

The impact of taxes and transfers on inequality

by Malte Luebker*

In many countries, income inequality has risen significantly over the past decades. Both greater wage inequality and a rising share of profits in national income (matched by a fall in the wage share) have contributed to a more unequal distribution of market incomes. However, social security transfers usually benefit the poor disproportionately, while the rich often pay a larger share of their incomes in taxes. In sum, tax and transfer systems can reduce inequality substantially – as demonstrated by European countries such as Sweden or the Netherlands. However, the redistributive impact of taxes and transfers is far smaller in other parts of the world. This Policy Brief discusses in how far policy-makers have made use of these tools, and presents an overview of trends across time and differences between countries and regions.

Rising inequality has emerged as a major concern during the past decades, and is often seen as one of the most adverse outcomes of globalization.¹ However, as the data presented in this policy brief demonstrate, policy-makers have maintained great influence on how the dynamics of the market translate into income inequality. When measuring and debating income inequality, it is important to distinguish between two different concepts: inequality of private sector incomes (i.e. before taxes and public transfers),² and inequality of disposable incomes (i.e. after taxes and transfers). Sometimes, these two concepts are also referred to as the primary and the secondary distribution of incomes.³

Many governments counteract high inequality in private sector incomes through their tax and transfer systems, and achieve a more equitable income distribution through two principal mechanisms:

- First, social security systems⁴ generally have a redistributive impact, since transfer payments – such as unemployment benefits, child and family allowances, and social retirement benefits – disproportionately benefit those with the lowest private sector incomes.
- Second, under most tax systems those with high incomes pay proportionately higher income taxes than those with lower incomes. Therefore, progressive taxation narrows the gap between rich and poor households and reduces income inequality.

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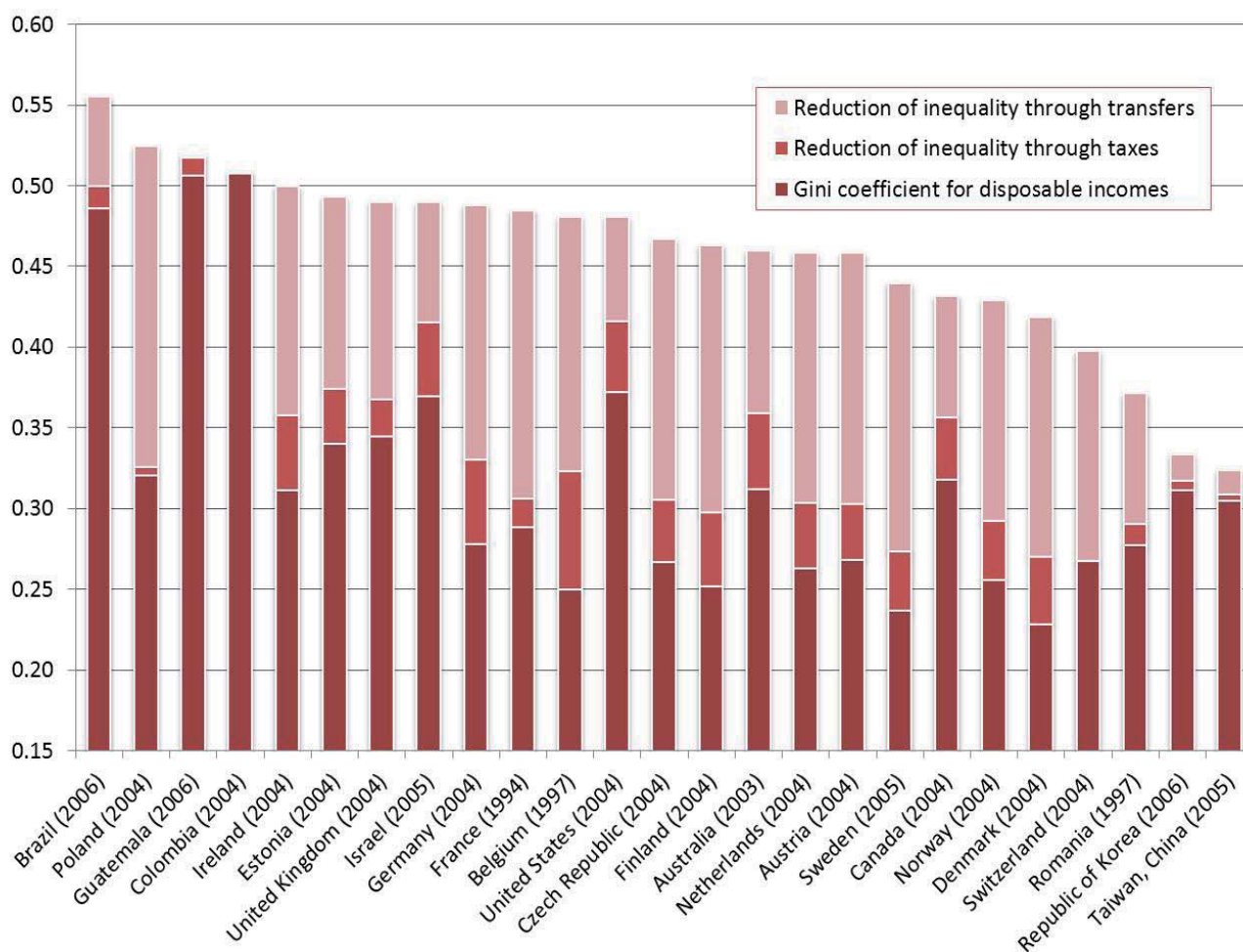
The combined effect of these two mechanisms is that inequality of disposable incomes is often much lower than that of private sector incomes. However, countries differ remarkably in the extent to which they use their tax and transfer systems to reduce inequality. Figure 1 provides Gini coefficients for private sector incomes (total size of the bar) in 25 countries, mostly from the 2000s.⁵ Under the definition used here, private sector incomes include all pre-tax incomes that derive from the private sector (such as income from employment, property income and private transfers).⁶

The graph then shows the amount by which transfer receipts (sand coloured bar) and income taxes and mandatory social insurance contributions (light red bar) reduce inequality. The overall result is a much lower Gini coefficient for disposable incomes (dark red bar).

Countries with the same market inequality can achieve very different outcomes

The striking finding is that cross-country differences in the Gini coefficient for disposable incomes are, to a significant extent, driven by the magnitude of redistribution, and can thus diverge substantially from the initial distribution of private sector incomes.⁷ The Nordic countries and Belgium reached post-tax/post-transfer Gini coefficients of roughly 0.25 or less. Yet, the underlying distribution of private sector incomes in these countries ranges from high inequality (as in Belgium, with a Gini of 0.481) to a more egalitarian distribution (as in Denmark, with a Gini of 0.418). Somewhat surprisingly, the United States and Belgium share the same Gini coefficient for private sector incomes (0.481). Nonetheless, Belgium has one of the most equitable distributions of disposable incomes

Figure 1. The impact of taxes and transfers on income inequality in 25 countries (ca. 2000s)



Note: The total height of the column corresponds to the Gini coefficient for market incomes (i.e. before taxes and transfers).

Source: Luxembourg Income Study (LIS) Database, <http://www.lisproject.org/techdoc.htm> (multiple countries, analysis of micro-data).

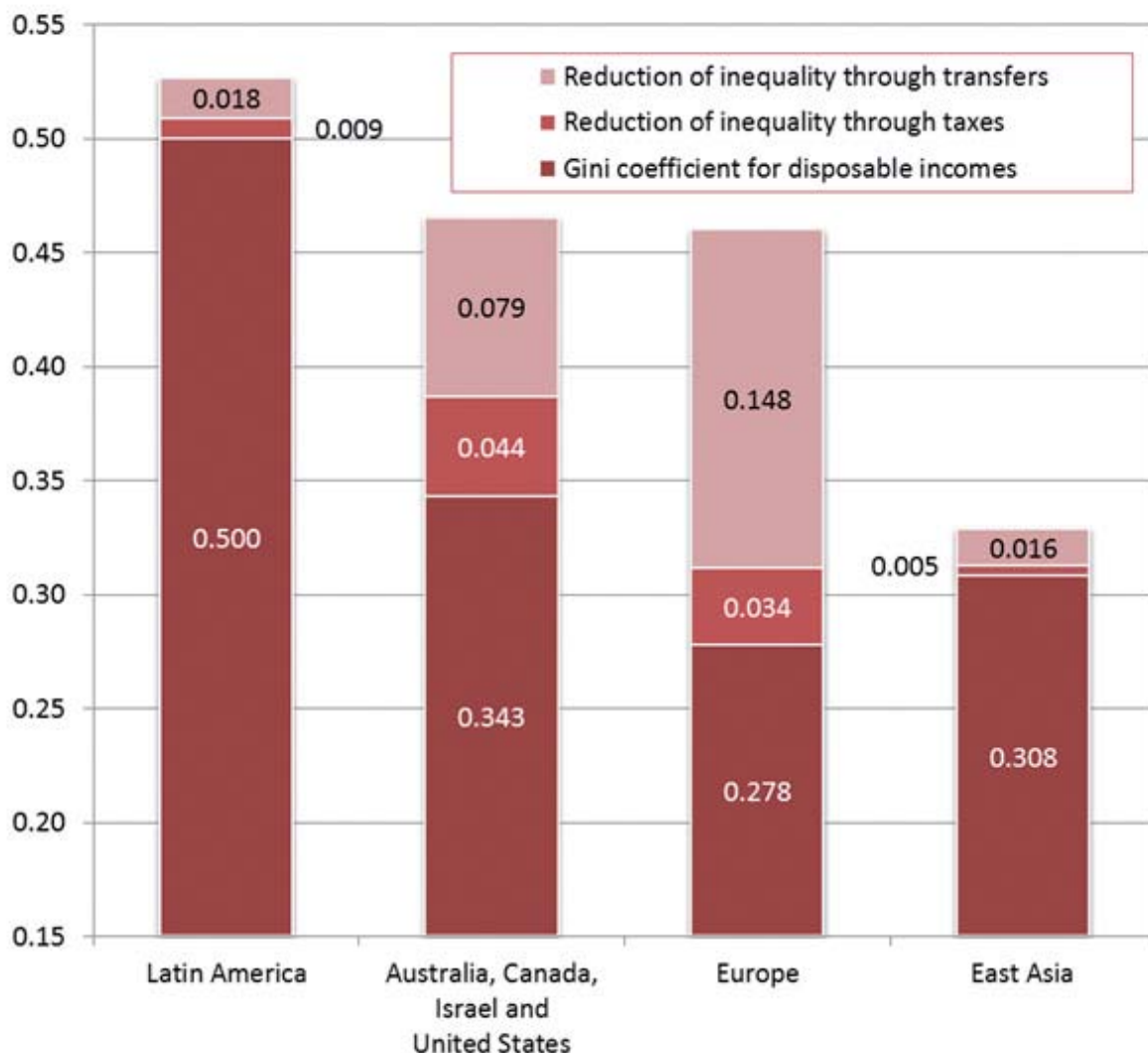
(Gini 0.25), while the United States has the highest inequality of disposable incomes among all industrialized countries in the sample (Gini 0.372). Here, the decisive factor is that taxes and transfers are far more redistributive in Belgium than in the United States.

Limited redistribution in Latin America

The three Latin American countries in the sample (Brazil, Colombia and Guatemala) all share extremely high levels of inequality, with Gini coefficients for private sector incomes above 0.50. In Guatemala, the tax and transfer systems lead only to a negligible reduction in inequality, while it actually marginally increases inequality in Colombia (since transfers disproportionately benefit the richer segments of society). This is

in line with a recent study on Latin America, that shows that the region’s tax and transfer systems only slightly reduce the Gini coefficient (on average by 0.02 points). The study therefore concludes that “a good deal of Latin America’s excess inequality over international levels reflects the failure of the region’s fiscal systems to perform their redistributive functions”.⁸ With an average Gini coefficient for disposable income of 0.52, the region stands out as one of the most unequal in the world. One approach to rectify this failure is to target social transfers at the poorest, as done under the “Bolsa familia” programme in Brazil and similar schemes in other countries. The data presented in Figure 1 show that transfers indeed reduce Brazil’s Gini coefficient by 0.055, and the tax structure leads to a further decrease in inequality.

Figure 2. The impact of taxes and transfers on income inequality, regional averages (ca. 2000s)



Note: The total height of the column corresponds to the Gini coefficient for market incomes (i.e. before taxes and transfers).

Source: Luxembourg Income Study (LIS) Database, <http://www.lisproject.org/techdoc.htm> (multiple countries, analysis of micro-data).

By contrast to Latin America, countries in East Asia have managed to achieve a low level of private sector inequality. The literature credits heavy investment into broad-based education and egalitarian labour market policies for this success, as well as lower levels of asset inequality.⁹ The two East Asian countries with available data – Republic of Korea and Taiwan, Province of China – have in fact by far the lowest pre-tax, pre-transfer inequality among all 25 countries in the sample. This reduces the need for redistribution, and despite only mildly redistributive tax and transfer systems, inequality of disposable incomes remains relatively moderate (see Figure 1).

Large differences between regions

The different regional patterns are summarized in Figure 2. Whereas both the Latin American and East Asian countries have only mildly redistributive transfer systems, the gap between high and low inequality of private sector incomes means that the Gini for disposable incomes is much higher in Latin America (0.500) than in East Asia (0.308). By contrast, Europe and a group of largely Anglo-Saxon OECD countries (Australia, Canada, Israel and the United States) start from very similar initial income distributions. However, the income transfers in European countries – that have well-developed social security systems – reduce the Gini coefficient on average by 0.148 points, while a more restricted welfare state in the latter group has a smaller impact (-0.079). Australia, Canada, Israel and the United States thus have noticeably higher inequality of disposable incomes (0.343) than Europe (0.278), despite starting from a similar underlying distribution.

Rising inequality since the early 1980s

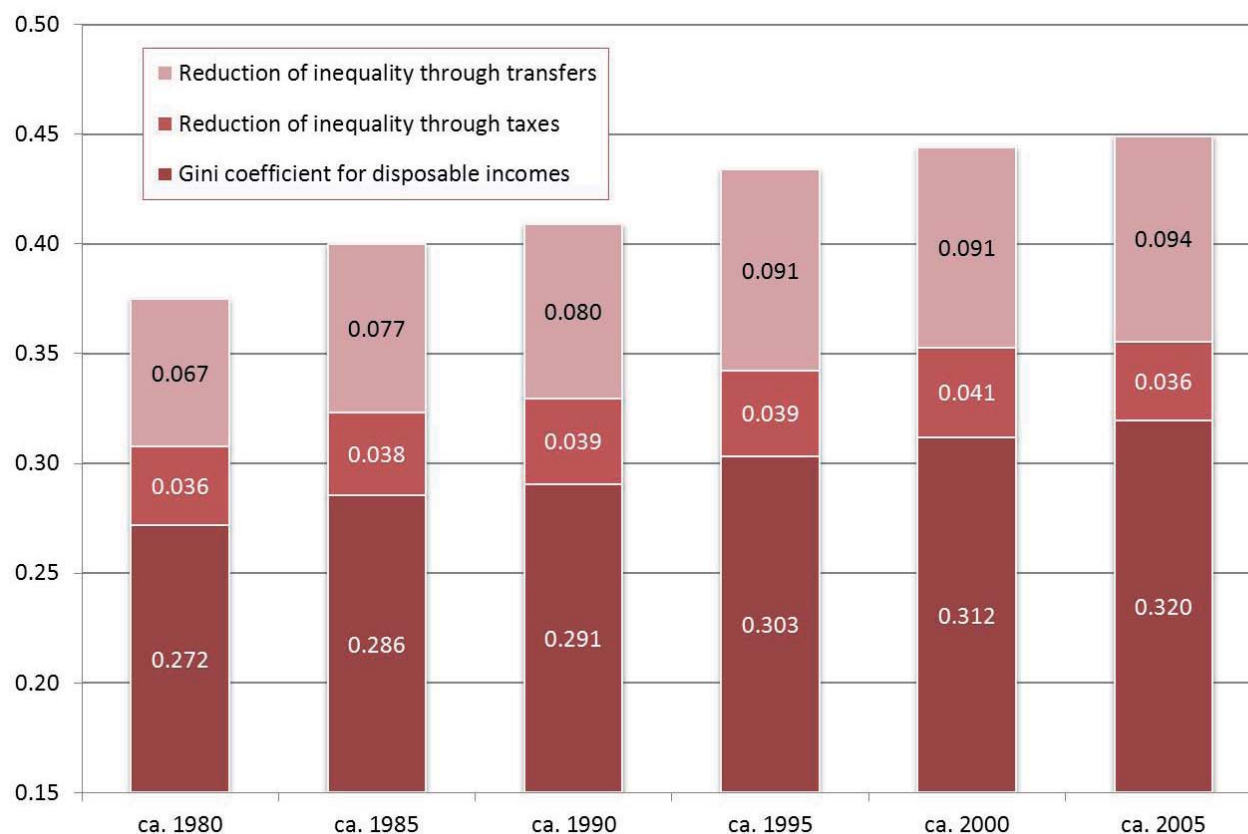
Looking at trends over time, data for eight countries with a consistent time-series show a continued increase in inequality of disposable incomes: the Gini rose from an average of 0.272 in ca. 1980 to 0.320 in ca. 2005 (see Figure 3). Although this increase seems numerically small, it still has a profound impact on the incomes of the poorer households. If we assume that incomes are distributed under a lognormal distributions (which they generally are), the increase in the Gini coefficient corresponds to

a decline in the share of the poorer half of the population in total incomes from 31.1 per cent to 28.0 per cent. In a hypothetical country with an average income of US\$ 10,000, the poorer half of the population would have received per capita incomes of US\$ 6,228 in 1980, but only US\$ 5,597 in 2005 (an income loss of US\$ 631). On the other hand, the average incomes of the richest 10 per cent would have risen by US\$ 2,766 due to the shift in distribution – from US\$ 21,485 to US\$ 24,251.¹⁰

The rise in inequality over the past decades was driven by a greater dispersion of market incomes; taxes and especially transfers somewhat slowed the rise in inequality. However, this overall trend conceals substantial differences between trends of individual countries. Between the beginning of the time-series in the 1980s and the latest available data point, inequality of disposable incomes actually declined in Denmark, France, Ireland and Switzerland: in other words, these countries have become more equal at a time when inequality grew in most other countries. At the other extreme, in the United Kingdom the Gini coefficient surged from 0.270 (1979) to 0.345 (2004), and in the United States it rose from 0.301 (1979) to 0.372 (2004). In a matter of two decades, these two countries thus experienced a considerable widening of income disparities.

Different developments in private sector incomes lie behind these divergent experiences, but also policy choices. It is instructive to compare the experience of Germany and the United Kingdom, two countries that were faced with large increases in inequality of market incomes between the 1980s and the 2000s. In Germany, high unemployment rates following reunification contributed to a rise in the Gini for private sector incomes by +0.100 from 1981 to 2004. However, the country's relatively generous unemployment benefit system offset much of this increase, and inequality of disposable incomes grew only modestly (+0.034). By contrast, inequality of market incomes rose somewhat less sharply in the United Kingdom (+0.095), but at the same time the British tax and transfer system absorbed much less of the increase, leading to steeper increase in inequality of disposable incomes by +0.075 between 1979 and 2004.

Figure 3. The impact of taxes and transfers on inequality, trends from ca. 1980 to ca. 2005



Note: Based on a stable sample of eight industrialized countries (Australia, Canada, Germany, Israel, Norway, Taiwan [Province of China], United Kingdom, United States). The total height of the column corresponds to the Gini coefficient for private sector incomes (i.e. before taxes and transfers).

Source: Luxembourg Income Study (LIS) Database, <http://www.lisproject.org/techdoc.htm> (multiple countries, analysis of micro-data).

Conclusions: Making use of tax and transfer systems to reduce inequality

These examples show that governments can shape the distribution of incomes by making use of the tax and transfer systems. The experience of Brazil shows that even developing countries have substantial scope for reducing inequality that emanates from the market. At times, governments can be faced with a trade-off between equity and efficiency; but these trade-offs need not be steep, and often equity and efficiency can go hand-in-hand. For the countries in the sample, there is no apparent correlation between overall redistribution and the growth of per capita incomes over the past two decades. Countries that achieved low inequality through high redistribution – such as Belgium, Finland, Germany and Sweden – did equally well as those with limited redistribution and higher inequality.

Political choice is thus as much a factor behind inequality as trends in the economy are. Arguably, the different choices governments make also reflect different preferences of voters. While public opinion surveys consistently show that people in Europe support redistribution of incomes from the rich to the poor, the majority in favour of redistribution is smaller in Australia and Canada. The United States is the only country in the industrialized world where those who support fiscal redistribution are outnumbered by those who think that it is not their government's business to reduce income differences, although they agree that these are too large. The redistributive restraint that makes the United States stand apart thus finds a possible explanation in the preferences of its citizens.¹¹

Endnotes

1. See World Commission on the Social Dimension of Globalization (2004), *A Fair Globalization: Creating Opportunities for All*. Geneva: ILO.
2. For the purposes of this policy brief, “market incomes” include private transfer, such as alimony payments, and other cash incomes that are not classified elsewhere.
3. Further to this, the tertiary distribution of incomes includes the consumption of public services, such as education, subsidized public transport and housing, or free health care. Although this provides a better measure of overall welfare, it is often difficult to put a monetary value on most of these services and therefore data on the tertiary distribution of incomes are seldom reported.
4. The nine classical branches of social security are medical care, sickness benefit, unemployment benefit, old-age benefit, employment injury benefit, family benefit, maternity benefit, invalidity benefit and survivors’ benefit. See the ILO Social Security (Minimum Standards) Convention, 1952 (No. 102).
5. Unfortunately, no comparable data are available for developing countries.
6. The definitions used here follow those of V. A. Mahler and D. K. Jesuit (2006), “Fiscal redistribution in the developed countries: New insights from the Luxembourg Income Study”, in *Socio-Economic Review*, Vol. 4, No. 3, pp. 483-511.
7. The cross-country correlation between the Gini coefficient for disposable incomes and the reduction of inequality due to taxes and transfers is Pearson’s $r = -0.722$ (significant at the 0.001-level). The correlation between the Gini coefficient for disposable incomes and the Gini coefficient for private sector incomes is somewhat lower, at $r = 0.499$ (significant at the 0.05-level).
8. E. Goñi, J.H. López. and L. Servén (2008), *Fiscal Redistribution and Income Inequality in Latin America*. Policy Research Working Paper 4487 (Washington DC, World Bank).
9. See, for example, N. Birdsall, D. Ross and R. Sabot (1995), “Inequality and Growth Reconsidered: Lessons from East Asia”, in *World Bank Economic Review*, Vol. 9, No. 3, pp. 477-508.
10. These simulations are based on the standard assumption that incomes follow a lognormal distribution. See also M. Luebker (2010), *Inequality, income shares and poverty: The practical meaning of Gini coefficients*. Travail Policy Brief No. 3 (Geneva, ILO).
11. See M. Luebker (2004), “Globalization and perceptions of social inequality”, in *International Labour Review*, Vol. 143, No. 1-2, pp. 91-128.



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