-country-average. Other transfers (child/family benefits, maternity and other family leave benefits, military/veterans/war benefits, and other social insurance benefits) accounted for 22 per cent of the total increase in redistribution. On the contrary, direct taxes slowed down redistribution by 16 per cent during 1985–2005.

This empirical analysis did not show why benefits and direct taxes had become more or less redistributive. It can be expected that, as market income inequality rises, the tax-benefit systems will automatically have a more redistributive impact because of the progressivity built into these systems. However, also policy changes and demographic changes will certainly explain a part of the changes in redistribution. Future research should shed light on the impact of specific policy reforms and demography in changing the redistributive effect of welfare states. Finally, LIS surveys do not take into account indirect taxes which are generally considered more regressive than direct taxes. The extent of reliance on indirect taxes varies a good deal across the countries under study, with European countries especially reliant on value added taxes.

Annex 3A

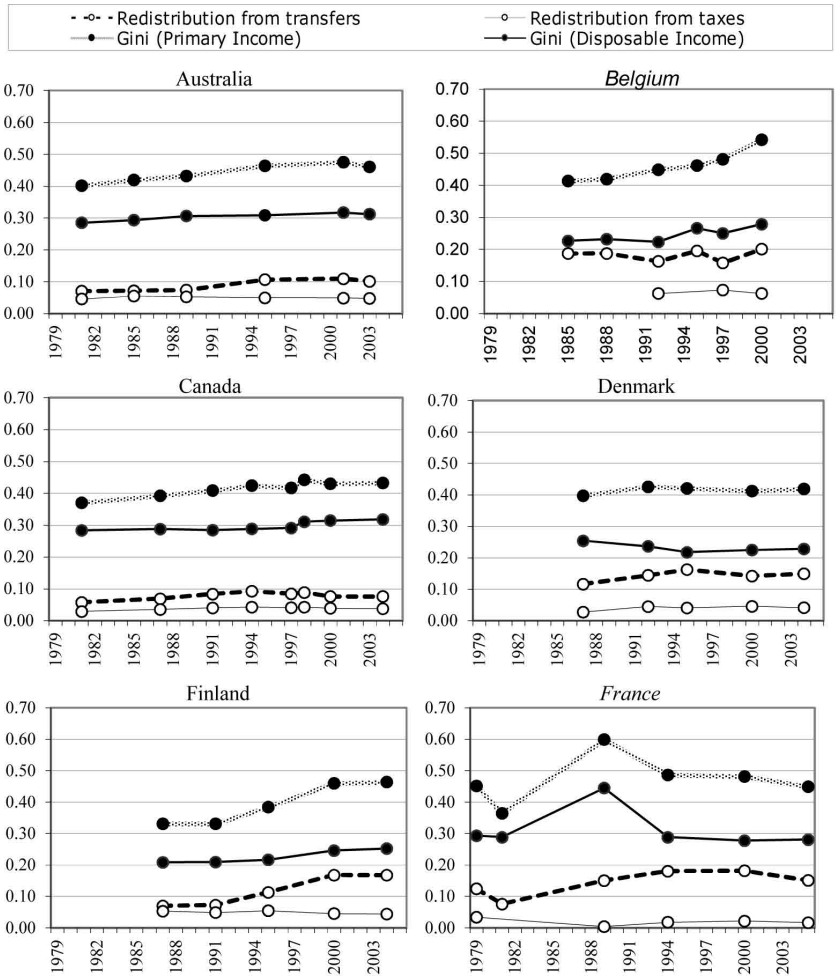
Trends in inequality and redistribution in 20 LIS countries

Figure 3A.1 illustrates the trends of overall redistribution, redistribution by transfers and redistribution by direct taxes for all 20 LIS country, 1979-2005. In all countries, the trend in total redistribution was mainly driven by transfer redistribution. The redistribution achieved by public cash transfers was more than twice as large as that achieved through direct taxes, except for Canada, Israel, and the United States.

From the mid-1980s to the mid-1990s, total redistribution increased in all countries except the Netherlands and the United Kingdom. Redistribution by transfers also increased in all countries except Italy, the Netherlands and the United Kingdom. Redistribution achieved by the tax system fell in all countries but rose in Canada, Denmark, Finland and the United States.

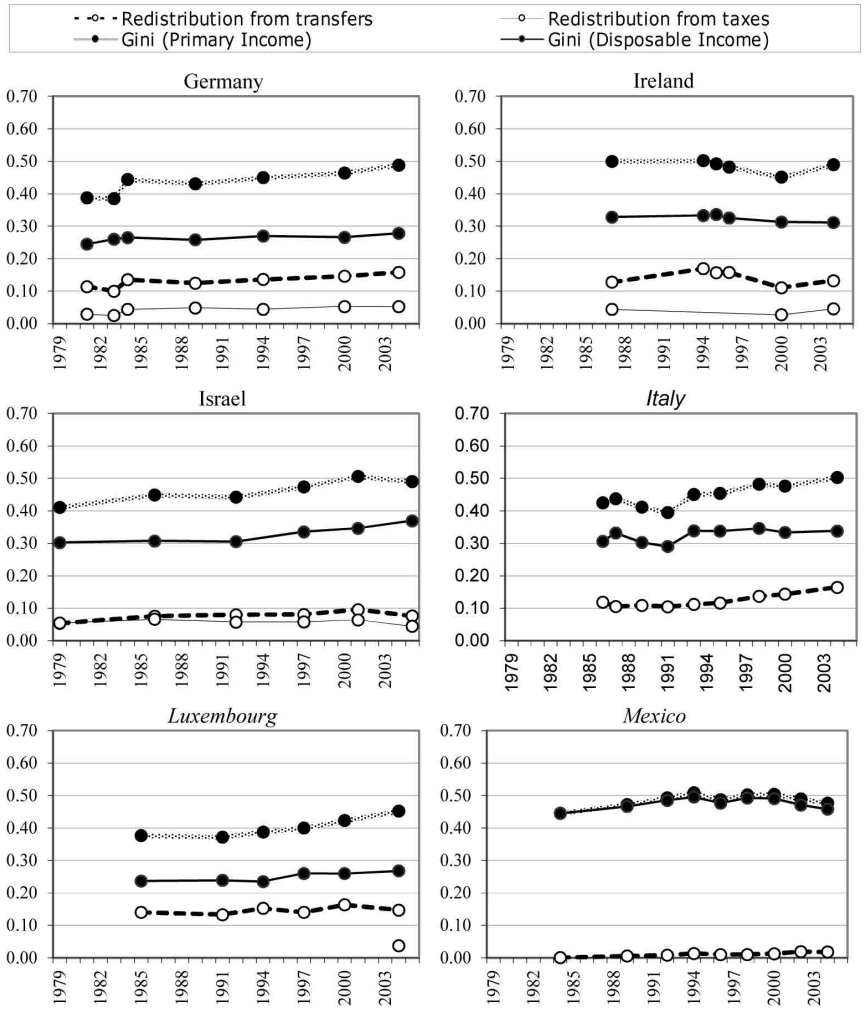
From the mid-1990s to the mid-2000s the patterns of redistribution across countries are more diverse, both in overall redistribution and in tax and transfers redistribution. In this decade, total redistribution fell in many countries but increased significantly in Belgium, Finland, Germany, Italy, Luxembourg and the Netherlands, and to a lesser extent in Ireland and Norway. The trends of transfer redistribution across countries followed the total redistribution pattern. However in Ireland and Luxembourg, the decrease of transfer redistribution did not lead to a decreasing total redistributive effect, because of the rising redistribution through the tax system in those countries. See figure 3A.1.

Figure 3A.1 Trends in inequality and redistribution in 20 LIS countries, 1979-2005



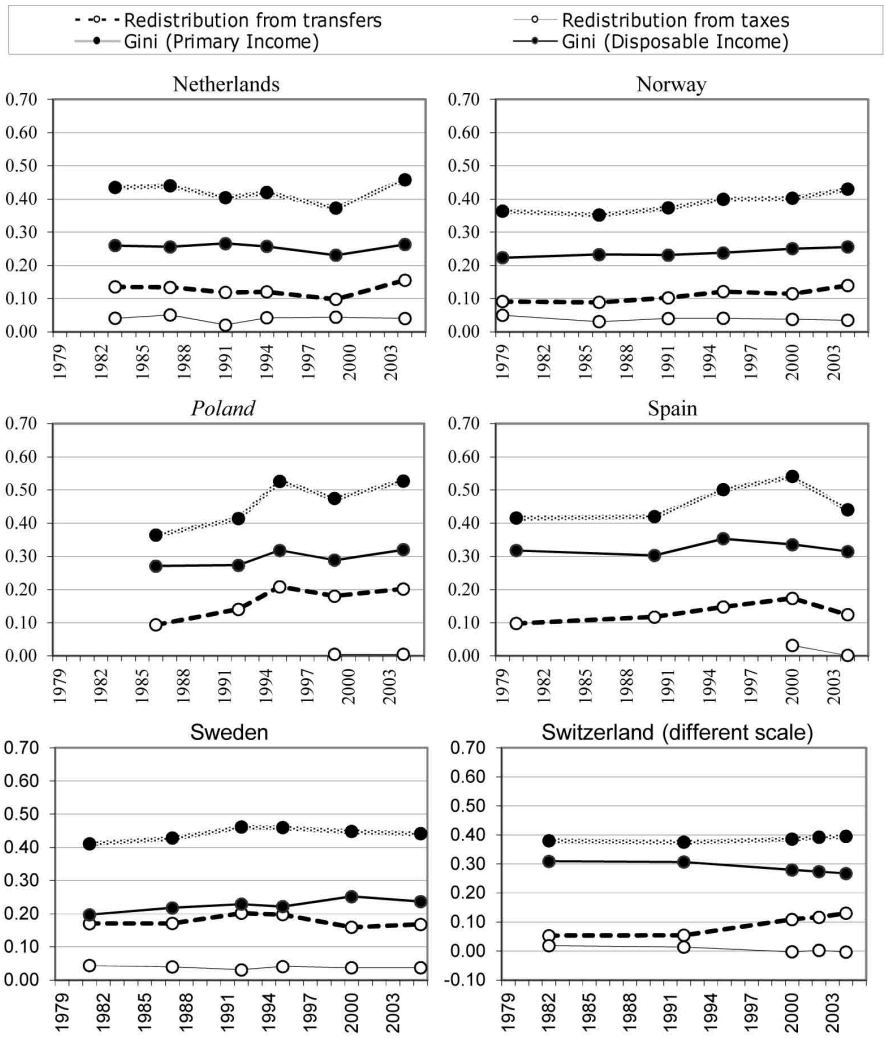
Source: Wang and Caminada (2011b), and own calculations

Figure 3A.1 Trends in inequality and redistribution in 20 LIS countries, 1979-2005 (continued)



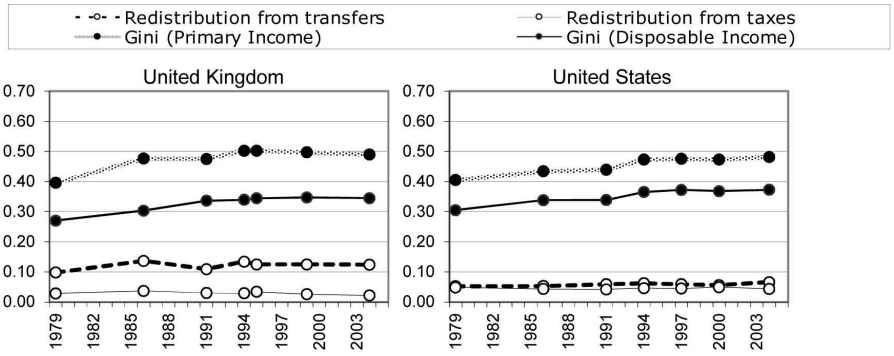
Source: Wang and Caminada (2011b), and own calculations

Figure 3A.1 Trends in inequality and redistribution in 20 LIS countries, 1979-2005 (continued)



Source: Wang and Caminada (2011b), and own calculations

Figure 3A.1 Trends in inequality and redistribution in 20 LIS countries, 1979-2005 (final)



Note: For 12 countries full tax and benefit information is available in LIS. For other 8 countries (marked *italic*) net wages and salaries are used because gross variables are not available for all data years in LIS.

Source: Wang and Caminada (2011b), and own calculations.

Annex 3B

Sensitivity analysis for redistribution using different global income inequality indicators

Literature shows that different indicators of income inequality are sensitive to different parts of the income distribution.[9] In order to offer a broader picture of the redistributive effect of income transfers, we not only use the Gini coefficient, but also other widely used indicators, namely Atkinson's index (á=1.0 and á=0.5), Mean Log Deviation and Theil index. Indicators more sensitive to the middle part of the income distribution are the Gini coefficient, Atkinson's index (á=0.5) and Theil index, while Atkinson's index (á=1.0) and Mean Log Deviation are relatively more sensitive to the changes in the lower tail of the income distribution. The figures below show the results of the sensitivity analysis on the partial redistributive effects of income transfers for 4 countries (Germany, the Netherlands, Sweden and the United States) from around 1985 to around 2005.

This sensitivity analysis is presented in three dimensions. The first dimension is the redistributive effect across countries at one moment in time, which is shown in Figure 3B.1. It presents the level of redistribution in Germany, the Netherlands, Sweden and the United States around 2005. In each country, all indicators follow the same pattern; the largest redistribution is given by Mean Log Deviation, the lowest by the Atkinson's index (á=0.5). The second dimension concerns the partial redistributive effects at one moment in time across countries in Figure 3B.2. Here, we see some differences for the various indicators. The highest redistribution always comes from state old-age and survivors benefits (T4), but the share of taxes and social assistance benefits (T9+T10) slightly changes depending on the indicators used. Thirdly, the trends of decomposed redistribution are similar using different indicators in most cases, although there are some exceptions; see Figure 3B.3, 3B.4, 3B.5 and 3B.6.

To sum up, in most cases the empirical result is hardly affected by using different global income inequality indicators. However, especially if the social programme is targeted towards a certain group, for instance the lower tail of the income distribution, the results vary slightly, depending on the indicators used.

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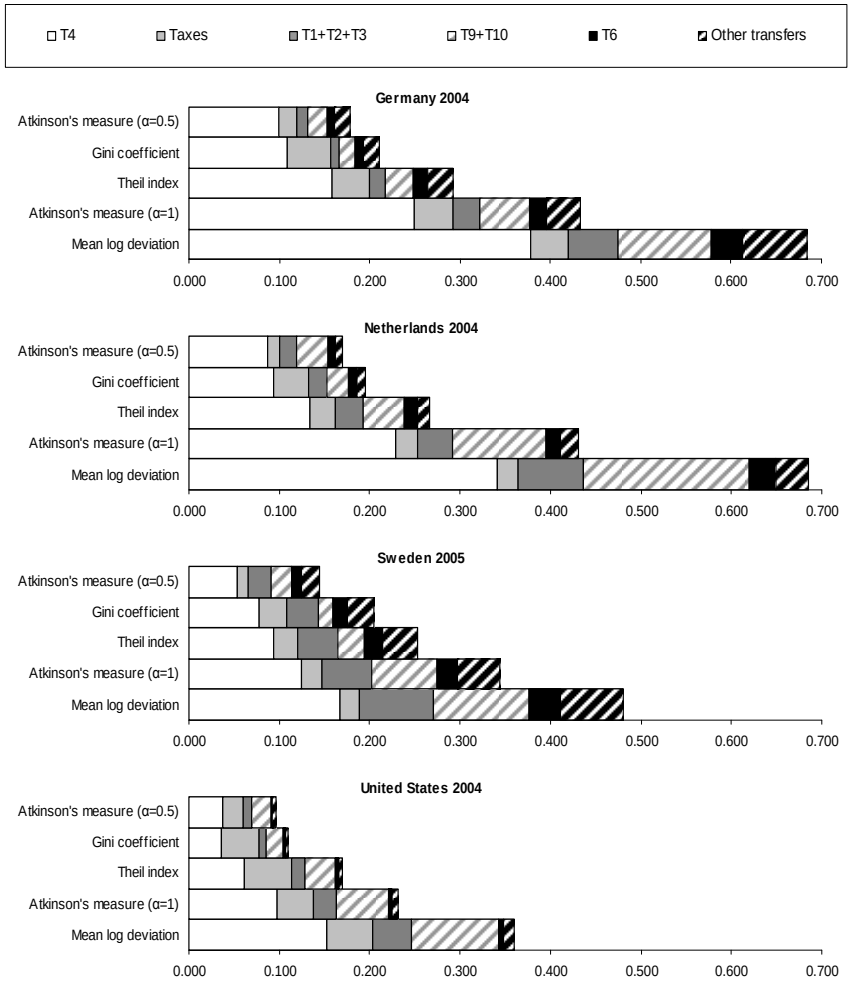
9 Among others, see Atkinson et al (1995), Föster (2000), Hauser and Becker (1999) and Lambert (1993).

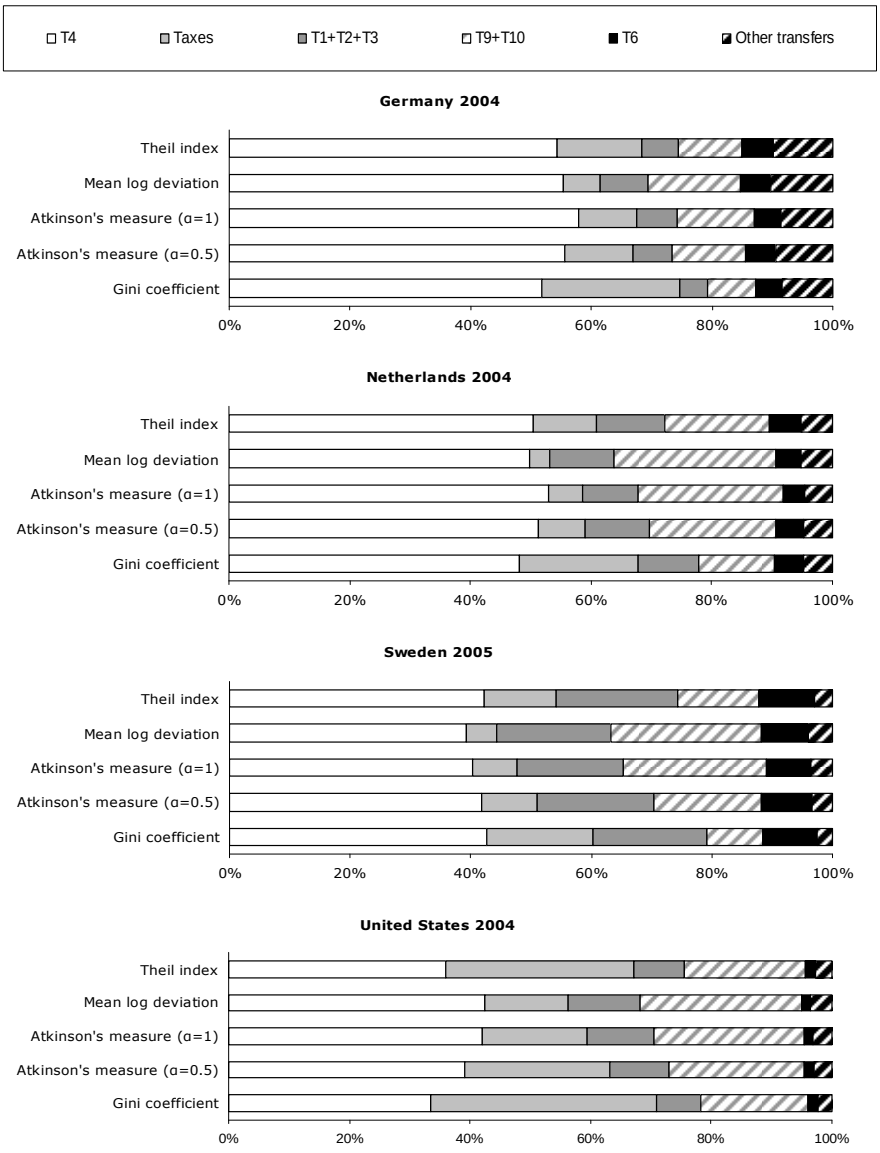
Social programmes presented in the Figure below are listed here:
- T4: state old-age and survivors benefits;
- T1+T2+T3: benefits for sickness, occupational injury and disease, and disability;
- T9+T10: social assistance cash benefits, near-cash benefits;
- T6: unemployment compensation benefits;
- Other transfers (child/family benefits, maternity and other family leave benefits, military/veterans/war benefits, other social insurance benefits); and
- Taxes (income taxes and mandatory payroll taxes).

Figure 3B.1 Trends in inequality and redistribution in 20 LIS countries



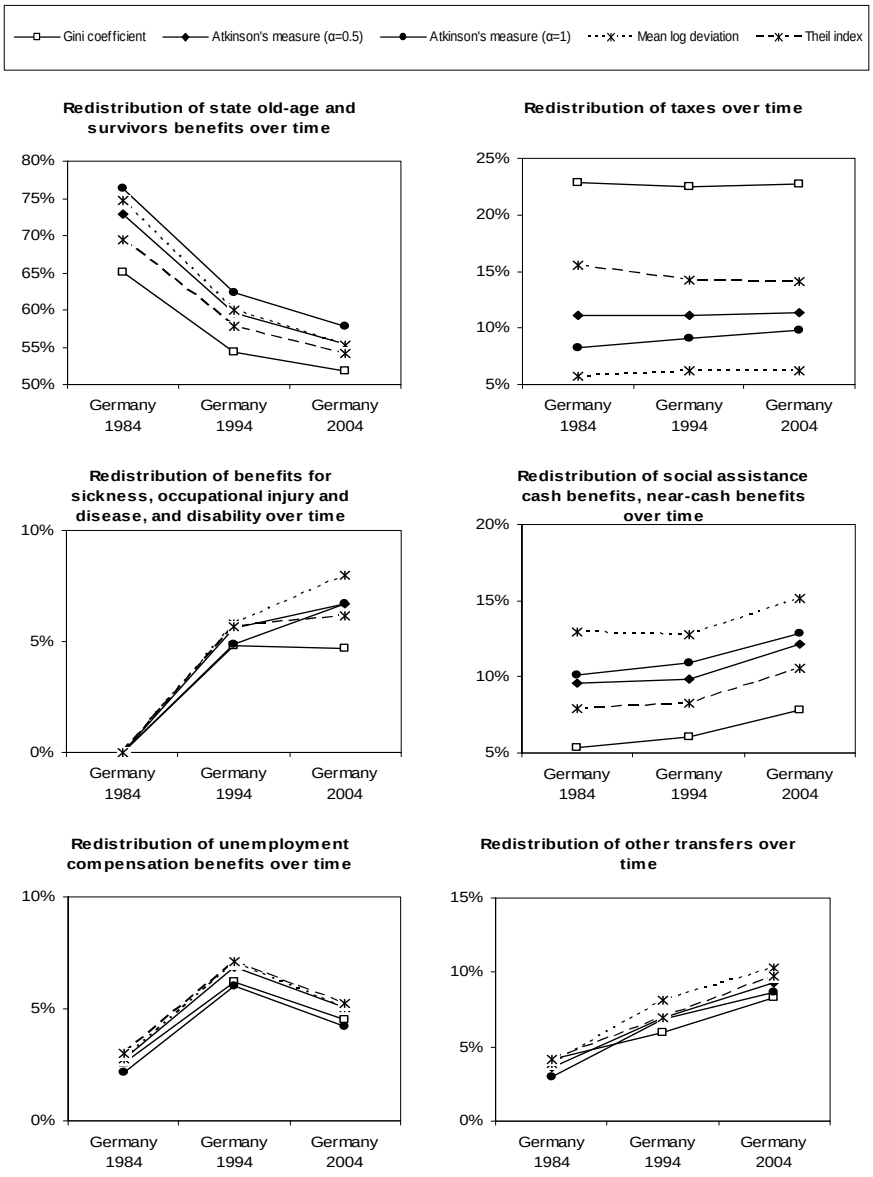
Source: Caminada, Goudswaard and Wang (2012), and own calculations.

Figure 3B.2 Sensitivity analysis for partial redistributive effects around 2005 (shares)



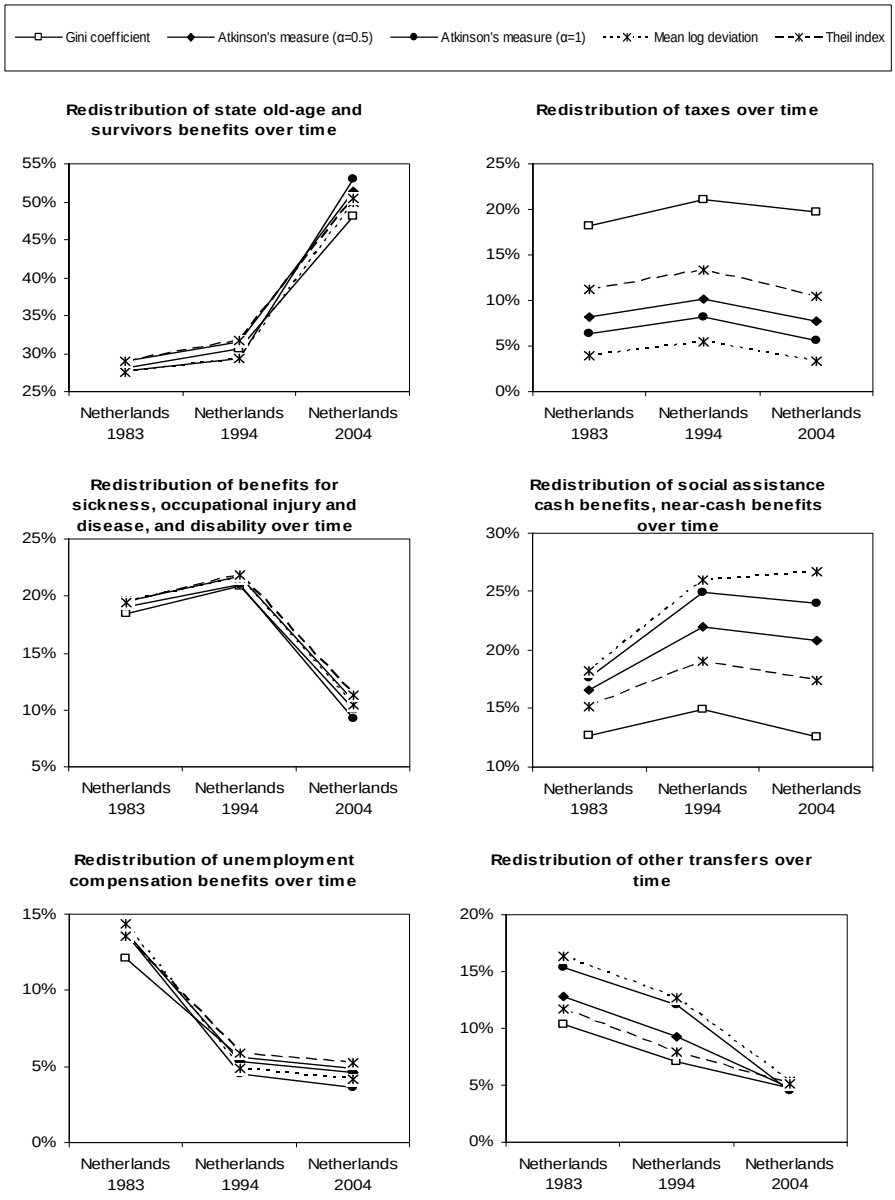
Source: Caminada, Goudswaard and Wang (2012), and own calculations

Figure 3B.3 Sensitivity analysis for partial redistributive effects in Germany over time



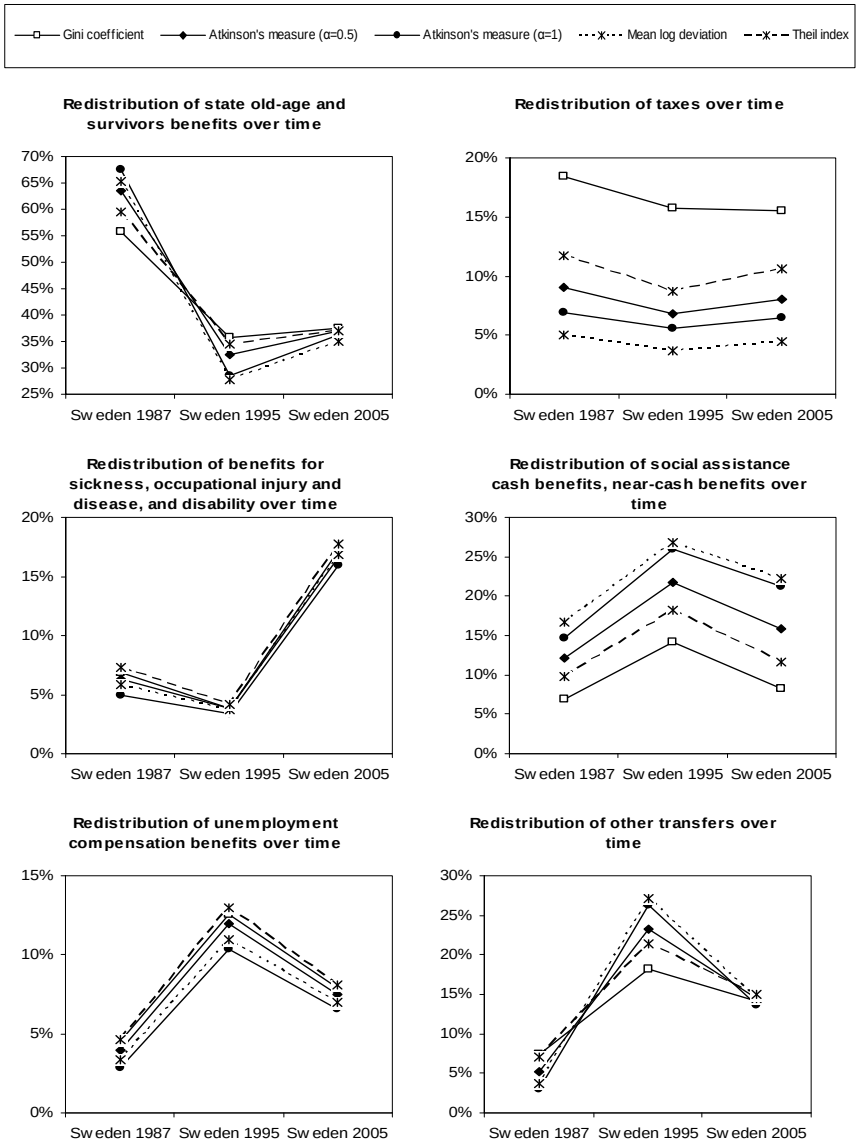
Source: Caminada, Goudswaard and Wang (2012), and own calculations.

Figure 3B.4 Sensitivity analysis for partial redistributive effects in the Netherlands over time



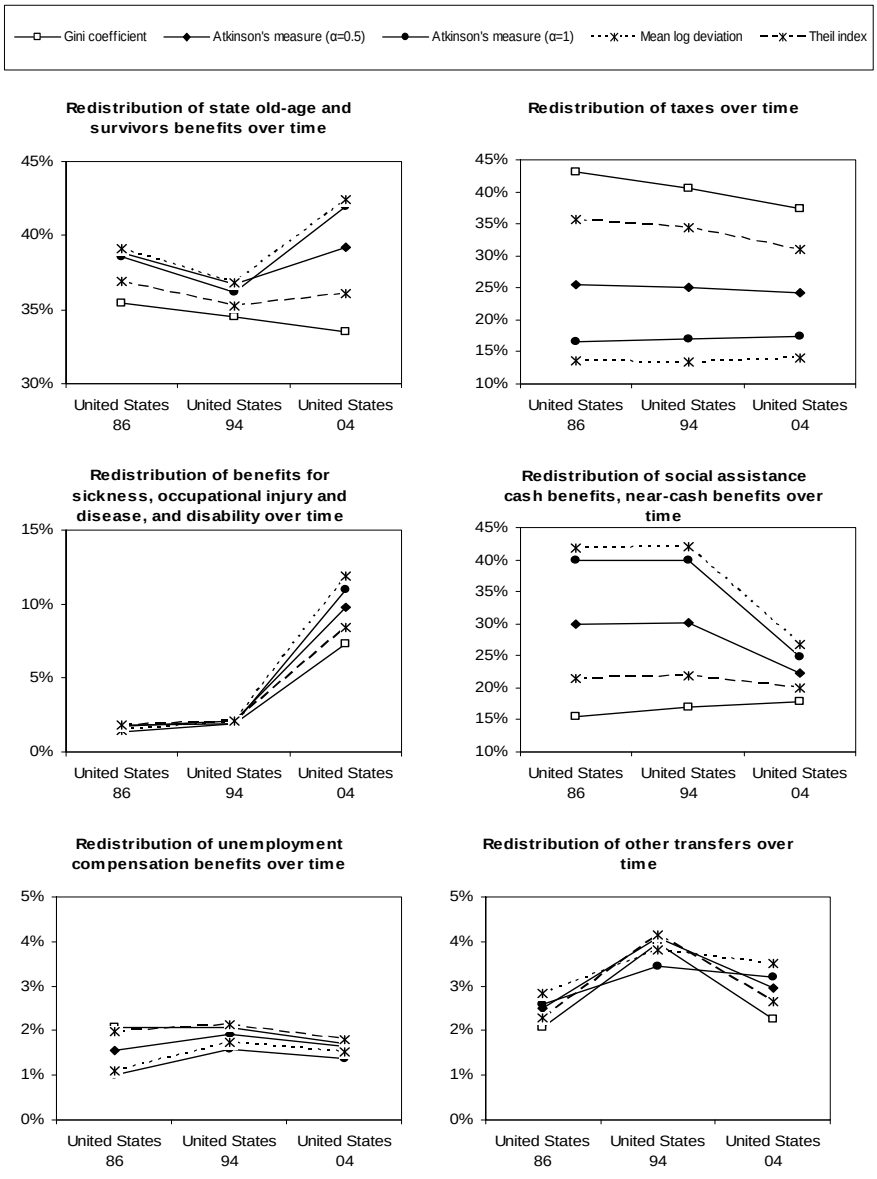
Source: Caminada, Goudswaard and Wang (2012), and own calculations.

Figure 3B.5 Sensitivity analysis for partial redistributive effects in Sweden over time



Source: Caminada, Goudswaard and Wang (2012), and own calculations.

Figure 3B.6 Sensitivity analysis for partial redistributive effects in the United States over time



Source: Caminada, Goudswaard and Wang (2012), and own calculations.

Annex 3C

Decomposition of income inequality and redistributive effects of social transfers and direct taxes in 20 LIS countries 1979-2005

Annex 3C Decomposition of income inequality and redistributive effects of social transfers and direct taxes in 20 LIS countries 1979-2005

						Partial effects [a]														
Country	Year	(a) Gini primary income	(b) Gini disposable income	Absolute redistribution (a-b)	Relative Redistribution (a-b)/a*100	*Transfers*	Sickness benefits	Occupational injury and disease benefits	Disability benefits	State old-age and survivors benefits	Child/family benefits	Unemployment compensation benefits	Maternity and other family leave benefits	Military/veterans / war benefits	Other social insurance benefits	Social assistance cash benefits	Near-cash benefits	*Taxes*	Mandatory payroll taxes	Income taxes
Australia	1981	0.401	0.285	0.116	29%	0.070	0.002	0.001	0.006	0.031	0.006	0.009	-	0.007	0.009	-	-	0.046	-	0.046
	1985	0.420	0.293	0.126	30%	0.071	0.002	0.002	0.008	0.033	0.006	0.012	-	0.001	0.008	-	-	0.055	-	0.055
	1989	0.432	0.307	0.126	29%	0.073	0.002	0.001	0.009	0.024	0.005	0.010	-	0.009	0.002	0.010	-	0.052	-	0.052
	1995	0.464	0.308	0.156	34%	0.107	0.001	0.001	0.012	0.032	0.025	0.015	0.001	0.010	0.007	0.000	-	0.049	-	0.049
	2001	0.475	0.317	0.158	33%	0.109	0.000	0.003	0.013	0.033	0.020	0.009	0.015	0.009	0.008	0.000	-	0.049	-	0.049
	2003	0.461	0.312	0.149	32%	0.101	0.000	0.002	0.012	0.032	0.020	0.008	0.012	0.008	0.008	0.000	-	0.047	-	0.047
Belgium	*1985*	*0.414*	*0.227*	*0.187*	*45%*	*0.187*	*0.013*	*0.002*	-	*0.108*	*0.028*	*0.030*	-	-	*0.001*	*0.004*	*0.000*	*0.000*	-	-
	1988	*0.420*	*0.232*	*0.188*	*45%*	*0.188*	*0.013*	*0.002*	*0.003*	*0.108*	*0.027*	*0.033*	-	-	*0.001*	*0.001*	*0.000*	*0.000*	-	-
	1992	*0.449*	*0.224*	*0.226*	*50%*	*0.163*	-	-	*0.016*	*0.102*	*0.020*	*0.024*	-	-	-	*0.001*	-	*0.063*	*0.013*	*0.050*
	1995	*0.462*	*0.266*	*0.195*	*42%*	*0.195*	*0.001*	*0.001*	*0.013*	*0.121*	*0.022*	*0.030*	*0.000*	-	-	*0.005*	*0.001*	*0.000*	-	-
	1997	*0.481*	*0.250*	*0.231*	*48%*	*0.158*	-	*0.001*	*0.013*	*0.103*	*0.015*	*0.021*	-	-	-	*0.004*	*0.001*	*0.073*	*0.008*	*0.065*
	2000	*0.542*	*0.279*	*0.263*	*49%*	*0.201*	*0.002*	*0.000*	*0.006*	*0.153*	*0.013*	*0.021*	*0.000*	-	-	*0.004*	*0.001*	*0.063*	*0.063*	
Canada	1981	0.370	0.284	0.086	23%	0.058	-	-	-	0.026	0.005	0.009	-	-	0.004	0.014	-	0.029	-	0.029
	1987	0.393	0.288	0.105	27%	0.069	-	-	-	0.031	0.004	0.012	-	-	0.006	0.017	-	0.035	-	0.035
	1991	0.409	0.285	0.124	30%	0.084	-	-	-	0.034	0.004	0.017	-	-	0.009	0.020	-	0.040	-	0.040
	1994	0.424	0.289	0.136	32%	0.093	-	-	-	0.040	0.009	0.012	-	-	0.010	0.022	-	0.043	-	0.043
	1997	0.417	0.291	0.126	30%	0.085	-	-	-	0.041	0.010	0.008	-	-	0.010	0.016	-	0.041	-	0.041
	1998	0.442	0.311	0.132	30%	0.089	-	0.003	-	0.039	0.012	0.009	-	-	0.005	0.020	-	0.043	-	0.043
	2000	0.430	0.315	0.115	27%	0.076	-	0.003	-	0.037	0.011	0.007	-	-	0.005	0.013	-	0.039	-0.002	0.041
	2004	0.433	0.318	0.114	26%	0.076	-	0.003	-	0.037	0.012	0.009	-	-	0.005	0.011	-	0.038	-0.002	0.040
Denmark	1987	0.398	0.254	0.144	36%	0.117	0.006	-	0.017	0.047	0.006	0.017	-	-	0.002	0.021	-	0.027	0.000	0.027
	1992	0.426	0.236	0.190	45%	0.144	0.007	-	0.020	0.053	0.007	0.027	-	-	0.007	0.024	-	0.045	0.000	0.045
	1995	0.421	0.218	0.203	48%	0.163	0.007	-	0.025	0.062	0.008	0.027	0.004	-	0.005	0.016	0.010	0.041	0.000	0.041
	2000	0.413	0.225	0.188	46%	0.142	0.006	-	0.022	0.061	0.007	0.014	0.002	0.000	0.005	0.016	0.008	0.046	0.001	0.045
	2004	0.419	0.228	0.191	45%	0.149	0.006	-	0.022	0.062	0.007	0.014	0.003	0.000	0.007	0.016	0.010	0.042	0.000	0.041

Annex 3C Decomposition of income inequality and redistributive effects of social transfers and direct taxes in 20 LIS countries 1979-2005 (continued)

						Partial effects [a]														
Country	Year	(a) Gini primary income	(b) Gini disposable income	Absolute redistribution (a-b)	Relative Redistribution (a-b)/a*100	*Transfers*	Sickness benefits	Occupational injury and disease benefits	Disability benefits	State old-age and survivors benefits	Child/family benefits	Unemployment compensation benefits	Maternity and other family leave benefits	Military/veterans / war benefits	Other social insurance benefits	Social assistance cash benefits	Near-cash benefits	*Taxes*	Mandatory payroll taxes	Income taxes
Finland	1987	0.332	0.209	0.123	37%	0.070	0.002	0.000	0.002	0.030	0.008	0.004	0.003	0.005	0.004	0.011	-	0.053	0.002	0.051
	1991	0.331	0.210	0.122	37%	0.073	0.002	0.000	0.003	0.025	0.013	0.008	0.004	0.004	0.002	0.014	-	0.049	0.003	0.046
	1995	0.384	0.217	0.168	44%	0.113	0.002	0.001	0.002	0.023	0.020	0.030	0.004	0.004	0.004	0.016	0.008	0.054	0.008	0.046
	2000	0.460	0.246	0.214	46%	0.168	0.002	0.002	0.021	0.079	0.012	0.014	0.007	0.003	0.004	0.016	0.007	0.046	0.004	0.041
	2004	0.464	0.252	0.212	46%	0.168	0.003	0.002	0.019	0.085	0.011	0.013	0.007	0.002	0.004	0.015	0.007	0.044	0.004	0.040
France	*1979*	*0.452*	*0.294*	*0.159*	*35%*	*0.125*	-	-	-	*0.076*	*0.020*	-	-	-	-	*0.029*	-	*0.034*	-	*0.034*
	1981	*0.364*	*0.288*	*0.076*	*21%*	*0.076*	-	-	*0.003*	*0.009*	*0.021*	*0.006*	-	-	*0.002*	*0.020*	*0.015*	*0.000*	-	-
	1989	*0.599*	*0.445*	*0.154*	*26%*	*0.150*	-	-	*0.001*	*0.091*	*0.022*	*0.017*	-	-	*0.003*	*0.003*	*0.013*	*0.004*	-	*0.004*
	1994	*0.487*	*0.288*	*0.199*	*41%*	*0.180*	*0.003*	-	*0.010*	*0.110*	*0.020*	*0.015*	*0.001*	*0.000*	*0.002*	*0.004*	*0.016*	*0.018*	-	*0.018*
	2000	*0.481*	*0.278*	*0.204*	*42%*	*0.182*	*0.003*	-	*0.007*	*0.106*	*0.018*	*0.014*	*0.003*	*0.001*	*0.002*	*0.012*	*0.016*	*0.022*	-	*0.022*
	2005	*0.449*	*0.281*	*0.168*	*37%*	*0.151*	*0.003*	-	*0.006*	*0.078*	*0.018*	*0.015*	*0.002*	*0.001*	*0.002*	*0.012*	*0.015*	*0.017*	-	*0.017*
Germany	1981	0.388	0.245	0.143	37%	0.114	-	0.012	-	0.079	0.008	0.002	-	0.005	0.000	0.002	0.006	0.029	-0.002	0.031
	1983	0.385	0.260	0.125	32%	0.100	-	0.001	0.001	0.077	0.005	0.005	0.000	0.002	0.003	0.005	-	0.025	-0.003	0.028
	1984	0.444	0.265	0.179	40%	0.135	-	-	-	0.114	0.007	0.005	0.000	-	-	0.006	0.003	0.044	-0.003	0.046
	1989	0.431	0.258	0.173	40%	0.125	-	0.001	-	0.102	0.006	0.005	0.001	0.003	-	0.004	0.003	0.048	-0.003	0.051
	1994	0.450	0.270	0.180	40%	0.136	-	0.002	0.007	0.095	0.006	0.011	0.002	0.002	-	0.007	0.003	0.044	0.001	0.043
	2000	0.464	0.266	0.199	43%	0.146	-	0.001	0.010	0.101	0.011	0.009	0.002	0.001	0.001	0.008	0.003	0.052	-0.002	0.054
	2004	0.489	0.278	0.210	43%	0.158	-	0.001	0.009	0.106	0.013	0.009	0.002	0.001	0.002	0.011	0.005	0.052	0.002	0.050
Ireland	*1987*	*0.500*	*0.328*	*0.172*	*34%*	*0.128*	*0.009*	*0.000*	*0.009*	*0.020*	*0.012*	*0.016*	*0.000*	-	*0.003*	*0.058*	-	*0.044*	*0.003*	*0.041*
	1994	*0.502*	*0.333*	*0.169*	*34%*	*0.169*	*0.006*	*0.000*	*0.013*	*0.048*	*0.013*	*0.009*	*0.000*	-	-	*0.076*	*0.005*	*0.000*	-	-
	1995	*0.493*	*0.336*	*0.157*	*32%*	*0.157*	*0.005*	*0.000*	*0.012*	*0.047*	*0.013*	*0.007*	*0.000*	-	-	*0.067*	*0.005*	*0.000*	-	-
	1996	*0.483*	*0.325*	*0.158*	*33%*	*0.158*	*0.005*	*0.001*	*0.014*	*0.046*	*0.014*	*0.011*	*0.000*	-	-	*0.063*	*0.004*	*0.000*	-	-
	2000	*0.451*	*0.313*	*0.138*	*31%*	*0.111*	*0.004*	*0.001*	*0.012*	*0.043*	*0.008*	*0.006*	*0.000*	-	-	*0.033*	*0.002*	*0.027*	*0.027*	
	2004	*0.490*	*0.312*	*0.178*	*36%*	*0.132*	*0.005*	*0.000*	*0.007*	*0.034*	*0.020*	*0.007*	*0.000*	-	*0.002*	*0.049*	*0.008*	*0.046*	*0.004*	*0.042*

Annex 3C Decomposition of income inequality and redistributive effects of social transfers and direct taxes in 20 LIS countries 1979-2005 (continued)

						Partial effects [a]														
Country	Year	(a) Gini primary income	(b) Gini disposable income	Absolute redistribution (a-b)	Relative Redistribution (a-b)/a*100	*Transfers*	Sickness benefits	Occupational injury and disease benefits	Disability benefits	State old-age and survivors benefits	Child/family benefits	Unemployment compensation benefits	Maternity and other family leave benefits	Military/veterans / war benefits	Other social insurance benefits	Social assistance cash benefits	Near-cash benefits	*Taxes*	Mandatory payroll taxes	Income taxes
Israel	1979	0.411	0.303	0.108	26%	0.054	-	-	0.004	0.021	0.018	-	0.000	0.002	0.005	0.003	0.001	0.055	-0.003	0.058
	1986	0.449	0.308	0.142	32%	0.076	-	0.000	0.008	0.027	0.023	0.003	-	0.002	0.007	0.005	0.000	0.066	0.004	0.062
	1992	0.443	0.305	0.138	31%	0.080	0.005	-	0.006	0.022	0.015	0.006	-	-	0.019	0.006	-	0.058	0.003	0.055
	1997	0.474	0.336	0.139	29%	0.081	-	-	0.008	0.022	0.021	0.006	-	-	0.016	0.008	-	0.058	0.001	0.057
	2001	0.506	0.346	0.160	32%	0.096	-	0.001	0.011	0.024	0.023	0.008	-	0.001	0.003	0.024	-	0.064	0.004	0.061
	2005	0.491	0.370	0.121	25%	0.076	-	0.001	0.014	0.024	0.012	0.003	-	0.001	0.003	0.019	-	0.045	0.003	0.042
Italy	*1986*	*0.425*	*0.306*	*0.119*	*28%*	*0.119*	-	-	-	*0.111*	-	-	-	-	*0.008*	-	-	*0.000*	-	-
	1987	*0.437*	*0.332*	*0.105*	*24%*	*0.105*	-	*0.000*	*0.019*	*0.078*	-	-	-	*0.000*	*0.000*	*0.008*	-	*0.000*	-	-
	1989	*0.412*	*0.303*	*0.109*	*26%*	*0.109*	-	*0.000*	*0.016*	*0.087*	-	-	-	*0.001*	*0.000*	*0.006*	-	*0.000*	-	-
	1991	*0.395*	*0.290*	*0.105*	*27%*	*0.105*	-	*0.001*	*0.013*	*0.084*	-	-	-	*0.000*	*0.000*	*0.007*	-	*0.000*	-	-
	1993	*0.450*	*0.339*	*0.112*	*25%*	*0.112*	-	*0.001*	*0.011*	*0.088*	-	-	-	*0.000*	*0.000*	*0.011*	-	*0.000*	-	-
	1995	*0.454*	*0.338*	*0.116*	*26%*	*0.116*	-	*0.001*	*0.014*	*0.090*	-	*0.004*	-	*0.000*	*0.000*	*0.007*	-	*0.000*	-	-
	1998	*0.483*	*0.346*	*0.137*	*28%*	*0.137*	-	*0.002*	*0.015*	*0.109*	-	*0.003*	-	*0.001*	*0.000*	*0.006*	-	*0.000*	-	-
	2000	*0.477*	*0.333*	*0.143*	*30%*	*0.143*	-	*0.002*	*0.012*	*0.116*	-	*0.003*	-	*0.000*	*0.000*	*0.010*	-	*0.000*	-	-
	2004	*0.503*	*0.338*	*0.165*	*33%*	*0.165*	-	*0.002*	*0.007*	*0.137*	*0.005*	*0.003*	-	*0.001*	*0.000*	*0.010*	-	*0.000*	-	-
Luxemb.	*1985*	*0.377*	*0.237*	*0.140*	*37%*	*0.140*	*0.000*	*0.003*	*0.022*	*0.096*	*0.014*	*0.002*	*0.000*	-	*0.001*	*0.002*	-	*0.000*	-	-
	1991	*0.372*	*0.239*	*0.133*	*36%*	*0.133*	*0.002*	-	*0.019*	*0.089*	*0.013*	*0.000*	*0.000*	*0.001*	*0.002*	*0.007*	-	*0.000*	-	-
	1994	*0.388*	*0.235*	*0.153*	*39%*	*0.153*	*0.001*	-	*0.019*	*0.101*	*0.018*	*0.002*	*0.001*	*0.001*	*0.002*	*0.010*	-	*0.000*	-	-
	1997	*0.400*	*0.260*	*0.140*	*35%*	*0.140*	*0.002*	*0.002*	*0.021*	*0.079*	*0.017*	*0.003*	*0.002*	*0.001*	*0.007*	*0.007*	-	*0.000*	-	-
	2000	*0.423*	*0.260*	*0.163*	*39%*	*0.163*	*0.001*	*0.002*	*0.021*	*0.105*	*0.020*	*0.002*	*0.005*	*0.000*	*0.001*	*0.007*	-	*0.000*	-	-
	2004	*0.452*	*0.268*	*0.184*	*41%*	*0.147*	*0.001*	-	*0.015*	*0.097*	*0.021*	*0.008*	-	-	*0.000*	*0.005*	*0.001*	*0.037*	*0.037*	
Mexico	*1984*	*0.446*	*0.445*	*0.001*	*0%*	*0.001*	-	-	*0.000*	*0.001*	-	-	-	-	*0.000*	-	-	*0.000*	-	-
	1989	*0.472*	*0.466*	*0.006*	*1%*	*0.006*	-	-	*0.000*	*0.006*	-	-	-	-	*0.000*	-	-	*0.000*	-	-
	1992	*0.493*	*0.485*	*0.008*	*2%*	*0.008*	-	-	*0.000*	*0.008*	-	-	-	-	*0.000*	-	-	*0.000*	-	-
	1994	*0.509*	*0.495*	*0.013*	*3%*	*0.013*	-	-	-	*0.007*	-	-	-	-	*0.007*	-	-	*0.000*	-	-
	1996	*0.487*	*0.477*	*0.010*	*2%*	*0.010*	-	-	*0.000*	*0.006*	-	-	-	-	*0.004*	-	-	*0.000*	-	-
	1998	*0.503*	*0.492*	*0.010*	*2%*	*0.010*	-	-	*0.000*	*0.007*	-	-	-	-	*0.003*	-	-	*0.000*	-	-
	2000	*0.504*	*0.491*	*0.013*	*3%*	*0.013*	-	-	*0.000*	*0.006*	-	-	-	-	*0.007*	-	-	*0.000*	-	-
	2002	*0.490*	*0.471*	*0.019*	*4%*	*0.019*	-	-	-	*0.007*	-	-	-	-	*0.003*	*0.009*	-	*0.000*	-	-
	2004	*0.476*	*0.458*	*0.018*	*4%*	*0.018*	-	-	-	*0.007*	-	-	-	-	*0.003*	*0.007*	-	*0.000*	-	-

Annex 3C Decomposition of income inequality and redistributive effects of social transfers and direct taxes in 20 LIS countries 1979-2005 (continued)

						Partial effects [a]														
Country	Year	(a) Gini primary income	(b) Gini disposable income	Absolute redistribution (a-b)	Relative Redistribution (a-b)/a*100	*Transfers*	Sickness benefits	Occupational injury and disease benefits	Disability benefits	State old-age and survivors benefits	Child/family benefits	Unemployment compensation benefits	Maternity and other family leave benefits	Military/veterans / war benefits	Other social insurance benefits	Social assistance cash benefits	Near-cash benefits	*Taxes*	Mandatory payroll taxes	Income taxes
Netherl.	1983	0.435	0.260	0.176	40%	0.135	-	-	0.031	0.046	0.012	0.020	-	-	0.005	0.021	-	0.040	0.004	0.036
	1987	0.440	0.256	0.184	42%	0.134	-	-	0.031	0.042	0.010	0.012	-	-	0.005	0.026	0.008	0.051	0.002	0.048
	1991	0.405	0.266	0.139	34%	0.119	0.003	-	0.026	0.047	0.009	0.009	-	-	0.000	0.017	0.008	0.020	-	0.020
	1994	0.420	0.257	0.162	39%	0.120	0.001	-	0.030	0.047	0.011	0.009	-	-	0.000	0.017	0.006	0.042	-0.005	0.047
	1999	0.373	0.231	0.142	38%	0.098	0.001	-	0.021	0.050	0.008	0.004	-	-	0.000	0.009	0.004	0.044	0.001	0.043
	2004	0.459	0.263	0.196	43%	0.156	0.002	-	0.018	0.093	0.006	0.009	-	-	0.003	0.019	0.005	0.040	-	0.040
Norway	1979	0.364	0.223	0.141	39%	0.091	-	0.082	-	-	0.007	-	-	-	-	-	0.002	0.050	0.005	0.044
	1986	0.352	0.233	0.119	34%	0.089	-	0.074	-	-	0.008	0.002	-	-	0.002	0.002	0.001	0.031	0.005	0.025
	1991	0.374	0.231	0.142	38%	0.102	-	-	0.018	0.062	0.011	-	-	-	0.002	0.007	0.001	0.040	0.005	0.035
	1995	0.400	0.238	0.162	41%	0.121	-	-	0.019	0.066	0.012	0.009	0.001	-	0.003	0.007	0.004	0.041	0.007	0.034
	2000	0.402	0.250	0.152	38%	0.114	0.006	0.000	0.023	0.054	0.009	0.004	0.008	-	0.003	0.004	0.002	0.038	0.003	0.034
	2004	0.430	0.256	0.174	41%	0.139	0.022	0.000	0.026	0.052	0.011	0.007	0.009	-	0.005	0.006	0.002	0.035	0.003	0.032
Poland	*1986*	*0.365*	*0.271*	*0.094*	*26%*	*0.094*	-	*0.000*	*0.024*	*0.052*	*0.002*	-	*0.001*	-	*0.016*	-	-	*0.000*	-	-
	1992	*0.414*	*0.274*	*0.141*	*34%*	*0.141*	-	-	-	*0.093*	*0.020*	*0.027*	*0.001*	-	-	-	-	*0.000*	-	-
	1995	*0.527*	*0.318*	*0.208*	*40%*	*0.208*	-	-	*0.071*	*0.089*	*0.017*	*0.020*	*0.000*	-	*0.002*	*0.009*	-	*0.000*	-	*0.000*
	1999	*0.475*	*0.289*	*0.186*	*39%*	*0.181*	*0.001*	-	*0.049*	*0.103*	*0.009*	*0.009*	*0.002*	-	*0.001*	*0.005*	*0.000*	*0.005*	*0.000*	*0.006*
	2004	*0.527*	*0.320*	*0.207*	*39%*	*0.202*	*0.001*	-	*0.044*	*0.126*	*0.014*	*0.006*	*0.002*	-	-	*0.008*	*0.000*	*0.005*	*0.000*	*0.005*
Spain	*1980*	*0.416*	*0.318*	*0.098*	*24%*	*0.098*	-	-	-	-	-	-	-	-	*0.098*	-	-	*0.000*	-	-
	1990	*0.420*	*0.303*	*0.117*	*28%*	*0.117*	-	-	*0.018*	*0.076*	-	*0.015*	-	-	*0.001*	*0.006*	*0.001*	*0.000*	-	-
	1995	*0.501*	*0.353*	*0.148*	*29%*	*0.148*	*0.004*	*0.001*	*0.019*	*0.098*	*0.003*	*0.009*	*0.000*	-	*0.002*	*0.012*	*0.000*	*0.000*	-	-
	2000	*0.541*	*0.336*	*0.205*	*38%*	*0.174*	*0.001*	*0.000*	*0.016*	*0.137*	*0.001*	*0.005*	*0.000*	-	*0.001*	*0.013*	*0.000*	*0.031*	*0.031*	
	2004	*0.441*	*0.315*	*0.126*	*29%*	*0.124*	*0.003*	-	*0.009*	*0.100*	*0.001*	*0.011*	-	-	*0.001*	*0.000*	*0.000*	*0.001*	-	*0.001*
Sweden	1981	0.411	0.197	0.214	52%	0.170	0.011	-	-	0.108	0.006	0.006	0.004	-	0.002	0.006	0.026	0.044	-0.003	0.047
	1987	0.428	0.218	0.211	49%	0.171	0.014	-	-	0.117	0.008	0.010	0.007	-	0.001	0.014	0.000	0.040	-0.002	0.041
	1992	0.462	0.229	0.232	50%	0.202	0.012	-	-	0.113	0.010	0.024	0.011	-	0.004	0.008	0.020	0.031	-	0.031
	1995	0.460	0.221	0.239	52%	0.198	0.008	-	0.001	0.084	0.010	0.029	0.009	-	0.023	0.011	0.022	0.041	-	0.041
	2000	0.448	0.252	0.196	44%	0.159	0.013	0.002	0.017	0.070	0.009	0.017	0.006	-	0.007	0.008	0.011	0.037	0.001	0.036
	2005	0.442	0.237	0.205	46%	0.168	0.011	0.002	0.020	0.075	0.008	0.016	0.008	-	0.012	0.007	0.009	0.037	0.001	0.036

Annex 3C Decomposition of income inequality and redistributive effects of social transfers and direct taxes in 20 LIS countries 1979-2005 (continued)

						Partial effects [a]													
Country	Year	(a) Gini primary income	(b) Gini disposable income	Absolute redistribution (a-b)	Relative Redistribution (a-b)/a*100	*Transfers*	Sickness benefits	Occupational injury and disease benefits	Disability benefits	State old-age and survivors benefits	Child/family benefits	Unemployment compensation benefits	Maternity and other family leave benefits	Military/veterans / war benefits	Other social insurance benefits	Social assistance cash benefits	Near-cash benefits	*Taxes*	Mandatory payroll taxes	Income taxes
Switzerl.	1982	0.381	0.309	0.071	19%	0.053	-	-	0.005	0.043	-	0.001	-	0.000	0.002	0.002	-	0.018	0.000	0,018
	1992	0.376	0.307	0.068	18%	0.055	0.001	-	0.000	0.042	-	0.003	-	0.000	-	0.006	0.001	0.014	-0.002	0,016
	2000	0.386	0.280	0.106	28%	0.109	0.001	0.001	0.000	0.088	0.006	0.004	-	0.000	0.001	0.007	0.000	-0.003	-0.012	0,009
	2002	0.393	0.274	0.119	30%	0.117	0.002	0.002	0.000	0.094	0.006	0.005	-	0.000	0.001	0.006	0.000	0.002	-0.017	0,019
	2004	0.395	0.268	0.128	32%	0.130	0.001	0.002	0.000	0.100	0.005	0.010	-	0.000	0.001	0.010	0.000	-0.003	-0.010	0,007
UK	1979	0.396	0.270	0.126	32%	0.098	0.001	0.001	0.008	0.045	0.013	0.006	0.002	0.000	0.002	0.017	0.003	0.028	0.004	0,024
	1986	0.476	0.303	0.173	36%	0.136	0.002	0.001	0.011	0.046	0.014	0.007	0.001	0.000	0.003	0.038	0.012	0.037	0.005	0,032
	1991	0.475	0.336	0.139	29%	0.109	0.001	0.001	0.014	0.039	0.009	0.002	0.000	0.000	0.004	0.038	0.000	0.030	0.005	0,025
	1994	0.502	0.339	0.163	32%	0.134	0.000	0.001	0.018	0.040	0.010	0.003	-	0.001	0.004	0.031	0.026	0.029	0.005	0,024
	1995	0.503	0.344	0.158	32%	0.125	0.001	0.001	0.014	0.038	0.011	0.001	0.000	0.001	0.005	0.033	0.020	0.034	0.006	0,028
	1999	0.497	0.347	0.150	30%	0.125	0.000	0.001	0.019	0.039	0.010	0.001	0.000	0.001	0.003	0.028	0.023	0.026	0.004	0,022
	2004	0.490	0.345	0.145	30%	0.124	0.000	0.000	0.017	0.039	0.008	0.000	0.000	0.001	0.003	0.034	0.022	0.021	0.005	0,017
USA	1979	0.405	0.305	0.100	25%	0.052	-	0.001	0.004	0.025	-	0.002	-	0.004	-	0.011	0.004	0.048	0.000	0,049
	1986	0.434	0.338	0.096	22%	0.053	-	0.002	-	0.033	-	0.002	-	0.002	-	0.011	0.004	0.043	0.000	0,043
	1991	0.439	0.338	0.101	23%	0.059	-	0.002	-	0.034	-	0.003	-	0.002	-	0.013	0.005	0.042	0.001	0,041
	1994	0.473	0.365	0.108	23%	0.062	0.000	-	0.002	0.036	-	0.002	-	0.001	0.003	0.011	0.007	0.046	0.001	0,045
	1997	0.476	0.372	0.103	22%	0.059	-	-	0.001	0.037	-	0.002	-	0.002	-	0.013	0.005	0.045	-0.001	0,046
	2000	0.473	0.368	0.105	22%	0.056	-	0.001	0.005	0.034	0.000	0.001	-	0.002	0.000	0.009	0.003	0.049	-0.001	0,050
	2004	0.482	0.372	0.109	23%	0.066	-	0.001	0.007	0.035	0.000	0.002	-	0.002	0.000	0.014	0.005	0.043	0.000	0,044
20 country-average																				
around 1985		0.412	0.285	0.128	31%	0,101	0.002	0.004	0.007	0.048	0.009	0.007	0.001	0.001	0.008	0.012	0.002	0.027	0.001	0.026
around 1995		0.452	0.299	0.153	34%	0,127	0.002	0.000	0.014	0.062	0.011	0.012	0.001	0.001	0.004	0.013	0.005	0.026	0.001	0.025
around 2005		0.467	0.304	0.163	35%	0,133	0.003	0.001	0.013	0.074	0.010	0.009	0.002	0.001	0.003	0.013	0.004	0.032	0.005	0.028
12 country-average																				
around 1985		0.412	0.273	0.139	34%	0,098	0.002	0.007	0.007	0.047	0.008	0.008	0.001	0.001	0.003	0.012	0.002	0.041	0.001	0.039
around 1995		0.437	0.281	0.157	36%	0,114	0.002	0.000	0.010	0.049	0.011	0.013	0.002	0.001	0.006	0.013	0.007	0.042	0.001	0.041
around 2005		0.454	0.292	0.163	36%	0,126	0.004	0.001	0.014	0.062	0.009	0.008	0.003	0.001	0.004	0.013	0.005	0.037	0.000	0.036
8 country-average																				
around 1985		*0.413*	*0.303*	*0.111*	*27%*	*0,105*	*0.003*	*0.001*	*0.007*	*0.050*	*0.010*	*0.007*	*0.000*	*0.000*	*0.016*	*0.010*	*0.002*	*0.005*	*0.000*	*0.005*
around 1995		*0.475*	*0.327*	*0.148*	*31%*	*0,146*	*0.002*	*0.000*	*0.020*	*0.083*	*0.012*	*0.011*	*0.000*	*0.000*	*0.001*	*0.014*	*0.003*	*0.002*	*0.000*	*0.002*
around 2005		*0.485*	*0.321*	*0.164*	*33%*	*0,143*	*0.002*	*0.000*	*0.012*	*0.092*	*0.011*	*0.009*	*0.001*	*0.000*	*0.001*	*0.012*	*0.003*	*0.026*	*0.013*	*0.015*

Note: For 12 countries full tax and benefit information is available in LIS. For other 8 countries (marked *italic*) net wages and salaries are used because gross variables are not available for all data years in LIS.

[a] Including the ordering effect of social programmes. We consider every specific social transfer as the first programme to be added to primary income and every direct tax as the first tax to be subtracted from gross income. In that case, the sum of all partial redistributive effects amounts to (a little) over 100 percent. We rescaled the redistributive effects of each programme by applying an adjustment factor, which is defined as the overall redistribution (100%) divided by the sum of all partial redistributive effects of all programmes (a little over 100%).

Source: Wang and Caminada (2011b), and own calculations