



# The endangered middle class? A comparative analysis of the role played by income redistribution

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## Abstract

Contributing to the debate on the decline of the middle class, this article provides a comparative and longitudinal analysis of changes to the relative position of middle income groups in 19 (post)industrial countries between 1985 and 2005. How much did the income position of the middle worsen compared with more vulnerable groups? To what extent did public policies mitigate the market position of different income groups? The analysis is based on microdata of the Luxembourg Income Study. It divides the broad category of 'middle class' into three groups. Results suggest little change in the income position of the middle classes with respect to both market and disposable incomes. In most countries market incomes in the top quintile increased remarkably while the bottom quintile group lost out. The scale of government income redistribution has improved the position of the lowest income group, while burdening the highest income group. But it failed to fully compensate for the growing gap between the top and bottom income groups. The distance between the middle and the top incomes grew significantly, which might be one reason for the current public debate about an endangered middle class.

## Keywords

comparative political economy, income inequality, middle class, public redistribution, welfare state

In the past few years, a public debate has begun over the shrinking of the middle class in various European countries (Chauvel, 2006; FAZ, 2010; Discroll, 2011; Kroll, 2011; Watson and Coates, 2011). The increase of disparities in the income distribution is seen as endangering the middle class. Accordingly, the fear is that it will not only be the low income groups that will be confronted with worsening job prospects and income opportunities. So, a debate that started much earlier in the liberal English-speaking countries due to rising inequalities that began to be observed in the 1970s has now reached continental Europe

(Kutmer, 1983; Ehrenreich, 1989; Alderson et al., 2005; Atkinson, 2007). It can be assumed that this difference in timing is due to the stronger regulation of wage bargaining and labour relations in many European countries, and due to more comprehensive welfare states that partly compensated for rising market inequality. Our knowledge of the actual shrinkage or decline of the middle class in the income

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hierarchy has been scant until now. Some studies on changing income distributions and the polarization of job opportunities have offered insights, as a side-product, on the situation of the middle class. In general, however, there has been insufficient differentiation between the level of market or of disposable income, and closely connected to it, insufficient awareness that there may be different developments and causes at each level that contribute to the supposed decline of the middle class. A differentiation can show more precisely whether developments in the labour markets or in social policies are the cause of a decline (or of a stable position) of the middle income groups.

The present article intends to address this lacuna. It asks how widespread or serious the much-discussed shrinking of the middle class in highly industrialized and post-industrial societies is. By a comparative perspective it can establish whether such shrinkage is a common trend or whether it is concentrated in certain countries. The analysis conducted is based on microdata on equivalized household income from the Luxembourg Income Study (LIS). The data analysed here cover the time from 1985 to 2005, and encompass 19 European and English-speaking countries. This article critiques the fact that previous analyses of a shrinking middle class often used an overly broad categorization of the middle. As that 'middle' sometimes comprises three-quarters of the households in a country, this results in overlooking existing internal differentiations. Different strata of the middle will be differently affected by economic and societal changes, hence resulting in income distribution becoming more unequal. To address this problem, we use quintile shares of total income to differentiate between lower, middle and upper middle class. This furthermore allows us to analyse middle-class decline by addressing the *relative income position* of the strata and its change over time.

In social research, observing a shrinking middle class is often discussed as part of an increased *polarization* of the income distribution. That means that there is a growing *distance* between those at the top and at the bottom of the income hierarchy, and an expanding *number* of members in both the lowest and highest income groups. This

polarization is seen as caused by the loss of skilled, well-paid jobs in industry, due to de-industrialization and globalization, to skill-biased technological change, or to the weakness of unions. Yet, this perspective only considers processes related to the labour market and neglects the impact of public policies. This article instead addresses the role that welfare state redistribution plays in the (supposed) middle-class decline and examines the impact of social policies on the income position of middle income groups. We differentiate between market and disposable income to be able to infer how much the decline of the middle strata is taking place at the level of labour market processes, and is also being influenced by public redistribution via transfer payments, taxes and social security contributions.<sup>1</sup> Therefore, this article contributes to comparative political economy and welfare state research directed at the redistributive effects of social policy (Korpi and Palme, 1998; Bradley et al., 2003; Mahler, 2004; Smeeding, 2005; Mahler and Jesuit, 2006; Palme, 2006; Organisation for Economic Co-operation and Development, 2008: 97; 2011). From this vantage point, there is a question of whether redistribution improves the position of the middle class or whether it helps protect the middle income strata from a decline over time, at least at the level of disposable income. To what extent do taxes and transfers change the market income position of the middle class(es), compared with the lower income groups to whom income redistribution should be directed? Due to debates about imposing cuts in social programmes, there is a further question whether public policies (still) compensate for the consequences of greater market income inequality – both among the middle and among the lower income groups.

Some scholars assume, in line with Esping-Andersen's view (Esping-Andersen 1990), that income redistribution can be understood as *stratification*. According to his widely cited typology of liberal, social democratic and conservative welfare regimes – a Mediterranean and a post-communist type have been added – each regime is associated with specific social policies generating specific patterns of inequality. Although many comparative studies have used Esping-Andersen's typology, the

classification is, however, contested (Scruggs and Allan, 2008). Still, one can ask empirically whether the impact of social policies on the income position of the middle income strata actually shows regime patterns. Comparative political economy gives the middle class an even more specific role to play. Both argue that the scope of public redistribution depends on whether the middle classes form a coalition with the upper or the lower social strata. Scholars have focused on electoral rules established by political institutions to explain coalitions (Cusack et al., 2008; Iversen and Soskice, 2008), on the self-interest of the middle class, which some regimes further by benefiting not only the poor (Goodin and LeGrand, 1987; Korpi and Palme, 1999) or on the structure of inequality (Lupu and Pontusson, 2011). An analysis of the relationship between public support of government policies by the middle class and the scope of income redistribution is beyond the remit of this article, even though we can probe whether social democratic regimes really give the middle a more favourable position.

Our data analysis shows that the lowest income group experienced a more severe drop in income share during the last decades than did the middle classes. The ‘welfare state effort’, which balances the loss in the share of market income available to those in the lowest income group, rose over time without being able to compensate for either the losses at the bottom or the gains at the top (in terms of market income). The middle classes suffered much less from a declining share of total market income than did the low income category. Consequently, public income redistribution was less important to the middle than to those at the bottom in terms of stabilizing their relative income position. However, the middle is faced with a growing distance to the topmost incomes, which seem to run away.

The article first reviews the comparative research on the declining middle class and the polarization of incomes and job opportunities. Then the methods and the dataset used in this study are described. The result of analysing the impact of redistribution on the position of individual quintiles in the income distribution, including the middle class(es), is then presented, and this is followed by the conclusion.

## **The decline of the middle class: Previous research**

A decline of the middle class was first observed in the US, the UK, Australia, Canada and New Zealand. In these countries, a debate about it began early, as there had been a general increase in income disparity starting in the 1970s (Kutner, 1983; Rosenthal, 1985). Most European countries experienced this increase later, as they typically had a more encompassing regulation of the labour market, collective wage bargaining, and a stronger cushioning of income disparities through welfare state policies and programmes. When inequality began to rise in Europe, research focused on the increase in poverty or on the consequences of a deregulation of gainful employment on income inequality rather than on the middle classes (Kenworthy, 1999; Esping-Andersen and Regini, 2000; Duncan and Paugam, 2002; Giesecke and Groß, 2003). Deregulation particularly affected groups in the workforce with low skills and qualifications, hence with a weak bargaining position in the labour market, and led to discussions of ‘precarious work’. This, and poverty, were seen not as risks to the middle class but as dangers which the lower classes faced. Today, however, the middle class is perceived as threatened even in countries such as France or Germany that have coordinated market economies or corporatist welfare states (Chauvel, 2007; Grabka and Frick, 2008).<sup>2</sup>

Present knowledge about middle-class decline is a by-product of descriptive studies of the changing income distribution. Organisation for Economic Co-operation and Development (OECD) reports, for example, indicate that the income situation of the middle classes was stable until about 2000 in most OECD member states. Only a few countries (Norway, Turkey, Mexico) saw either gains or losses for the middle class from the mid 1990s to the mid 2000s (Förster and d’Ercole, 2005: 15). These findings are based on a comparison of the percentage share individual quintiles receive of total disposable household income in different time periods. A later report provides information on the *absolute* increase in income by average annual changes in real income. Again the authors differentiate their data by quintiles in order to see which effect growth had at different

points in the distribution. The data indicate that between 1980 and 2000, disposable (net equivalent) income changed in such a manner that the top of the income hierarchy benefited most in terms of absolute income gains. In some countries, even real incomes in the bottom quintile dropped. In terms of who reaps the benefits of economic growth, the middle class lost ground relative to the top quintile (Organisation for Economic Co-operation and Development, 2008: 31).<sup>3</sup> The most recent report of the OECD (Organisation for Economic Co-operation and Development, 2011) provides detailed analyses that help evaluate the reasons for growing inequality. Decomposition analysis shows how individual income types contribute to income inequality and how wages, income from capital, and income taxes support the ‘take-off’ of high incomes. Since the report focuses on high and low incomes, it is not that instructive for understanding the position of middle income groups.

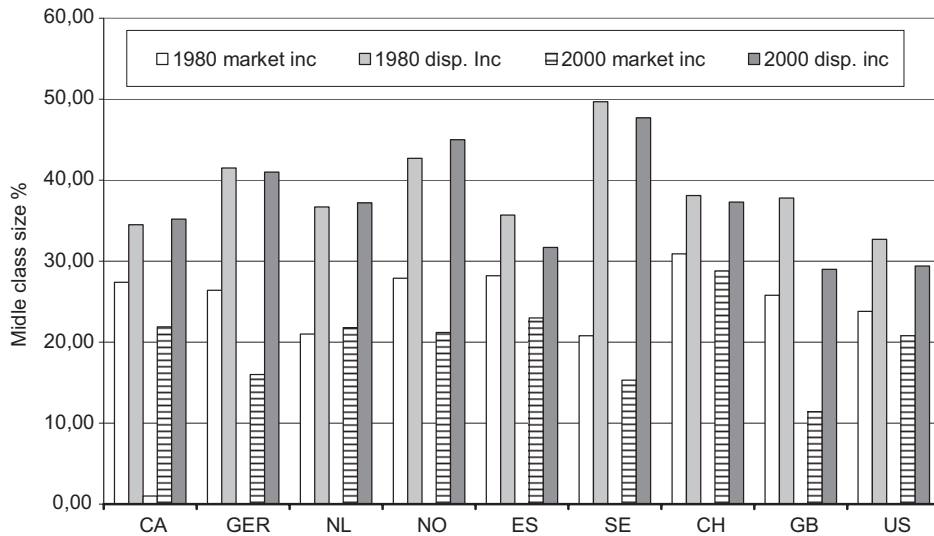
Comparative studies on the *polarization* of the income distribution provide insight into the ‘threatened middle class’, since polarization squeezes the middle income strata. Of course, the above results also describe a polarization, but the following studies make explicit use of the notion. Based on data on disposable household income (equivalence weighted) from LIS for 16 industrialized countries covering the time between the 1960s and 2000, sometimes only from the 1980s to 2000, Alderson et al. (2005) show that a polarization of the income distribution increased and the number of people belonging to the middle income deciles decreased – and that across a rather heterogeneous mix of countries: the UK, the US, Finland, Australia, Luxembourg and Austria. By contrast, at least to 2000, Germany, France, Belgium and the Netherlands were distinctive for their stable income distributions. Canada and Sweden even saw the polarization of income distribution decrease during this period. (The measure of polarization in Alderson et al. is the number of people belonging to income deciles and the change in this number.)

Cross-national variation does not provide much by way of clues to general country characteristics or regime-specific features that might explain a changed income position of the middle class.

Nevertheless, given the spectrum of countries, it stands to reason that in places where disposable household net income was more equally distributed, or polarization only modest, the welfare state could be a factor preventing the decline of the middle class. In Sweden, a country with high welfare state expenditures, both lowest and highest deciles shrank while the middle decile grew. The middle eroded, by contrast, in countries with low social expenditures and a marginal welfare state, such as the UK, the US and Australia. Still, the ‘fate’ of the middle classes in a specific country often deviates from what could be expected given its regime type. So, while social policies seem to matter for middle class shrinkage, it remains an open question as to whether a regime approach is appropriate. Alderson et al.’s finding that there is significant cross-national variation in the *time period* during which the middle class shrinks hints at the role of public policies. In some countries, a polarization in the distribution of disposable income began early, while in others (such as Germany), the gap in the distribution began to widen only by the early 2000s.<sup>4</sup>

Some contributions to this debate, anchored in research on the income distribution, have directly addressed the influence of the welfare state on the income position of the middle class (Pressman, 2007, 2009). Studies from Pressman used LIS data and covered the period 1980 to 2000. The middle class is defined as a group whose income lies between 75 percent and 150 percent of median income. The impact of welfare redistribution was established by comparing the size of the middle class, calculated first based on income before taxes and transfers (from dependent employment, self-employment, interest, dividends and rents), and then calculated based on net disposable household incomes adjusted for household size.

As Figure 1 shows, redistribution has a remarkable effect in most countries examined. Thanks to the welfare state, the percentage of the population classified as middle class rises, though not uniformly across nations. In the US and Switzerland, taxes and transfers enlarge the middle class only by a few percentage points. In terms of market income, the societal middle in Switzerland is already broad so there is not much left for the welfare state to do. In the US,



**Figure 1.** Size of the middle class, pre- and post tax and transfer income. Source: Pressman, 2007; author's presentation. disp. disposable; inc., income.

again in terms of market income, the middle is as big as in European countries but gains much less from public transfers. The largest middle classes can be found in Sweden, Norway and Germany, to a large extent an achievement of the welfare state. Based on market income alone, the middle class in both Sweden and Germany is rather modest (15 percent), but with taxes and transfers, it increases to more than 40 percent of the population. There is, of course, considerable inter-country variation, but then also different conclusions to be drawn depending on the basis for the observations. If one only takes market income, the middle class shrank between 1980 and 2000 in most countries, seriously so in the UK, but not at all in the Netherlands.<sup>5</sup> If one instead takes (equivalence-weighted) disposable household income, however, then the change over time is small. Hence, the thesis of a shrinking middle class is confirmed primarily with respect to market income developments.<sup>6</sup> Still, this is offset by public redistribution, meaning that the stability of the household income distribution in some countries and marked changes to it at the expense of the middle in other countries can be attributed to the welfare state (Alderson et al., 2005; Atkinson, 2008: 27).

A further stream of research shows a hollowing-out of the middle class caused by a *polarization of employment structures*. This research examines labour market processes, not public policies. Middle-class jobs are seen as vanishing due to 'skill-biased technological change' (SBTC) connected to globalization or the shift to a service sector economy (Katz and Autor, 1999; Autor et al., 2006; Spitz-Oener, 2006). Both trends have consequences for the earnings position of the middle class. SBTC approaches assume the middle becomes hollowed-out due to changes in the demand for labour. The development of technology calls for higher skills among employees on the one hand, while globalization is assumed to threaten employees with lower qualifications on the other. Shifts to a service sector economy means that what were once mid-level jobs in the industrial sector – the skilled manual worker with adequate pay and social security benefits – vanish and are replaced by jobs that call for either higher or lower qualifications. There is empirical evidence for such polarization, inasmuch as the proportion of employees in professional and managerial positions (higher) as well as employees in personal services (lower) has been increasing in English-speaking countries



for a number of years and is now increasing in most European countries as well (Goos and Manning, 2007; Goos et al., 2009).

Similarly, *organizational processes* within companies are analysed to understand middle-class decline (Breen, 1997). During the ‘Golden Age of Capitalism’, blue-collar workers and intermediary classes improved their labour market position, with aspects of service class employment conditions being extended to blue-collar workers. With the decline of working-class organizational power, privileges have been reduced. In addition, changes in technology and new methods of monitoring – performance objectives, outsourcing, smaller entities within a company responsible for labour process and results – have worsened the position of intermediary jobs. The lower service class is especially affected by these new structures and processes (Breen, 1997: 480).

There are a number of lacunae in the literature on the crisis of the middle class. (1) The shrinking of the middle incomes mainly was part of the description of a changing income distribution. Yet little was done to examine its causes. By analysing different income dimensions, we can probe more closely whether the middle is losing ground due to labour market processes or due to welfare state restructuring. (2) The delimitation of the size of the middle class is too broad and misses the fact that it is quite likely that income positions develop differently. Therefore we differentiate between lower, middle and upper middle class. (3) Only scrutinizing the changes in the size of the middle class is too narrow a perspective. Its relative position in the income hierarchy is more informative. Moreover, the position of the middle and its change over time needs to be compared with the relative position of other income groups to determine the extent to which the middle or other strata are under pressure.

## Data and methods

Much research on the middle class concentrates on changes to its size. To establish this size, relative income limits such as 75–150 percent of median income are used (Pressman, 2007; Grabka and Frick,

2008), though they are not the only possible endpoints. Because such limits determine which households do or do not fall within the definition of the ‘middle class’, one needs to be careful about choosing the boundaries.<sup>7</sup> A disadvantage of this method is that it can create a very broad middle class. This article instead defines the middle class in terms of quintiles in order to capture the internal differentiation of the societal middle. The relative income position of the middle (and other) societal groups is defined as the share of income that individual quintiles have, as a proportion of total income.<sup>8</sup> Classifying by quintiles means the ‘middle’ middle class in a narrow sense is the middle 20 percent of the income distribution (Q3). Below it, one finds the ‘lower’ middle class (Q2), above it, the ‘upper’ middle class (Q4). The three quintiles taken together (for example, Q2 + Q3 + Q4, equalling 60 percent of the income distribution) form the entire middle class. Q1 is the bottom or lowest class, Q5 the topmost or upper income class.

Like other methods, this delineation is arbitrary and draws boundaries that may well not be so strict in social reality. However, it yields a more precise quantitative delimitation of different middle income groups than previous research, and their income shares can be compared with other groups.<sup>9</sup> This can be used for both cross-national and longitudinal comparisons. Furthermore, ratios between income shares can be calculated to indicate how *much* the income of a higher quintile exceeds the income of another quintile. Such quintile-based ratios are similar to percentile ratios for deciles (that is, a tenth of the population) that are often used in studies of income distribution. They can be interpreted in the same way as percentile ratios (for example, P90/P10 or P90/P50). Thus, a Q5/Q3 ratio of 2.5 means that the 20 percent of the population with the highest income has 2.5 times more household income than does the middle fifth of the population.<sup>10</sup>

In the literature, the distributive effect that taxes, contributions and social transfers have on the income distribution is assessed by comparing distribution measures for market income with distribution measures for disposable household income (Mahler, 2004; Garfinkel et al., 2005; Kenworthy and Pontusson, 2005). This distinction between

market income and net disposable income a household or person has is crucial for the following analysis. Market income refers to all income derived from involvement in the market, whether through dependent employment or other market activity. Disposable income (or net income) adds taxes, social insurance contributions, and all other transfer payments (child benefits, unemployment compensation, etc.). These two concepts reveal different social dynamics influencing the income distribution. Market income largely reflects trends in labour and capital markets, while welfare state redistribution policies effects are manifested in the concept of net disposable income (Atkinson, 2007; Kenworthy, 2007). Both income types are usually weighted to take the number and age of persons living in a household into account. Here we calculate distribution measures based on household income, using the equivalence weighting method suggested in the LIS.<sup>11</sup> Accordingly, the redistributive effect of welfare policies is captured in the difference between the share of total market income and the share of disposable income the quintiles receive.<sup>12</sup> It may be positive or negative. If the quintile share of income increases after taxes and transfers, the respective income group gains from redistribution. If the quintile share of income decreases, the income group loses from redistribution.

However, one should keep in mind that the difference between pre-tax and transfer income and post-tax and transfer income only *approximates* government redistribution effects. It accounts largely for cash benefits and direct taxation, yet the public delivery of social services (Garfinkel et al., 2005) and indirect taxation (reducing the value of transfers) also have redistributive effects. Furthermore, there is no pure pre-governmental market income because the very existence of public income maintenance programmes influences people's market behaviour. Without redistributive programmes, market activities (for example, saving for private pensions) would have to fill the gap (Saunders, 2010). In addition, the welfare state may influence the size and income position of the middle classes by creating employment opportunities in qualified (semi-) professional jobs, such as for nurses, teachers or social workers. Taking these limitations into account, our

data provide reliable indicators of the redistributive impact of direct monetary transfers within social policies.

Longitudinal and comparable data on household market income and net disposable household income is needed to conduct cross-national comparisons of the influence the welfare state has on the income position of the middle class and its change over time. The LIS microdata provide such a basis because they are generated from high-quality, national-level microdata that are recoded using a consistent methodology to guarantee international comparability. For the purposes of this article, income distribution measures are calculated only for persons of working age (25 to 60 years), thereby avoiding effects of differing length of education in individual countries and the bias that would result from zero market income of pensioners in countries with public pension schemes.<sup>13</sup> The lowest as well as the highest one percent of the observation was cut off to eliminate outliers (top and bottom coding).

Six waves of LIS data are available, but since the first wave only surveyed a limited number of countries, the time period analysed here uses only the second to sixth wave to ensure a consistent selection of countries. These five waves cover the period from the mid 1980s to the mid 2000s, and though the waves are labelled 1985, 1990, 1995, 2000 and 2005, data from the individual countries vary around these time points. The exact dates are given in Table A1 in the appendix. We use the central year of each wave here. For purposes of cross-national comparison, observations summarizing all waves are analysed. Change over time is shown separately. To reduce the complexity of presentation, only the starting (1985) and endpoint (2005) are shown, not the three waves in between (see Table A2). The results are not distorted by doing so, because the data on the income position of individual quintiles show no extreme fluctuations or breaks. A presentation of all periods would take up too much space.

Not all countries or waves in this dataset include variables for both market and net disposable income (Table A1 gives the details by country and wave). Nevertheless, observations on both income concepts are available for 19 countries.<sup>14</sup>

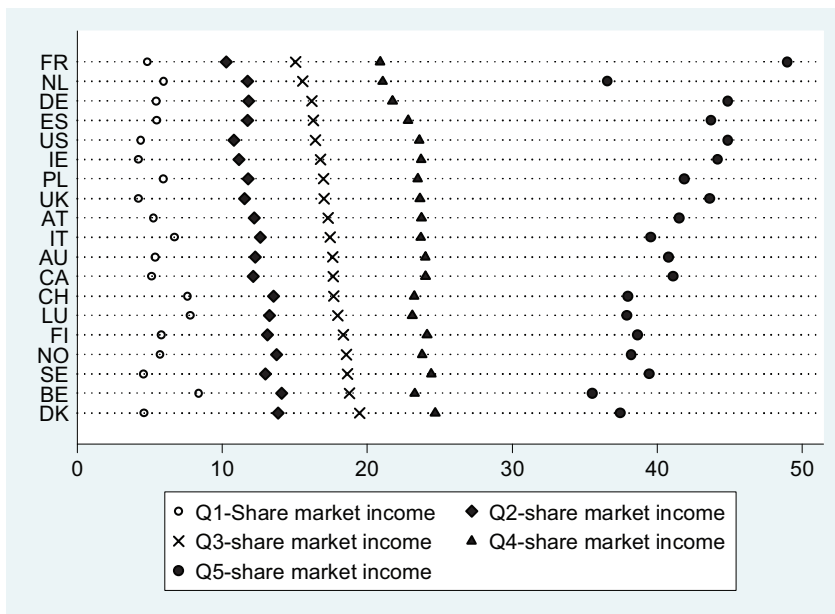
### The income position of the middle class in an international comparison

This section first examines the cross-national variation in the position of the middle classes in the distribution of both market income and disposable income, with differences between the three middle classes of special interest. Second, we analyse the impact of welfare redistribution on the share of income that accrues to the five income groups and show that redistribution could not compensate the growing dispersion of market income over time. Third, we show the growing distance between the middle and the top income group that might provide an explanation for the debate on a middle-class crisis.

To compare the position of the middle classes within the distribution of market income, we look at the quintile shares that the individual income strata in each country obtain, calculated as an average across all waves. As Figure 2 shows, there is a similar structure – a broad gap between the highest quintile and all other quintiles, and smaller differences

between the bottom and the middle – in every country. If we take the example of Germany, the lower middle class has about 12 percent of the market income, the middle middle class about 16 percent, and the upper middle class about 22 percent. The bottom quintile must make do with only 7 percent of the market income, while the top quintile has 43 percent. This structure varies between countries, as one can see by the different horizontal positions of the dots on individual country lines. Figure 2, which sorts countries based on the size of the market income share of Q3, indicates that Scandinavian countries give the middle the best income position, with the highest quintile not pulling away from the middle as strongly as in other countries. Still, the short distance between the shares of market income that the middle and the top receive does not necessarily benefit the lowest quintile: in Denmark and Sweden, in particular, this quintile does not profit from the closer position of middle and top.

The market income share of the middle middle income group is, from a comparative point of view, the ‘worst’ in France, the Netherlands, Germany and



**Figure 2.** Quintiles share in market income, average over all waves (countries sorted by size of Q3). Source: LIS, author’s calculation.

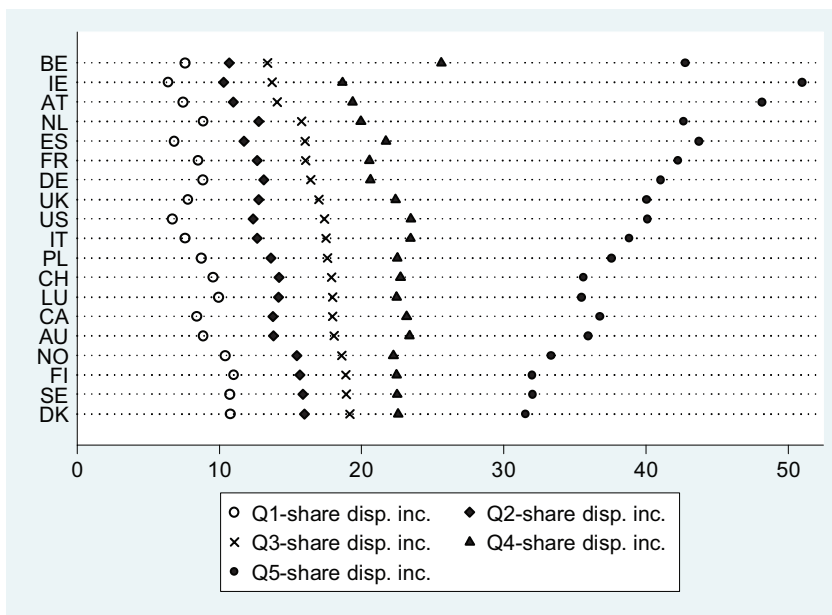


the US. Among continental European countries, the unfavourable position of this group is accompanied by a better position of the lower middle and the lowest quintiles. In some liberal countries, notably Canada and Australia, the middle middle income group occupies a relatively good position compared with continental European countries. In all the liberal countries examined here, however, the lowest quintile is in a more unfavourable position. So, the lower middle and the lowest quintile are relatively better off in continental European countries. Since these results are based on market income, this is likely due to the regulation of labour relations and coordinated wage bargaining. By comparison, the nature of labour relations in liberal countries leads to a distribution that tends to benefit the middle middle and upper middle classes. The upper middle class obtains a larger share of the market income in these countries, while the lower middle class has a relatively smaller share.

It is instructive that in Luxembourg and Switzerland, both market income and disposable income of the middle and lowest quintiles are relatively high in international comparison. Welfare

redistribution does not have much left to do, because the market incomes are already relatively balanced.

When the same measure is calculated on the basis of net disposable household income the influence of the welfare state becomes noticeable. As shown in Figure 3, public redistribution results in a gain for the lower income quintiles and a loss to the top quintile. The degree to which this takes place of course varies by country. Regarding the group the present article is focused on, it is remarkable how little the income share of the middle classes change when we move from market to disposable income. In terms of disposable income, the Scandinavian countries remain the most advantageous for the middle middle class, and after redistribution, the lowest quintile moves considerably closer to the middle. Germany is among the bottom third in terms of the income position of the middle middle, though the lowest quintile does relatively better. In terms of the income distribution that reflects welfare state measures, Germany, along with France, the Netherlands and Spain, range even behind the US and the UK with respect to the position of the middle middle quintile. However, as was true of the market income distribution, the lower



**Figure 3.** Quintile shares in disposable income (countries ordered by size of Q3). Source: LIS, author's calculations.

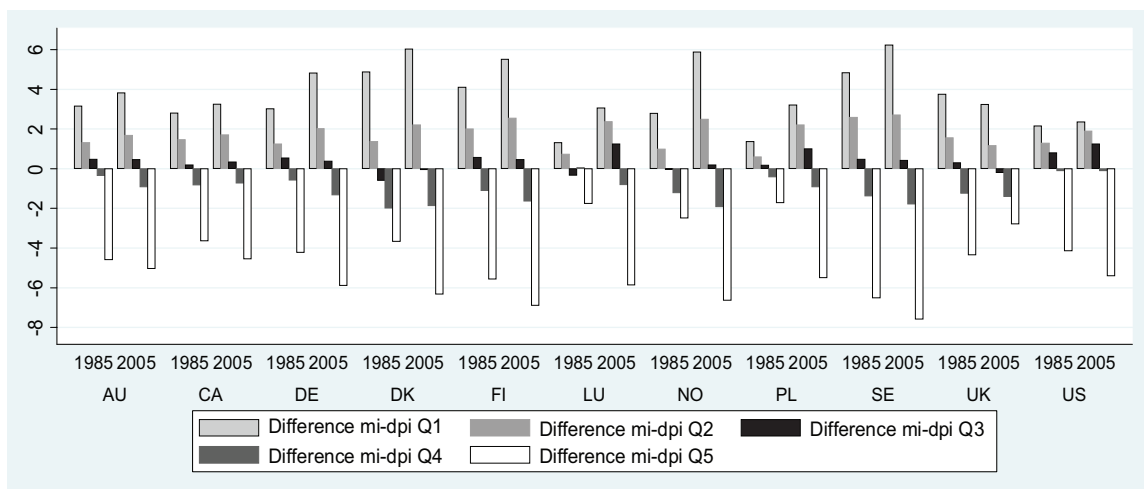
middle class and the lowest class quintiles are better off in continental European countries than in liberal countries. Here, the middle receives a more advantageous position, though the lowest quintile receives a relatively disadvantageous income share compared with other countries. Still, one cannot generalize, and there are exceptions among both liberal and continental groups, especially among the former. For example, both Canada and Australia provide more 'equality' to the middle – meaning less distance to the top – than do the countries of continental Europe.

### Which income class is protected by government redistribution?

The effect that redistribution makes is shown in more detail in Figure 4, which shows the difference in income shares individual quintiles received before and after taxes. For each country, the five bars show the size of redistribution in each of the quintiles, the first set for the mid 1980s, the second for the mid 2000s, in order to assess a changing influence of the welfare state on the income distribution over time. In all countries, and for both dates, government-directed redistribution increases the income share of the first quintile and decreases the share of the fifth

quintile. The share of wealth the quintiles in the middle receive, by contrast, changes little, when comparing pre-tax with post-tax/transfer income. Relative to market income, the share of the lower middle and the middle middle classes increase slightly in most of the countries, while the share of the upper middle class decreases. In terms of redistribution, the three middle classes thus do not show the same patterns.

All in all, welfare state interventions provide a larger volume of income for the lowest class, and reduce the volume of the highest. The middle classes are much less affected by such redistribution than are bottom and top quintiles. The middle income groups are therefore neither sucked dry for the benefit of the lower (or upper) incomes, nor do they benefit more from welfare state redistribution than does the lower class. These findings substantiate a 'pro-poor pattern' of welfare state intervention. In international comparison, the variation is only with respect to scope: 'The redistribution effects of net social welfare transfers have the same pro-poor pattern in all nations, differing only by degree, not direction ... The majority of the net costs of supporting the welfare state are paid by the top income persons in each nation' (Garfinkel et al. 2005: 15, 16).<sup>15</sup>



**Figure 4.** Effects of public redistribution by quintile and its change

Source: LIS, author's calculations.

Note: Countries are in alphabetic order. Some countries do not appear because they have no data for the waves 1985 and/or 2005 (IE, FR, NL, ES, IT). Switzerland is not included because the first observation is 1990.

The variation over time in how strong the welfare state's influence is on the income distribution is instructive. Between 1985 and 2005, the expansion of the income share of the lowest income class through redistribution increased, other than in the UK. The extent to which the income share of the top quintile is reduced through government intervention grew during the same period – again with the exception of the UK. In short, over these two decades, the effect of welfare state-induced redistribution increased in advanced industrial nations (a result confirmed for example by Mahler and Jesuit, 2006).<sup>16</sup> Its impact is much less significant for the middle classes than for groups at the top and the bottom in a given society. It is true that the importance of redistribution to the lower middle, as well as to the lowest class is of increasing importance in most countries. Only in a few countries (US, Sweden, Poland, Luxembourg), however, did the extent of redistribution become more significant for the middle middle between 1985 and 2005.

### *Public redistribution without compensation of market income inequality*

That the welfare state increasingly influences the distribution of income does not necessarily mean improvement for the lower class, or that the upper class is at a disadvantage. For though the welfare state tries to improve the 'welfare-share' of the lowest income group(s) more than that of other groups, a betterment of their situation does not occur due to the dynamics of market income. On the contrary: despite an increasing redistribution, the position of the lower income group has worsened. This can be seen in Table A2 in the appendix, which shows the income shares of individual quintiles in terms of both market income and disposable income, and changes to these shares between the mid 1980s and the mid 2000s. The losses in market income share of the lower income groups were moderated, but not fully compensated for at the level of disposable income. Instead, the top income group shows an increase in market income share, which persists despite an increase in redistribution (a pattern again with cross-national variations). Net growth took place at the

top of the income hierarchy. According to the recent OECD report on income distribution (Organisation for Economic Co-operation and Development, 2011: 234), this gain at the top mainly results from capital market income. At the bottom, despite compensation provided by the welfare state, the share of income accrued has become smaller.

The three groups in the middle differ significantly with respect to the consequences of changes to market and welfare state income distribution. In many countries, the upper middle quintile benefited from the gains to the upper income quintile. The lower middle and middle middle, by contrast, had to accept a net worsening of their positions. Still, their shrinking market income share was almost completely compensated for. Thus, the lower middle shares the destiny of the lowest quintile, but only has to take small losses in market income and disposable income into account.

How much losses at the bottom are compensated for, and gains at the top moderated, varies by country. In Germany, for example, the bottom quintile's share of market income declined between 1985 and 2005 by 2.35 percentage points, but disposable income by only 0.5 percentage points. The market income share of the topmost quintile rose by 2.46 percentage points, while disposable income grew by merely 0.76 percentage points. However, losses at the bottom and gains at the top, even after welfare state intervention, are more evident in most countries than in Germany, including in the Scandinavian countries. Only in Denmark and Switzerland do the quintiles below the top show gains (data only for 1990 to 2005).

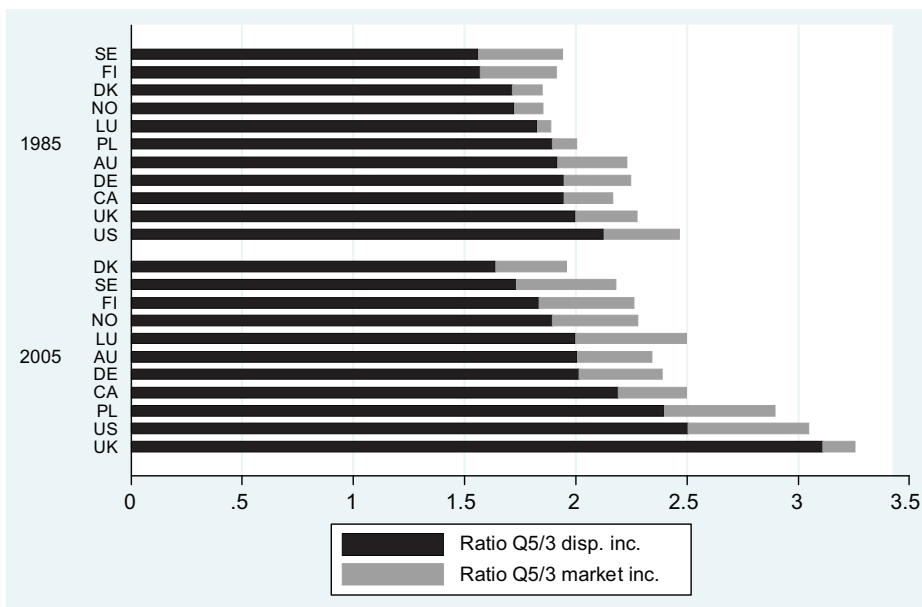
As noted above, changes to market income distribution and changes in the income distribution resulting from welfare policy are far more significant at the top and bottom than in the middle. In that middle, the welfare state has to compensate for far less relative losses over time than it has to at the bottom, and it skims off fewer resources from the middle than from the top. Redistribution partially compensates for growing market disparities, but it is unable to compensate for the far more serious worsening in the distribution of market income. Thus, the 'pro-poor pattern' of welfare state intervention has its limits.

*Middle classes left behind: The growing gap between top and middle*

The ‘pro-poor pattern’ of welfare state redistribution and the stable participation of the middle in market income do not seem congruent with the diagnosis of a threatened middle class. Both aspects – few losses to middle class market income, compared with lower incomes, and the impression that decline is occurring – become more plausible if one looks at the distance between middle and top. This can be done by measuring the ratio between the income share of the top fifth (Q5) and the share of the middle fifth (Q3; the ratio is then Q5/Q3). The magnitude is shown in Figure 5, calculated first using market income and then using disposable household income, for those countries that have data for both 1985 and 2005. The light grey section of the bars shows the reduced distance between middle and top achieved through welfare state redistribution; countries are

sorted by the magnitude of the Q5/Q3 ratio, lowest values first. These show a comparatively short distance between middle and upper class in the four Scandinavian countries, for both market and disposable (household equivalent) income. In 1985, Luxembourg was still one of the countries where middle and top were closer than in other countries, because the top quintile’s income was reduced and distributed primarily to the two lowest quintiles. Greater discrepancies between middle and top are allowed in conservative and liberal countries.

The discrepancies between middle and top increased substantially until 2005, especially in market income, and to a lesser degree in disposable income. The *relative* position of the middle has worsened because the upper class now receives a larger share. The welfare states make more efforts to reduce the growing gap in market income between middle and top, but cannot wholly compensate. The degree with which the welfare state



**Figure 5.** Relative income position of the middle class: ratio Q5/3 before and after redistribution, 1985 and 2005. Source: LIS microdata, author’s calculations.

Note: The ratio Q5/3 indicates the relation between the income share the topmost and the middle quintiles received. A figure of 1.6 for Sweden 1985 (referring to disposable income) means that the top quintile has 1.6 times of the total income as the middle quintile. Countries are ordered by the size of the Q5/3 ratio. For reasons why not all of the 19 countries are included, see note in Figure 4.

reduced the income distance has markedly increased especially in Denmark, Norway and Luxembourg and the liberal US. The UK is an exception again here, as it reduced its redistributive effort.

The distance between middle and top clearly grew in some liberal countries (see also Smeeding, 2005: 963). The upper class in the UK now has 3.3 times more market income share than does the middle class. In the US it is three times, and in disposable income, the distance between middle and top has also grown despite increased governmental involvement. In the UK, the gap has grown because the welfare state has not tried to halt it. In Poland, there were remarkable gains to the top fifth of the market income share, leaving the middle behind. The welfare state largely equilibrated this trend, and the relative situation of the middle has only moderately worsened. In Sweden, the upper class in the mid 1980s had more than twice the middle class's market income, but due to redistribution this has been reduced to only 1.6-fold. In 2005, the market income of the top quintile grew to 2.2 times that of the middle class. The discrepancy in disposable income merely rose to 1.7 times, however. Due to the welfare state, the relative distance between middle and top remained almost constant. In Germany, as in Australia, the situation is quite stable. The share of market income of the top to the middle quintile rose very little, and the welfare state intervened a bit more, with the result that the income position of the middle class relative to the top remained almost stable.

Overall, the top quintile has pulled away from the middle in market income. This trend is less visible in disposable income, because in most countries the welfare state thereupon intensified its redistribution efforts – other than in the UK, where it decreased, and Sweden, where it remained constant, dampening the distance to the topmost quintile. The top quintile distanced itself in market income from the middle, and because the middle did not take part in this improvement, this may have engendered the impression of 'being left behind'. This impression produces subjective insecurity, even if it is the lowest income quintile that is losing much more ground.

## Conclusion

This article contributes to the ongoing public debate over the shrinking middle class by adopting research methods that help to avoid misleading generalizations. It has differentiated between developments at the level of market and of disposable incomes to address in which sphere of income distribution the middle actually loses and how much public redistribution balances out what happens in market incomes. By looking at the income position of the middle *relative* to the position of low and high income groups it was possible to draw a picture of gains and losses of individual income groups over time and in cross-national comparison. Moreover, splitting up the middle class into three groups showed how different the position of the middle classes within the distribution processes is.

It became clear that the decline of the middle class in most countries takes place more at the level of market incomes than of disposable income. There are exceptions where the market already provides a favourable position to the middle and the lower strata, as in Switzerland and Luxembourg. Income redistribution primarily stabilized the socioeconomic situation of the lowest income groups. The income position of the three middle classes is far less dependent on public redistribution than is the position of the lowest income group. Only the lower middle income group achieves an improvement of its share of total market income by redistribution. However, it would be wrong to infer from the results that income redistribution is irrelevant for the income position of the middle. Rather, what is taken away from the middle by the state flows back through benefits and taxes (and through other channels not analysed here, such as education). By contrast, the market income shares of the upper middle and especially the topmost quintile is reduced as one moves from market to disposable income. 'In sum, welfare states are large engines of redistribution. The bottom three quintiles and elders are net beneficiaries in all societies' (Garfinkel et al., 2005: 18). The top two quintiles are net contributors, though the lead the topmost quintile has is by no means nullified by taxation and social contributions.

Over time, income redistribution increasingly cushions the impact of growing market income disparities (except the UK), of course with cross-national differences. In 2005, public policies do more to balance out the declining market income shares of the bottom as compared with the mid 1980s. But a compensation for the much more dynamic market changes – the strong loss at the bottom, the gain at the top – has not been achieved. Market gains at the top are so remarkable, and the highest and the upper middle income groups are so strong, that even after public policies increase their ‘redistributive efforts’, the top of the income distribution has an even higher proportion of disposable income than before. This finding accords with other studies:

The moderate increase in inequality recorded over the past two decades hides a larger underlying trend. In developed countries, governments have been taxing more and spending more to offset the trend towards more inequality – they now spend more on social policies than at any time in history. (Organisation for Economic Co-operation and Development, 2008: 16)

The question about *regime patterns* in the position of the middle class partly is confirmed. Continental European countries, in particular Germany, France, the Netherlands and Spain, have improved the welfare position of the bottom quintile and of the lower middle. In these countries, the middle quintile position is merely preserved, with payments and benefits rather balanced. In the Scandinavian countries, the low welfare share of the bottom quintile, based on market income, was strongly boosted, but the gap between the middle and the top was also kept smaller than in the other countries studied. With some caution, this seems to lend support to the idea that social democratic states do more that is beneficial for the middle incomes than do other countries. Liberal countries are quite heterogeneous with respect to the position of their middle income groups, however, which weakens the regime pattern argument.

Our approach that looks at the relative income position of groups both in terms of market and disposable income, furthermore made visible the fact

that labour market *and* welfare state institutions in combination shape the pattern of the income distribution. The positions of the middle income classes at the level of the market income distribution already differs cross-nationally, which points to different labour market regulations and collective wage bargaining regimes.

If the relative income position of the middle has remained largely stable, what drives the public debate over the decline of the middle class? We suggest an answer lies in looking at the growing distance between the middle and the top of the income distribution. The proportion of market income going to the topmost quintile has increased so substantially that the middle has been left behind.

The results presented in the article differ from those obtained by looking at the *size* of the middle income. It is in identifying the large differences between the three middle sections, both concerning their position within distribution processes and the outcomes, that our approach is fruitful. It has shed light not only on a public debate which receives much attention because most people define themselves as middle class, but also provides insights into the internal structure of redistributive processes. Further research should delve deeper into the question ‘Who gets what and why?’

## Notes

1. Services and infrastructure provided by the state for free or at low cost, as well as occupational options in the public sector, affect the welfare position of the middle class as well, but are not part of this study.
2. Such deregulation of employment is a factor among cohorts newly entering the workforce, making the threat to the middle class a problem in younger cohorts, as Chauvel (2007) showed for France.
3. Even if one takes the relative income position of the middle, based on the ratio between median and average income, Germany is among the countries (CA, DK, FR, FI, IT, NO, SW, US) in which the middle has lost ground. Only in a few countries (TR, MX, IE) was the middle able to gain or in which stability prevailed (NL, NZ, JP) (*Growing Unequal*, Organisation for Economic Co-operation and Development, 2008).
4. The basis here is the annual disposable equivalence-weighted household income.



5. Pressman includes the entire population. Given that pension systems create special disparities, analyses based on income distribution often only consider the population under 60 years old.
6. Another study by Pressman (2009) examines the influence of transfer payments by the welfare state (for example, benefits for families) on the size of the middle class. This allows him to show that social security transfers in particular are what support a large societal middle.
7. See Foster and Wolfson (1992/2010) for the details.
8. Mahler et al. (2010).
9. Foster and Wolfson (1992/2010) distinguish between 'income-space' and 'people space'. The approach used here is like the latter.
10. For other methods of analysing the relative income position of the middle class, see Förster and d'Ercole (2005), Organisation for Economic Co-operation and Development (2008), Chauvel (2007).
11. This is the square root of the household size. Equivalence weighting not only accounts for different numbers of household members but also accounts for their age-specific financial needs and the financial advantages of living in a household (for example, 'economies of scale').
12. The method can also be applied to quintile ratios (Q5/Q3).
13. For example, the bottom quintile (Q1) contains many elderly persons whose income is derived from public pensions. This biases the results. Market income will appear overly low, while the effect due to social transfer payments will seem larger than it would be without senior citizens.
14. Because of data gaps, the countries in the figures below are not always identical.
15. The 'pro-poor pattern' differs between countries. In the Scandinavian countries (Sweden, Norway, Finland, Denmark) as well as in Germany, the income share of the lower class increases more significantly due to redistribution than in Luxembourg, Poland or the US. But one has to keep in mind that change is being described, not the starting level of the quintiles. Hence, the lowest income group in Luxembourg or Poland already has an advantageous market income share, while this income share is lower in Scandinavian countries, giving the process of redistribution more work to do.
16. This trend is even underscored by the most recent report of the OECD on income distribution (Organisation for Economic Co-operation and Development, 2011: 234). Here, an analysis of the

composition of income of single quintiles shows that the lowest quintile gets an increasing share of its income from government transfers.

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## Appendix

**Table A1.** Datasets of the LIS with both market and disposable income

	Wave I	Wave II	Wave III	Wave IV	Wave V	Wave VI
<b>Liberal</b>						
AU (Australia)	1981	1985	1989	1995	2001	2003
CA	(1971) 1981	1987	1991	1994/97	1998/00	2004
UK	(1974) 1979	1986	1991	1994/95	1999	2004
US	(1974) 1979	1986	1991	1994/97	2000	2004
IE	–	1987	–	1995	2000	–
<b>Social democratic</b>						
DK	–	1987	1992	1995	2000	2004
FI	–	1987	1991	1995	2000	2004
NO	1979	1986	1991	1995	2000	2004
SE	1981 (67/75)	1987	1992	1995	2000	2005
<b>Coordinated market economy</b>						
DE	1981 (1973)	1983/84	1989	1994	2000	2004
CH	1982	–	1992	–	2000/02	2004
NL	–	1983/87	1991	1994	1999	–
AT	–	1987	–	1995	2000	2004
BE	–	1985	1992	1995	2000	2004
FR	–	–	1989	1994	2000	–
LU	–	1985	1991	1997	2000	2004
IT	–	1986	1991	1995	2000	2004
PL	–	1986	1992	1995	1999	2004
ES	–	–	1990	1995	2000	2004

Source: LIS Net Income datasets, available at [www.lisproject.org](http://www.lisproject.org).

Note: Datasets only covering disposable household income are shown in italics.

**Table A2.** Quintile share of total income for both market and disposable income and change between 1985 and 2005

Country	1985		2005		Difference 1985–2005	
	Market income	Disposable income	Market income	Disposable income	Market income	Disposable income
AT						
Q1	–	11.40	5.25	9.31	–	–2.08
Q2	–	15.13	12.21	14.26	–	–0.87
Q3	–	18.91	17.30	17.88	–	–1.02
Q4	–	22.78	23.73	22.42	–	–0.36
Q5	–	31.79	41.52	36.12	–	+4.33
DE						
Q1	6.83	9.84	4.48	9.31	–2.35	–0.54
Q2	13.23	14.46	12.38	14.40	–0.85	–0.05
Q3	17.56	18.10	17.51	17.88	–0.05	–0.21
Q4	22.94	22.37	23.73	22.40	+0.79	–0.03
Q5	39.44	35.22	41.90	36.01	+2.46	+0.79
LU						
Q1	9.63	10.9	6.07	9.13	–3.56	–1.82
Q2	14.02	14.75	11.77	14.14	–2.25	–0.61
Q3	18.66	18.32	16.81	18.05	–1.85	–0.26
Q4	22.46	22.50	23.36	22.56	+0.90	+0.05
Q5	35.24	33.49	41.98	36.12	+6.74	+2.63
DK						
Q1	5.45	10.33	4.82	10.84	–0.64	+0.52
Q2	14.47	15.84	13.73	15.94	–0.74	+0.09
Q3	19.57	18.97	19.21	19.15	–0.36	+0.19
Q4	24.34	22.37	24.54	22.67	+0.20	+0.30
Q5	36.17	32.50	37.71	31.40	+1.54	–1.10
FI						
Q1	7.17	11.28	4.79	10.31	–2.38	–0.97
Q2	14.16	16.16	12.53	15.08	–1.63	–1.10
Q3	18.81	19.38	17.95	18.41	–0.86	–1.0
Q4	23.84	22.74	24.1	22.42	+0.22	–0.32
Q5	36.0	30.45	40.67	33.78	+4.65	+3.34
NO						
Q1	8.23	11.01	3.9	9.78	–4.33	–1.23
Q2	14.64	15.62	12.61	15.10	–2.02	–0.51
Q3	18.7	18.66	18.16	18.34	–0.55	–0.32
Q4	23.72	22.50	23.93	22.01	+0.21	–0.49
Q5	34.71	32.21	41.40	34.77	+6.69	+2.56
SE						
Q1	5.95	10.78	4.38	10.61	–1.57	–0.17
Q2	13.92	16.51	12.82	15.53	–1.10	–0.98
Q3	18.0	19.45	18.38	18.80	–0.60	–0.65
Q4	24.25	22.88	24.3	22.51	–0.04	–0.37
Q5	36.9	30.38	40.12	32.54	+3.22	+2.17

**Table A2.** (Continued)

Country	1985		2005		Difference 1985–2005	
	Market income	Disposable income	Market income	Disposable income	Market income	Disposable income
UK						
Q1	4.96	8.71	3.87	7.12	-1.07	-1.59
Q2	12.35	13.91	10.15	11.31	-2.20	-2.6
Q3	17.76	18.05	15.17	14.98	-2.56	-3.07
Q4	24.51	23.27	21.43	20.02	-3.09	-3.25
Q5	40.42	36.07	49.37	46.57	+8.95	+10.50
US						
Q1	4.77	6.93	4.11	6.47	-0.67	-0.17
Q2	11.73	13.02	10.0	11.93	-1.71	-0.98
Q3	17.1	17.86	15.54	16.78	-1.55	-0.65
Q4	24.2	24.1	22.91	22.8	-1.30	-0.37
Q5	42.2	38.07	47.42	42.03	+5.22	+2.17
AU						
Q1	5.81	8.95	5.04	8.87	-0.76	-0.09
Q2	12.91	14.23	11.96	13.64	-0.95	-0.59
Q3	17.78	18.26	17.54	18.00	-0.24	-0.27
Q4	23.83	23.48	24.29	23.37	+0.46	-0.11
Q5	39.67	35.10	41.17	36.13	+1.50	+1.06
CA						
Q1	5.90	8.7	4.47	7.71	-1.43	-0.099
Q2	12.84	14.3	11.40	13.1	-1.43	-1.20
Q3	18.10	18.26	17.25	17.59	-0.82	-0.67
Q4	24.00	23.18	23.80	23.06	-0.20	-0.11
Q5	39.20	35.56	43.1	38.54	+3.88	+2.98
CH 1990						
Q1	7.84	9.28	7.39	9.75	-0.46	+0.48
Q2	13.62	14.07	13.71	14.55	+0.10	+0.48
Q3	17.35	17.63	18.16	18.12	+0.81	+0.48
Q4	22.60	22.33	23.67	22.93	+1.07	+0.60
Q5	38.59	36.69	37.07	34.65	-1.52	-2.05
PL						
Q1	7.65	9.01	4.5	7.71	-3.15	-1.3
Q2	13.72	14.32	10.46	12.66	-3.25	-1.66
Q3	18.28	18.46	15.88	16.87	-2.4	-1.59
Q4	23.65	23.22	23.19	22.28	-0.45	-0.94
Q5	36.71	35.0	45.97	40.47	+9.27	+5.47

Source: LIS microdata. Author's calculation.

Note: Countries are omitted when the waves 1985 and/or 2005 are missing (IE, FR, NL, ES, IT).