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# Inequality in Europe: What Can Be Done? What Should Be Done?

As economic inequality in Europe has continued to rise, it has become the subject of increasing academic attention. What are the drivers of inequality? How does it affect intergenerational economic and social mobility? At what point does inequality become a drag on economic growth or a threat to social order? What economic policy tools are available to reduce inequality? This Forum addresses these and other aspects of this complex and disturbing trend. Case studies of Ireland, Germany and Spain also highlight the impact of economic inequality on individual member states.

Maurizio Franzini and Michele Raitano

## Economic Inequality and Its Impact on Intergenerational Mobility

High and increasing economic inequality is a worrying phenomenon for several reasons. It can be a problem in itself, because widely shared conceptions of a fair society are hard to reconcile with it. Inequality can also be a problem because of its consequences, some of which may only materialise in the distant future.

The likely effect of inequality on economic growth has been the object of lively debate and discussion. Opposing ideas square off, and various – often conflicting – mechanisms have been considered sufficient to demonstrate the positive or negative impact of inequality on economic growth.<sup>1</sup> Unfortunately, empirical evidence on the relationship between inequality and growth is inconclusive.<sup>2</sup> Most likely the influence of too many other factors is overwhelming.

Inequality has been considered the cause of worsening social conditions in many respects. This is the position taken by Wilkinson and Pickett in a controversial book.<sup>3</sup>

Some of their findings have been disputed and, above all, it is doubtful whether inequality is actually the originating cause of worsening social conditions. In fact, the causation could run the other way.

There is another possible consequence of marked inequality – a long-neglected one – to which some authors, thanks to the availability of useful data, have called attention. This is the impact of current inequality on its intergenerational transmission and therefore on social and economic mobility across generations.

To put it simply, severe inequality today can make it more likely that the son of a poor man will himself be poor and the son of a rich man will be rich. Ermisch et al., in their introductory essay to a monumental volume on how parents can influence the economic and social future of their children, write: “Of all the potential consequences of rising economic inequality, none is more worrisome, or more difficult to study, than the possibility that rising inequality will have the long-term effect of reducing equality of opportunity and intergenerational mobility.”<sup>4</sup>

Independently from the specific mechanism that Ermisch and his colleagues have in mind, the broad and crucial is-

1 For a brief review of the possible channels connecting inequality to economic growth, see S. Voitchovsky: Inequality and Economic Growth, in: W. Salwerda, B. Nolan, T. Smeeding (eds.): The Oxford Handbook of Economic Inequality, Oxford 2009, Oxford University Press.

2 See, among others, R. Barro: Inequality and Growth in a Panel of Countries, in: Journal of Economic Growth, Vol. 5, No. 1, 2000, pp. 5–32; A.V. Banerjee, E. Duflo: Inequality and Growth: What Can the Data Say?, in: Journal of Economic Growth, Vol. 8, No. 3, 2003, pp. 267–99.

3 See R.G. Wilkinson, K. Pickett: The Spirit Level: Why More Equal Societies Almost Always Do Better, 2009, Allen Lane.

4 J. Ermisch, M. Jantti, T.M. Smeeding, J.A. Wilson: Advantage in Comparative Perspective, in: J. Ermisch, M. Jantti, T.M. Smeeding (eds.): From Parents to Children: The Intergenerational Transmission of Advantage, New York 2012, Russell Sage Foundation, p. 3.

sue is the relationship between economic inequality and economic and social mobility (which is negatively related to the intergenerational transmission of economic advantages and disadvantages). The importance of economic and social mobility should not be underestimated – it is an essential condition for a truly democratic and progressive society, as many great thinkers, from Tocqueville to Stuart Mill to Pareto, maintained. There is no exaggeration in saying that it is a hallmark of modernity.

This Forum contribution investigates this crucial issue, analysing what lies at the root of economic immobility and how it can be related to current inequality. In our analysis, we identify various channels through which family background can impact on the economic success of children, and we assess which of them apply to various European countries.

### **Economic mobility and its relationship with economic inequality**

Economic and social mobility are concepts open to the risk of terminological confusion. In this essay, we are concerned with intergenerational mobility; that is, we compare parents and their children's economic and social outcomes. We focus on relative rather than absolute mobility. The latter implies that the economic or social situation of the children is (in some meaningful sense) better than that of their parents. Relative mobility, instead, is defined as a situation in which children's place in the social and economic ranking of their generation is not correlated with that of their parents a generation earlier. This concept of mobility has much to do with inequality and its transmission from one generation to the next. In fact, if inequality is transmitted from parents to children, children will rank in the same order as their parents on the social or economic scale. If, to take an example, it is possible to predict the position that children will have in the income distribution on the basis of their parents' position, then we can conclude that economic mobility is absent. High relative mobility means that the sons and daughters of the poor will not be at the bottom of the social scale, nor will the children of the rich be mainly in the upper positions.

These positions can refer to social status or occupation (what sociologists are most interested in) or to economic conditions, as measured by income (what mainly draws economists' attention). Social and economic mobility are related, because social status and income are related. Generally, more prestigious social occupations bring higher income.

Measuring this complex phenomenon is no easy task. However, it is by now common practice to use the so-

called intergenerational elasticity coefficient ( $\beta$ ) to measure the intensity of the intergenerational transmission of inequality. The  $\beta$  coefficient is estimated by regressing offspring's log income on that of parents.<sup>5</sup> The closer this coefficient is to one, the stronger the transmission of inequality, hence the less mobile the society. When  $\beta$  is zero, mobility is perfect and no inequality is transmitted

5 For more on the  $\beta$  coefficient see, among others, A. Bjorklund, M. Jantti: Intergenerational Income Mobility and the Role of Family Background, in: W. Salverda, B. Nolan, T. Smeeding (eds.), op. cit.; J. Blanden: Cross-Country Rankings in Intergenerational Mobility: A Comparison of Approaches from Economics and Sociology, in: *Journal of Economic Surveys*, Vol. 27, No. 1, 2013, pp. 38-73.

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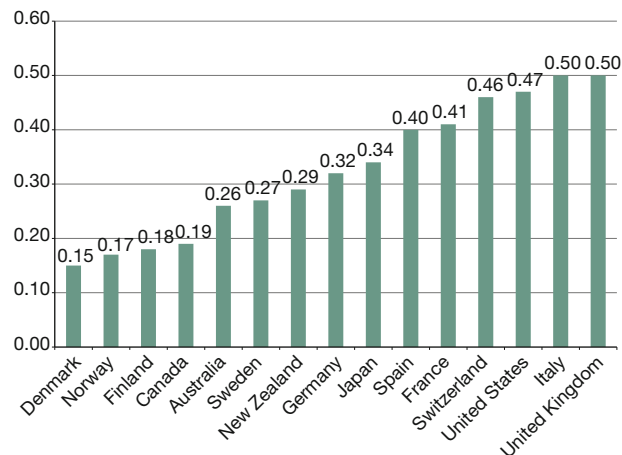
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**Figure 1**  
Intergenerational elasticity  $\beta$  of parents' and children's earnings in some OECD countries



Source: Based on data from M. Corak: Inequality from Generation to Generation: The United States in Comparison, in: R. Rycroft (ed.): The Economics of Inequality, Poverty, and Discrimination in the 21st Century, Santa Barbara 2012, ABC-CLIO.

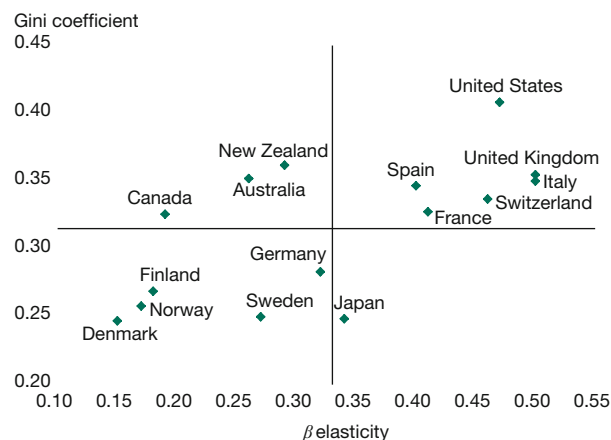
across generations. When it is equal to one, inequality among the offspring is a perfect mirror of that among their parents, that is, the society is completely immobile.

According to many empirical studies,<sup>6</sup> the European countries where the  $\beta$  coefficient is lowest are the Nordic countries followed by Germany, Spain and France. The UK and Italy show much higher values and are the least mobile: at least 50 per cent of the inequality existing among parents is transmitted to the next generation.

If we extend the analysis beyond Europe, the US emerges as an immobile society – not much different, according to the  $\beta$  coefficient, from the worst-performing European countries. This finding came as a surprise to those who believed in the American dream. Canada and Australia perform much better, and even in Japan the transmission of inequality is much lower than in the US. Figure 1 graphs these findings.

According to a number of empirical studies, current inequality is positively correlated with its intergenerational transmission. As Figure 2 shows, those countries where income inequality is low are generally also the countries

**Figure 2**  
Inequality and its intergenerational transmission in some OECD countries



Sources: Based on data from World Bank database and M. Corak: Inequality from Generation to Generation: The United States in Comparison, in: R. Rycroft (ed.): The Economics of Inequality, Poverty, and Discrimination in the 21st Century, Santa Barbara 2012, ABC-CLIO.

where economic mobility is relatively high and vice versa. Italy, the UK and the US exhibit the worst performance in both these dimensions.

This is enough to challenge the idea that current inequality and its intergenerational transmission are independent phenomena with different mechanisms at their roots. Such independence is, for instance, presumed by those who claim that equality of opportunity (usually a precondition for economic mobility) can be achieved independently of prior action to moderate existing inequality. The correlation is perplexing mainly because it suggests that income inequality is in fact one of the main forces behind low economic mobility – and this is what worries us the most. Before jumping to this conclusion, however, we must inquire into the possible mechanisms of economic immobility, check their empirical relevance and then identify the ways in which current inequality can fuel one or another of those mechanisms.

### Human capital and the transmission of inequality

The traditional economists' view on intergenerational inequality focuses on the key role played by human capital.<sup>7</sup>

6 See, among others, G. Solon: Cross-country differences in intergenerational income mobility, in: Journal of Economic Perspectives, Vol. 16, No. 3, 2002, pp. 59-66; M. Corak: Do poor children become poor adults? Lessons from a cross country comparison of generational earnings mobility, in: IZA Discussion Paper, No. 1993, 2006. The data we present in the paper are taken from M. Corak: Inequality from Generation to Generation: The United States in Comparison, in: R. Rycroft (ed.): The Economics of Inequality, Poverty, and Discrimination in the 21st Century, Santa Barbara 2012, ABC-CLIO.

7 The work that initiated this approach is G. Becker, N. Tomes: An equilibrium theory of the distribution of income and intergenerational mobility, in: Journal of Political Economy, Vol. 87, No. 6, 1979. Two important later works are G. Becker, N. Tomes: Human capital and the rise and fall of families, in: Journal of Labor Economics, Vol. 4, No. 3, 1986; and G. Solon: A model of intergenerational mobility variation over time and place, in: M. Corak (ed.): Generational Income Mobility in North America and Europe, Cambridge 2004, Cambridge University Press, pp. 38-47.

This view rests on two hypotheses. The first is that family background affects education (usually taken as a proxy for human capital) for several reasons: liquidity constraints in the presence of imperfect financial markets, costless transmission of genetic traits and endowments, peer effects, and educational policies.

A further hypothesis is that differences in earnings, as well as in occupational attainments, are the consequence of differences in human capital endowments. This assumption implies a labour market in which competition and merit prevail.

Given these two hypotheses, better family economic conditions imply a richer human capital endowment, which in turn brings higher earnings. Thus, increasing inequality leads to lower social mobility through more unequal distribution of human capital.

The data do provide support for the first hypothesis. The evidence takes parental occupation as a proxy for family background. This choice is due to the paucity of reliable and comparable data on parental income. In any case, however, this choice is in line with a wealth of sociological literature that takes parental occupation as the best predictor of offspring's outcomes.

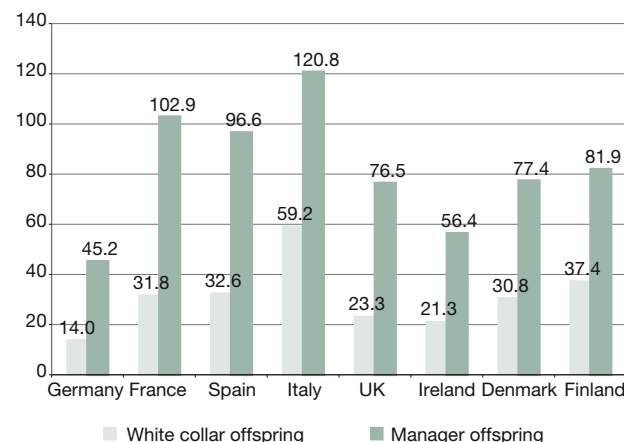
The data suggest that there is a positive and highly significant association between parental background and educational attainment everywhere. More specifically, as shown in Figure 3, the probability of higher educational attainment is correlated with parental occupation in all countries. For example, in Italy the children of managers have a 120 per cent greater probability of getting a university degree than the children of production workers. In other countries, the difference is less marked but always very sizeable. The advantage accruing to the children of clerical workers is, as expected, smaller.

Since parents' income is correlated with their occupations, this evidence supports the hypothesis that family economic conditions exert a major influence on children's education. An obvious implication is that the more unequal distribution of income will aggravate this effect, producing greater educational inequality.

The second hypothesis on which this explanation is based is more controversial. There is no doubt that human capital delivers a premium; in particular a university degree yields a substantial (but internationally differentiated) positive return. But this holds only on average. In fact, human capital is a risky investment, and the variance in its returns is considerable. According to our calculations, in all countries inequality among people with the

**Figure 3**  
**Probability of attaining a university degree: the advantage of better parental occupation**

compared to children of blue-collar workers, in %



Note: Probabilities computed as average partial effects from a logit model. Additional controls are gender, age, number of siblings and a dummy for the presence of both parents in the household when young. Offspring aged 35-49.

Source: Based on EU-SILC 2005 data.

same educational level is much greater than inequality among people with different educational levels.

Such variance suggests that inequality in earnings is also the result of other factors that are not easy to identify. Indeed, from our point of view, the point is to determine whether they are related to family background. An essential step is to check whether family background has an effect on offspring's earnings over and above that due to human capital. If it does, then there is good reason to believe not only that human capital cannot fully explain inequality but also that at least some of the factors generating earnings inequality among equally educated people are, again, related to family background.

### Beyond human capital: further channels of economic immobility

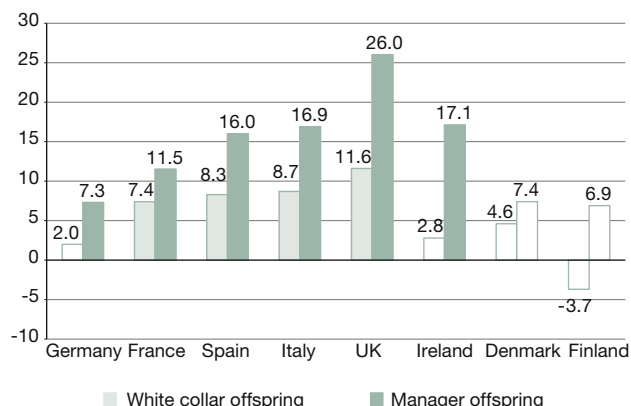
The data on family background from the 2005 wave of the EU SILC survey allows us to see whether parents' occupation has an additional influence, beyond that of educational attainment, on the earnings of their offspring. Figure 4 summarises our findings.

In almost all the countries, the additional influence of the family background is not negligible, and in some cases it is sizeable indeed. In the UK, for example, the son of a manager earns 26 per cent more than the son of a blue-

Figure 4

### Annual gross earnings gap by parental occupation, controlling for education

compared to children of blue-collar workers, in %



Note: White bars indicate that the estimated coefficient is not significant at the 90% level. Estimated coefficients from an OLS model. Additional controls are gender, age, seniority and dummies for part-time, self-employment, immigrant and subjective health. Offspring aged 35-49.

Source: Based on EU-SILC 2005 data.

collar worker, even if they have the same level of education. The gap is smaller but significant in other countries such as Ireland, Italy, Spain, and, to a lesser extent, France and Germany. The gap between white-collar and blue-collar workers' offspring is smaller, but still significant, in the UK, Italy, Spain and France.

The conclusion is that in a good many countries, education fails to capture a sizeable share of the effect of family background on earnings. There are other channels of influence, and we need to identify them. In this endeavour, we start by asking if family background has a specific influence on children's occupation.

Figure 5 shows that among equally well educated people, the probability of having a managerial position depends on one's parents' occupation. Everywhere, the probability is higher for the son of a manager than for the son of either a clerical or a production worker.

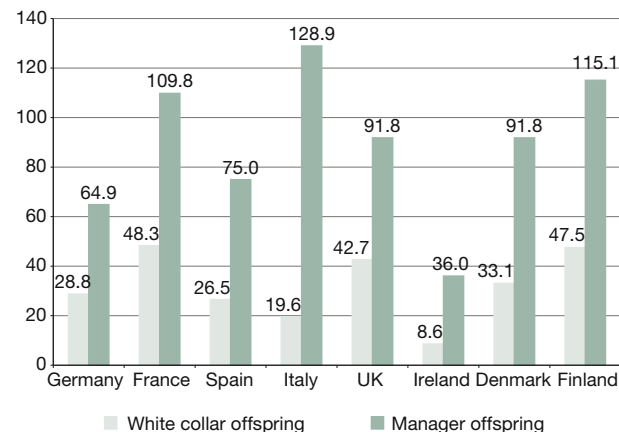
In particular, the probability of becoming a manager in Italy is about 130 per cent higher if you are the son of a manager than the son of a white-collar worker. In Finland, France, Denmark and the UK, this gap is narrower. Also, the children of white-collar workers have a general, though much smaller, advantage with respect to the children of blue-collar workers.

These results suggest that parental occupation has two separate effects on children: it influences their education

Figure 5

### Probability of achieving a managerial position: the advantage of a better parental occupation

compared to children of blue-collar workers, in %



Note: Probabilities computed as average partial effects from a logit model. Controls for education, gender, age and seniority. Offspring aged 35-49.

Source: Based on EU-SILC 2005 data.

(what the sociological literature calls the *achievement effect*), but it also influences their occupational sorting, holding education constant (the *ascription effect*).<sup>8</sup>

However, there is more to it: if we control for both education and occupation, we find that parents' occupation has an additional influence on the earnings of their offspring, at least in some countries. In other words, there is a residual effect of family background working directly on earnings, not indirectly through education and occupation. This effect is clear in Figure 6, which depicts the earnings gaps between the children of managers, white-collar and blue-collar workers, all with the same education and occupation.

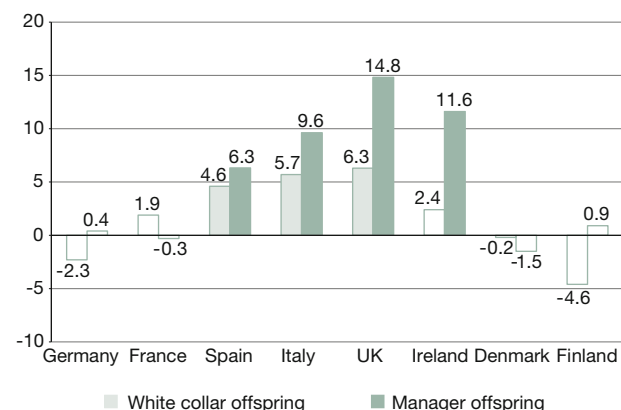
For example, in the UK this residual advantage enjoyed by the child of a manager over the child of a blue-collar worker amounts to about 15 per cent. Other countries where this advantage is statistically significant are Ireland, Italy and Spain. It is quite interesting that two Anglo-Saxon countries and two Mediterranean countries share this feature of the process that originates the intergenerational transmission of inequality.

<sup>8</sup> See H.B. Ganzeboom, D.J. Treiman: Ascription and Achievement in Occupational Attainment in Comparative Perspective, Paper presented at the Sixth Meeting of the Russell Sage Foundation/Carnegie Corporation, 25-26 January 2007.



Figure 6

**Annual gross earnings gap by parental occupation, controlling for offspring's education and occupation**  
compared to children of blue-collar workers, in %



Note: White bars indicate that the estimated coefficient is not significant at the 90% level. Estimated coefficients from an OLS model. Additional controls are gender, age, seniority and dummies for part-time, self-employment, immigrant and subjective health. Offspring aged 35-49.

Source: Based on EU-SILC 2005 data.

It is also interesting that this direct residual effect of family background as such, not mediated by education or occupation, appears as the main cause of cross-country differences in the magnitude of intergenerational inequality transmission.<sup>9</sup>

In the Nordic and Central European countries, the influence of parental background on earnings would appear to be exerted almost entirely through education and occupation. However, in the UK, Ireland and the Mediterranean countries analysed, the influence also takes the form of a direct impact on earnings. The cause underlying this effect needs further investigation, with a view to illuminating the impact of current inequality on economic mobility.

### In search of an explanation: unobservable abilities or networks of social contacts?

The search for the factors that can explain the direct influence of family background on earnings can take three directions.

The first involves the quality of human capital. Family background may play a part in determining several qualitative aspects of human capital that give a person

an edge in the labour market. In the specific case of tertiary education, these may be the course of study chosen, one's marks or the particular university one attends.

The second direction looks to soft skills, which include relational capacities, such as attitudes towards risk and trust, extroversion, a sense of discipline, and leadership. These capacities, which are not strictly linked to human capital, would appear to be increasingly important at least in certain segments of the labour market.

Both these directions point to what we can call unobservable characteristics or abilities. A good many scholars contend that wealthier and better educated parents positively affect their children's unobservable abilities in several ways, e.g. selecting better schools, investing in extra-curricular activities, providing additional cultural inputs and transferring soft skills. Unfortunately, it is virtually impossible to estimate the empirical relevance of these abilities directly; we simply lack the data.

The third and last direction turns to networks of social contacts. There are many ways in which being a member of a privileged social group can secure an economic advantage. One that is frequently stressed in the literature is quicker access to better information, especially with regard to the availability of good jobs.

However, social networks can play a much more important role if the markets are, so to speak, not impartial: they can allow the children of well-off families to get the best job and salary regardless of their abilities. As a result, in some cases workers actually endowed with better abilities but lacking a supportive network of social contacts can be crowded out. Social contacts can therefore have a profound allocative effect, with negative consequences not only on economic mobility but also on efficiency.

Family background can be of major importance in this case, too. Indeed, one's network of social contacts includes essentially those of one's family of origin, and the quality of such networks is positively correlated with the social and economic status of the family itself.

In sum, there are sound theoretical arguments for the case that unobservable abilities and social contacts could both account for the residual background effect not explained by occupation and education. The problem is that empirical estimation of the two effects is practically impossible due to lack of data.

However, we may be able to gain insight into the likely importance of the two factors in different countries by comparing what happens to the people who improve their so-

<sup>9</sup> On the direct and indirect effects of family background, see M. Franzini, M. Raitano, F. Vona: The Channels of the Intergenerational Transmission of Inequality: a Cross-Country Comparison, in: *Rivista Italiana degli Economisti*, Vol. 18, No. 2.

cial position from one generation to the next and to those whose position deteriorates. More precisely, we look for earnings gaps to the disadvantage of those who improve their position or to the advantage of those who slip down the scale of occupations. If there are penalties for upward mobility (after controlling for human capital), we can talk of a glass ceiling effect to the detriment of the upwardly mobile, while a parachute effect may be at work if downward mobility is buffered by a sort of invisible insurance.<sup>10</sup>

In order to detect these two effects, we must estimate differences in earnings between individuals with the same occupation (and education) but who come from families whose occupations were higher or lower. For example, we need to determine whether the manager coming from a family of blue-collar workers earns less than one from a managerial family. If so, we conclude that the glass-ceiling effect is at work. At the same time, we check whether the blue-collar son of a manager earns more than one in the same position who is himself the son of blue-collar worker. If this is the case, we can identify a parachute effect.

Our hypothesis is that a glass ceiling on upward mobility is likely to depend both on social contact effects and on unobservable individual abilities positively correlated with family background. In fact, it is likely that a manager who is the son of a manager has better unobservable abilities (soft skills, better quality schools, etc.) than the son of a clerical or production worker.

With the parachute effect, the story is different. In fact, it is not likely that those sliding down the social ladder enjoy an earnings edge due to better unobservable abilities. If they had such qualities, then given the advantageous position of their family, they should not suffer downward occupational mobility at all. Hence, in this case social contacts must be very important.

An attempt to estimate the glass ceiling and parachute effects in eight European countries yields interesting results.<sup>11</sup> In the UK there is a significant glass ceiling effect but no parachute effect. Ireland is similar. Southern European countries differ sharply. Here, and especially in Italy, there is quite a strong parachute effect, insuring the children of the better-off against too sharp a loss when they go down the occupation ladder. In particular the blue-collar worker whose parent is a manager earns

more than one whose parent is also a blue-collar worker. In Germany and France, insignificant residual background associations coexist with penalties for both downward and upward mobility. Finally, in the Nordic countries, no clear pattern emerges.

These findings, along with the assumption that the parachute effect is the consequence of effective networks of social contacts, suggest that in Italy and Spain social networks are likely to be essential in explaining the residual background effect, while in the UK unobservable abilities appear to be much more important. However, further research is needed to give stronger foundations to these conclusions.

### Concluding remarks: inequality and economic mobility

As we have seen, family background can influence earnings in various ways: i) indirectly, through the probability of higher educational attainment; ii) indirectly, through the probability of getting a good job; iii) directly, through a residual effect that may be due either to unobservable abilities or to networks of social contacts.

Economists focus almost exclusively on education, while sociologists also take account of the occupational channel and draw a distinction between achievement and ascription. The third, more direct effect is not usually considered despite its importance in a number of countries, as indicated by the results presented in this contribution.

We can now go back to the original question: does greater economic inequality influence economic and social mobility? The analysis of the various mechanisms that may block economic mobility, in our view, suggests that the answer must be in the affirmative. All of the mechanisms we have identified are related to the economic status of the family, even if the strength of these links may vary. Inequality in education is surely dependent on income inequality. Also, however, the relative power of one's network of social contacts depends on how income is distributed; when distribution is more unequal, the relative power of the more privileged social networks can be reinforced, to the detriment of economic mobility. Both glass ceiling and parachute effects can be amplified, with the undesirable result that reductions in educational inequality may not be particularly effective in enhancing economic mobility.

Moreover, when social networks are a major factor of economic immobility, there is greater risk that – as inequality increases and already powerful networks become more powerful still – institutions will decay. The market can lose its capacity to perform an efficient allocative role, and democracy itself can be undermined as some well-organ-

10 On these effects, see M. Raitano, F. Vona: Measuring the link between intergenerational occupational mobility and earnings: evidence from 8 European Countries, OFCE Working Paper, No. 3, 2011.

11 The estimation is performed on the basis of EU SILC 2005 data in M. Raitano, F. Vona: The Economic Impact of Upward and Downward Occupational Mobility: A Comparison of Eight EU Member States, OFCE Working Paper, No. 29, 2011.



ised groups gain power. This is the road to what Acemoglu and Robinson call an “extractive society”.<sup>12</sup> In such

<sup>12</sup> See D. Acemoglu, J. Robinson: *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*, New York 2012, Crown Business.

societies, preventing an aggravation of inequality can be vital. But even where the main mechanisms resulting in economic immobility depend on education and occupation, fairness and social progress would benefit greatly from the judicious curtailment of economic inequality.

Tim Callan, Brian Nolan, Claire Keane, Michael Savage and John R. Walsh\*

## The Great Recession, Austerity and Inequality: Evidence from Ireland

Ireland's national income fell by more than ten per cent between 2008 and 2011, one of the largest declines of all European economies in the Great Recession. In addition to the impact of a global downturn, Ireland was hit by the bursting of a property bubble, a very severe banking crisis and the need to undertake a major fiscal adjustment. Combined, these factors led to borrowing costs on financial markets becoming unsustainable. In 2010, an Economic Adjustment Programme (commonly termed a “bail-out”) was agreed upon with the IMF, the EU and the ECB.

What were the consequences for inequality and for poverty? Did austerity policies in the areas of direct taxes, social security and public sector pay give rise to greater inequality, or did they “lean against the wind” to offset other forces? These are the central questions examined in this paper. Ireland's response to the crisis has been widely seen as a test case for what is often described as the austerity approach. Here we focus on the income distribution consequences of the crisis and of the state's response, rather than on its merits or otherwise as a macroeconomic strategy. These consequences will be an important consideration in any overall assessment and of relevance to other countries undergoing stagnation and fiscal “correction”. To analyse these income distribution effects, we make use of the latest available microdata, notably the 2011 round of the Survey on Income and Living Conditions (SILC). We also use the SWITCH tax-benefit model to identify the impact of austerity policies as distinct from the impact of the economic recession itself.<sup>1</sup>

The macroeconomic and labour market context as well as the central features of the fiscal policy response are summarised in the following section. Key elements include a

rise in unemployment from about four per cent to 14 per cent, sharp rises in taxation, reductions and restrictions on welfare payments, and progressively structured reductions in public sector pay. Next, we set out how the overall distribution of income changed over the years 2008-2011, which saw sharp drops in employment and income. We also examine the impact on alternative measures of poverty.

We then explore the impact of austerity policies over this period in the areas of direct taxes, social security and welfare payments, and public sector pay. This helps to indicate how much of the total change in inequality is due to changes in tax and transfer policy and how much is due to changes in market incomes – including the loss of income for those who become unemployed. We draw overall conclusions in the final section.

### Macroeconomic context and policy measures

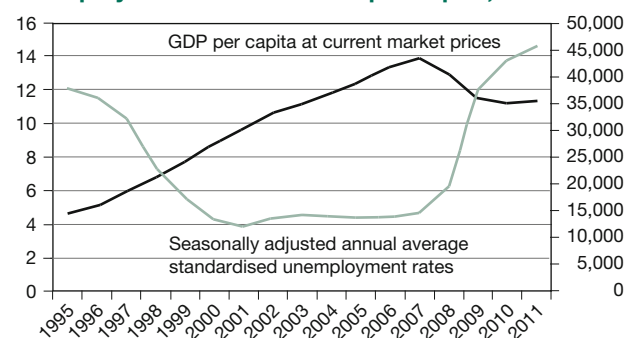
Prior to the Great Recession, economic growth in Ireland was among the highest in the OECD (see Figure 1). The period 1994 to 2000 saw an annual average growth rate in real GDP of over seven per cent. This growth was accompanied by sustained increases in the numbers of employed persons, rising from 1.2 million in 1994 to 2.1 million by 2007. Unemployment fell to just over four per cent in 2000 and remained around this level until 2008 (Figure 1). Net emigration, long a feature of the Irish economy, was reversed as significant numbers of Irish emigrants returned and immigrants from other countries were attracted to Ireland.

Ireland's economy entered recession in 2008, and by 2010 GDP per capita had fallen by more than 13 per cent, while unemployment soared to almost 14 per cent. This scale of economic deterioration was driven by three main factors:

\* We are grateful to the Central Statistics Office for access to the SILC data. Thanks also to participants at seminars in Bonn, Dublin, Maynooth, Washington and Brussels for helpful comments. Responsibility for the analysis and interpretation of these data rests with the authors.

<sup>1</sup> T. Callan, C. Keane, M. Savage, J.R. Walsh: *Work Incentives: New Evidence for Ireland*, in T. Callan (ed.): *Budget Perspectives* 2013, Dublin 2012, ESRI.

Figure 1

**Unemployment rates and GDP per capita, 1995-2011**

Source: Central Statistics Office.

- the effects of worldwide recession on a small and very open economy, compounded by
- a dramatic collapse in property prices and in activity and employment in the construction sector, upon which the Irish economy had become heavily reliant, and
- a banking crisis during which the Irish government was required to come to the aid of banks which were deeply exposed by the extent of their property-related lending.

Each of these factors contributed to a fiscal crisis, as tax revenues collapsed while increased unemployment led to greater demands on the welfare system. The banking crisis resulted in the government guaranteeing both investors and bondholders, and it led to unsustainable yields on Irish bonds as government debt grew. These unsustainable yields led to the Irish government seeking a financial bailout from the EU, the ECB and the IMF in 2010.

The nature of the recession, and in particular the severity of the downturn for the construction industry, contributed to a sharp differential in the evolution of the male and female unemployment rates. Between 2003 and 2007, the unemployment rates for men and women were similar, at about four to five per cent. By 2011, the male unemployment rate had risen by 13 percentage points, while the female unemployment rate had risen by about half that much.

What about developments in wages for those in employment? On average, there was a small rise in hourly earnings over the 2008-2012 period, but there was a great deal of diversity across sectors. Wages fell by five to six per cent in public administration and defence as well as

in finance and insurance, but they rose by seven to eight per cent for those in industry. Wages in public sector organisations were reduced first via a Pension-Related Deduction (PRD), introduced in 2009, and then by a pay cut the following year. Both the PRD and the explicit pay cut were progressively structured, e.g. the pay cut consisted of a five per cent reduction on the first €30,000 of salary, 7.5 per cent on the next €40,000 and ten per cent on the next €55,000. New entrants were also to be hired at salaries ten per cent lower than the level payable to current staff. The evolution of average wages in the public sector was also affected by compositional shifts. For example, a policy of incentivised early retirement, made available to those aged over 50, may have removed from the payroll more of those employees with above average wages, thereby depressing average wages.

Fiscal austerity involved both tax increases and reductions in welfare payment rates. Looking first at the taxation side, income tax rates remained unchanged, but other ways of increasing the direct tax “take” were exploited:

- A new levy on income was introduced in 2009 and soon doubled, and an existing income levy to fund health services was doubled. Both levies were then replaced in 2011 by a Universal Social Charge (USC) – a new form of income tax, with exemptions for annual income below €4,004 and a progressive structure above this level with rates of two, four and seven per cent.
- The income ceiling above which no further social insurance contributions were payable was first raised substantially and subsequently abolished in 2011.
- In 2011 the standard rate band of income tax was reduced (from €36,400 to €32,800 annually), as were the main tax credits.
- A €200 per annum charge on non-principal private residences was introduced in 2009, as was a flat-rate “household charge” or property tax of €100 in 2011, both payable by the owner of the property. This was the precursor to a full-scale value-related property tax, which came into force in mid-2013.
- Tax relief on pension contributions was also reduced, with the annual earnings limit for determining maximum tax-relievable contributions down from €275,239 in 2008 to €115,000 by 2011, while employee pension contributions also became liable for Pay Related Social Insurance and the USC.
- Indirect taxes were increased, with a rise in the standard rate of VAT and a new carbon tax.

**Table 1**  
**Gini coefficient equivalised disposable income**  
**among persons Ireland, 2005-2010**

	SILC
2005	0.324
2006	0.324
2007	0.317
2008	0.307
2009	0.293
2010	0.316
2011	0.311

Notes: The equivalence scale used here is 1 for the first adult, 0.66 for other adults (aged 14 or over) and 0.33 for each child (aged under 14).

Sources: SILC 2011 and revised 2010 results; www.cso.ie.

On the social welfare side, income support rates were actually *increased* in 2009. The budget for that year was brought forward from December to October 2008, and the full scale of the problems was not yet evident. However, the budgets of 2010 and 2011 then reduced the rates of support provided by most social welfare schemes applicable to those of working age and made deeper cuts in the universal child benefit payment. Payments to young unemployed people were reduced substantially. Rates of payment for old age pensions, however, have remained at their 2009 levels to date, with some reductions in near-cash benefits.

### Income inequality, 2008 to 2011

We look first at what has happened to the Gini coefficient, the most widely used measure of income inequality, over this turbulent period.<sup>2</sup> Table 1 shows Gini coefficients for disposable income (per adult equivalent) for the years 2005-2010 derived from the SILC surveys carried out each year.

Whether taking 2007 or 2008 as the end of the bubble/start of the recession, the Gini coefficient then was very similar to the one in 2011, the latest year for which data is available – a slight fall from the 2007 level and a slight rise from the 2008 level. Indeed, the Gini coefficient remained

2 Data are drawn from the Central Statistics Office's Survey on Income and Living Conditions for various years. Household income is adjusted for the size and composition of its members – i.e. "equivalised". The equivalence scale is the one used in Ireland's official measures of poverty: 1 for the first adult, 0.66 for other adults, and 0.33 for children aged under 14. This approximates the scale used in social welfare payments.

**Table 2**  
**Decile shares of equivalised disposable income**  
**among persons, 2008-2011**

Decile	2008	2011	% change in average real income, 2008-2011
	Income share		
	%	%	
Bottom	3.5	3.0	-18.4
2	5.0	5.0	-7.3
3	5.9	6.0	-5.4
4	6.8	6.9	-4.5
5	8.0	7.9	-6.2
6	9.2	9.2	-5.5
7	10.2	10.5	-5.2
8	12.2	12.4	-4.4
9	14.7	15.2	-4.1
Top	24.5	24.0	-11.4
	100.0	100.0	-7.8

Source: Authors' analysis of SILC data, 2008 and 2011.

in the range 0.31 to 0.32 for almost every year in the period 1994-2009, which includes the strong growth of the Celtic Tiger era.<sup>3</sup> Against this backdrop, the fall in the Gini to 0.29 in 2009, the first year in which the full effects of the recession were felt, is quite striking: this was the lowest level the Gini had reached in Ireland, by some margin, since 1980.

Data on decile shares calculated from the SILC and presented in Table 2 show that the stability of the Gini coefficient masks some changes in the pattern of income distribution. Between 2008 and 2011, the shares of both the top and bottom deciles fall by 0.5 per cent of income. (Of course, this implies a much sharper fall in the average income of the bottom decile, as will be seen). Increases in shares are found for the 7th, 8th and especially the 9th deciles. Other deciles saw little or no change in their shares of overall income.<sup>4</sup>

The overall fall in income was just under eight per cent between 2008 and 2011, but the greatest losses were

3 B. Nolan, B. Maitre, S. Voitchovsky, C.T. Whelan: Inequality and Poverty in Boom and Bust: Ireland as a Case Study, GINI Discussion Paper 70, 2012.

4 Against this broad stability over the full period, there were significant shifts on a year-by-year basis, which are examined in T. Callan, B. Nolan, C. Keane, M. Savage, J. Walsh: Crisis, Response and Distributional Impact: The Case of Ireland, ESRI Working Paper 456, 2013.

**Table 3**  
**Real incomes and risks of poverty in Ireland, 2008-2011**

	2008	2009	2010	2011
<b>Income</b>				
Mean real equivalised disposable income (Index, 2008=100)	100	100.2	96.0	90.7
	%	%	%	%
At risk of poverty rate (60% of median income in each year)	14.4	14.1	14.7	16.0
At risk of poverty rate anchored at 2008 (60% of 2007 median income, in real terms)	14.4	15.6	19.6	21.2
Consistent poverty rate (% below 60% of median income in each year, and experiencing basic deprivation)	4.2	5.5	6.3	6.9

Source: Authors' analysis of SILC data, 2008 and 2011.

strongly concentrated in the bottom and top deciles. On average, the real income of the lowest income decile in 2011 was 18 per cent lower than in 2008, while the average income of the top decile was 11 per cent lower. Changes in deciles 2 through 9 were less severe, ranging between four and seven per cent – below the average percentage loss. Below, we examine whether policy changes contributed to this pattern or have been “leaning against the wind” of other economic forces.

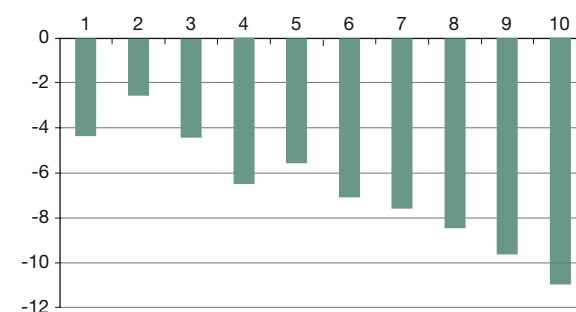
When interpreting these results, one must bear in mind that comparisons of corresponding deciles in different years are not comparing the incomes of the same people but are instead comparing what might be termed “income positions”, e.g. the incomes of the poorest ten per cent in each year. Changes in composition (e.g. more of the bottom decile being unemployed or self-employed with very low incomes during the recession) can also affect the observed patterns, and further research is needed to identify the contribution of such compositional factors.

This overview of changes in the income distribution can be complemented by a brief summary of changes in measures of poverty (see Table 3). The percentage of individuals falling below 60 per cent of median equivalised income (the Laeken indicator for “at risk of poverty”) was roughly stable at around 14.5 per cent from 2008 to 2010, but it rose to over 16 per cent in 2011. The elderly (aged 65 plus) were the main exception to this pattern, as there was a substantial net fall in their risk of poverty.

Table 3 shows how average real incomes declined sharply throughout the recession. The EU’s “anchored” poverty measures examine poverty lines which are set in the usual way (60 per cent of median income) for a base year and

**Figure 2**  
**Impact of income tax, welfare and public sector pay policy changes, 2009-2011**

percentage change in equivalised disposable income, by decile



Source: Analysis using SWITCH tax-benefit model based on SILC data for 2010, uprated to 2012.

then simply increased in real time. Analysis on this basis, with a poverty line anchored in 2008, shows the risk of poverty on this anchored basis rising sharply from about 14 per cent to 21 per cent.

### The role of taxes, transfers and public sector pay policies

There is strong interest in many countries in assessing the distributional impact of austerity measures. Traditional decomposition methods focus on changes between observed outcomes in a base year, with its associated tax/transfer policies, and an end year, with its amended policies. Such approaches may, for example, identify an increase in social assistance income but cannot say if this arises from the increased generosity of benefit payments or from an automatic increase in the incidence of transfers as unemployment rises. Bargain and Callan propose a decomposition which has particular advantages in addressing such questions.<sup>5</sup> The decomposition partitions the total change into one part which reflects changes in policy and another incorporating all other sources of change. A counterfactual policy designed to be distributionally neutral plays a key role; this is achieved by simply taking the base year policy and indexing it by the growth or decline in a broad measure of income.<sup>6</sup> The impact of policy change is then measured by estimating inequality measures under this counterfactual “distributionally neutral” policy and under actual policy, as simulated using a

5 O. Bargain, T. Callan: Analysing the effects of tax-benefit reforms on income distribution: a decomposition approach, in: *Journal of Economic Inequality*, Vol. 8, No. 1, March 2010, pp. 1-21.

6 When data for the base year and end year are available, the change in gross income provides a natural indexing factor; where income growth must be based on forward-looking estimates, changes in weekly earnings are often used.

tax benefit model. Where possible, this is done for both base year and end year data. The average of the two can be interpreted as a Shapley value decomposition.

Work along these lines is currently under way.<sup>7</sup> Figure 2 gives a broader picture of the impact of policy over the full 2008-2011 period. The impact of the policy changes is evaluated using simulation on survey data for 2010, uprated to 2012. Here the analysis is based on a “distributionally neutral” policy which indexes 2008 policy in line with average weekly earnings over the period. The analysis includes the main changes in income tax, social insurance contributions and the introduction of income levies, as well as changes in benefit payment rates. In addition, the modelling includes the impact of the progressively structured reductions in public sector pay mentioned above.

From 2008 to 2011, policy had a negative impact on income at all levels. Losses in the top half of the distribution increased with income, and thus the greatest percentage losses were experienced by those with the highest incomes. Losses in the bottom half of the income distribution were smaller, although decile 1 lost more than decile 2. A key factor in the relatively low losses for deciles 2 and 3 is that payment rates for pensioners were held constant, while there were explicit cuts in payment rates for those of working age and deeper cuts in child benefits.

## Conclusions

Summary measures of inequality have been broadly stable in Ireland over a long period, from the early 1990s through to the start of the current recession. There were, however, some significant shifts on a year-by-year basis in the years 2008-2011, during which average incomes fell sharply as Ireland experienced the full force of a major re-

cession. The year-by-year pattern shows a fall in inequality in 2009, which then reversed in the following years. Some of this is directly attributable to the timing of policy changes, as 2009 saw sharp increases in income-related taxes, together with an increase in welfare payment rates. Later years saw more emphasis on expenditure cuts and less on income-based taxes. Over the full period 2008 to 2011, the major changes involved losses for both bottom and top deciles, with gains in income shares focused on the remainder of the upper half of the distribution.

What of the impact of policy changes in the areas of direct taxes, welfare and public sector pay? The SWITCH model permits analysis of this issue to be extended to cover the 2008-2011 period and finds that policy changes were structured in a broadly progressive manner. An exception to this was the bottom decile, whose losses were greater than those of the 2nd decile. The pattern of losses in the bottom half of the distribution reflected the fact that payment rates for benefits to those of working age were reduced over the period, whereas payment rates for pension benefits were increased in 2009 and then held constant. Thus, the 2nd and 3rd deciles, which contained higher proportions of pensioners than other deciles, experienced relatively low losses.

Overall, the distributional impact of Ireland's austerity measures is strongly influenced by increases in income-related taxes, which were concentrated in 2009. In part, this reflects the fact that income-related taxes had been reduced to relatively low levels by that point, which meant that there was some scope for them to rise. However, Ireland can no longer be regarded as a country with low income taxes. The income tax burden as a share of GNP is now similar to that of the UK and not far from that of Germany.<sup>8</sup>

7 O. Bargain, T. Callan, K. Doorley, C. Keane: Changes in Income Distributions and the Role of Tax-Benefit Policy During the Great Recession: An International Perspective, IZA Discussion Paper No. 7737, 2013.

8 See T. Callan, M. Savage: Taxes on Income: Ireland in Comparative Perspective, in: Quarterly Economic Commentary, Spring, 2013 for details.

Gerhard Bosch

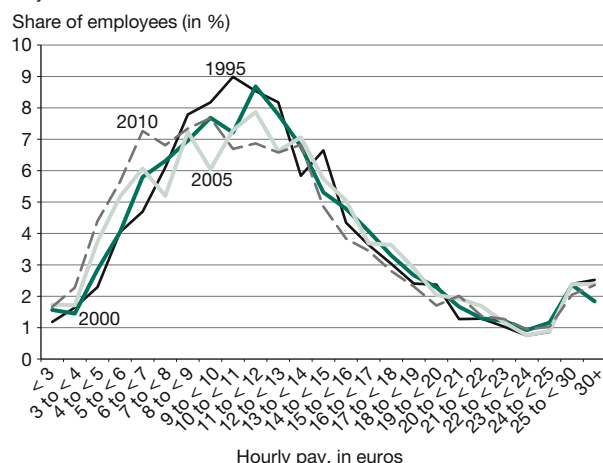
## Wage Inequality in Germany and the Bumpy Road to a Minimum Wage

In international comparisons, Germany has long been seen as a country with relatively narrow wage dispersion and only a limited proportion of low-paid workers. However, since the mid-1990s, the low-wage sector has grown considerably. The main reason is the vulnerability of the

German system of collective agreements to outside competition. Since there are no generally binding minimum wage thresholds (as a result of a statutory minimum wage or generally binding collective agreements), it is possible in most industries to pay wages below the industry rates.

**Figure 1**  
**Distribution of hourly pay in Germany, adjusted for inflation**

base year: 1995



Source: German Socio-Economic Panel (SOEP) 2012, calculations by the IAQ (T. Kalina).

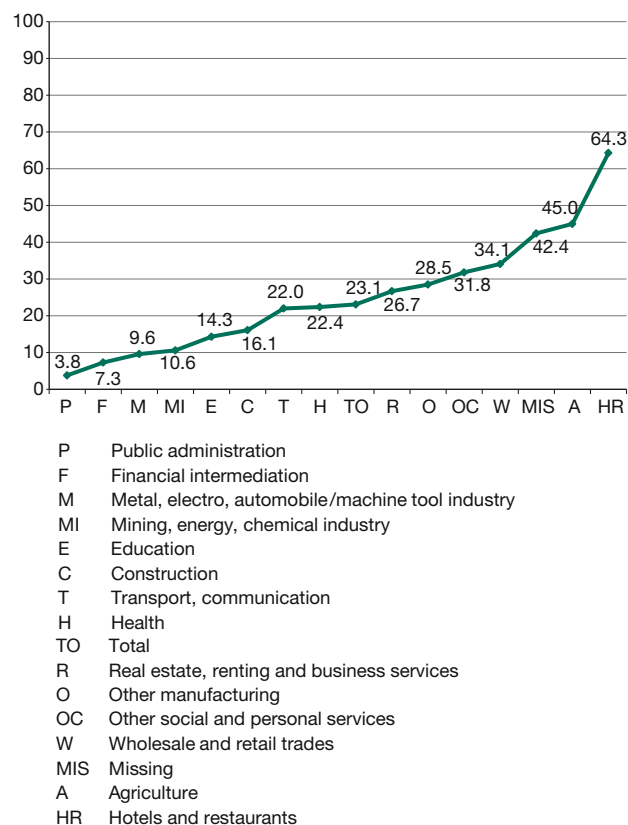
The aim of this paper is to provide an overview of the development of the German low-wage sector, the main reasons for the increase of low-wage work in Germany, the impact of German wage moderation on trade imbalances in the eurozone and the reforms of the German wage-setting system.

### The low-wage sector in Germany

Since the end of the 1990s, German wages have risen less than those in the rest of the EU. One principal reason for this is the rapid expansion of the low-wage sector, which was under way even before the Hartz acts. The proportion of low-wage (less than two-thirds of the median hourly wage) workers rose from 17.7 per cent in 1995 to 23.1 per cent of all workers in 2010. The number of low-wage workers increased from 5.6 million in 1995 to 7.9 million in 2010. The first particularity of the German low-wage sector is its marked downward dispersion, since there is no minimum wage to prevent very low wages. In 2010, 6.8 million workers were paid less than €8.50, the minimum wage demanded by the German Trade Union Federation, while 2.5 million actually earned less than €6 per hour.

Virtually all the growth in absolute terms took place in West Germany, i.e. in areas traditionally protected by high levels of adherence to collective agreements. Examination of the evolution of the inflation-adjusted wage distribution since 1995 shows that the concentration of wages around the midpoint of the wage distribution is crumbling and many previously well-paid activities are sliding down the wage scale (see Figure 1).

**Figure 2**  
**Low pay incidence in various industries, 2010**



Source: German Socio-Economic Panel (SOEP) 2010, calculations by the IAQ (T. Kalina).

In large parts of the manufacturing sector, in the public sector, and in the banking and insurance industry, the old German model with a high level of collective agreement coverage still exists. In private services in particular, and to some extent in small manufacturing companies (e.g. in the so-called craft sector), large areas devoid of collective agreements have emerged, in which only isolated clusters of firms remain covered by collective agreements and, as a consequence, the share of low-wage workers has risen rapidly (see Figure 2).

Low-wage work is not equally distributed among all employees. As shown in Table 1, in 2010 those particularly affected by low wages were younger employees under 25 (50.8 per cent), those on fixed-term contracts (45.7 per cent), those without vocational training (39.3 per cent), women (30.0 per cent) and foreigners (31.9 per cent). Because of the variable size of these employee categories, a distinction must be made between the impact on individual groups and the composition of the low-wage working population. Thus, in 2010, 30 per cent of female employees were paid low wages, but they accounted for almost



**Table 1**  
**Low-wage work and employment in the low-wage sector by employee category, Germany**

in %

	Category	Share of LW workers in category		Share in LW sector	
		1995	2010	1995	2010
Qualification	No vocational qualification	25.8	39.3	22.4	18.4
	Vocational qualification	17.0	24.7	67.2	71.0
	HE qualification	9.5	10.9	10.4	10.6
Gender	Men	10.8	16.7	37.6	36.3
	Women	26.0	30.0	62.4	63.7
Age	Under 25	34.9	50.8	13.6	11.2
	25 – 34	16.7	23.6	28.0	20.4
	35 – 44	14.7	20.3	23.7	23.1
	45 – 54	14.7	19.2	20.4	25.1
	55+	17.8	26.2	14.2	20.3
Nationality	German	17.0	22.6	90.6	88.7
	Foreign	17.2	30.6	9.4	11.3
Employment contract	Fixed-term	26.9	45.7	9.5	20.7
	Open-ended	16.2	18.9	90.5	79.3
Working time	Full-time	13.9	15.5	65.8	47.6
	Part-time (liable for social insurance contributions)	19.5	26.6	18.3	24.0
	Mini-job	77.1	86.1	16.0	28.4

Note: Low-wage workers are defined as earning less than two-thirds of the median hourly rate of pay. Data excludes the self-employed, school pupils, students and pensioners.

Source: German Socio-Economic Panel (SOEP), calculations by the IAQ (T. Kalina).

two-thirds (63.7 per cent) of all low-paid workers (Table 1). The second particularity of the German low-wage sector compared to the US or the UK is the low share of employees without a vocational qualification. Around 80 per cent of people in the sector have a vocational or higher education qualification.

From a social policy perspective, short periods in low-wage employment are less problematic than the concentration of low-wage jobs among certain groups and the absence of prospects for more highly paid employment. One of the arguments frequently put forward in Germany in favour of encouraging low-wage jobs is that they offer a low-threshold entry point into better-paid jobs. In the mid-1990s, the German labour market was still being praised by the OECD for offering low earners good

opportunities for advancement.<sup>1</sup> More recent investigations show that low-wage work is becoming increasingly entrenched. Kalina shows that the chances of advancement declined over the long period between 1975/6 and 2005/6.<sup>2</sup> Mosthaf et al. note that only about one in every seven full-time workers who were low paid in 1998/9 was able to leave the low-wage sector by 2007.<sup>3</sup>

### Factors causing the expansion of low-wage work

Coverage by collective agreement, which was around 80 per cent prior to 1990, had declined by 2012 to 60 per cent in West Germany and to 48 per cent in East Germany. Autonomous wage-setting by the social partners is obviously no longer functioning. In many small and medium-sized enterprises and service industries, wages are determined unilaterally by employers, since collective agreements are not in force and works councils have not been set up.

The decline of coverage and the expansion of the low-wage sector began around ten years before the Hartz acts. The causes were changes in the behaviour of employers, who took advantage of the extremely high unemployment after German unification to quit employers' associations and cease to be bound by collective agreements, and the opening of many previously public services (post, railways, local transport, etc.) to private providers who were not bound by collective agreements and competed with state-owned companies by engaging in wage dumping. Growth in the low-wage sector since the mid-1990s gave rise to knock-on effects even for highly unionised companies. This trend has been strongly supported by political interventions such as the EC directives opening the product markets of former public services (e.g. postal services, telecommunications or local transport).<sup>4</sup>

The Hartz acts did not set this process in motion but prevented low-wage work from being reduced in the strong upturn beginning in 2005. By reducing unemployment pay – previously means-tested – for the long-term unem-

- 1 OECD: Employment Outlook, Paris 1997; M. Keese, A. Puymoyen, P. Swain: The incidence and dynamics of low-paid employment in OECD countries, in: R. Asplund, P.J. Sloane, I. Theodossiou (eds.): Low Pay and Earnings Mobility in Europe, Cheltenham and Northampton 1998, Edward Elgar, pp. 223-265.
- 2 T. Kalina: Niedriglohnbeschäftigte in der Sackgasse? – Was die Segmentierungstheorie zum Verständnis des Niedriglohnsektors in Deutschland beitragen kann, University Duisburg-Essen, 2012.
- 3 A. Mosthaf, C. Schnabel, J. Stephani: Low-wage careers: are there dead-end firms and dead-end jobs?, in: Discussion Papers, No. 66, Friedrich-Alexander-Universität Erlangen-Nürnberg, Nürnberg 2010.
- 4 G. Bosch, C. Weinkopf: Low-Wage Work in Germany, New York 2008, Russell Sage Foundation.

ployed to the lower social benefit level, and by re-setting the “reasonableness” criteria, the Hartz acts stepped up pressure on the unemployed to accept work at as much as 30 per cent below the going rate for their locality. Deregulation of temporary agency work and of the so-called mini-jobs<sup>5</sup> made it possible to replace employees on standard contracts with new recruits on precarious contracts. In the case of temporary agency work, contracts ceased to be time limited, and a new mechanism involving wage agreements enabled employers to sidestep the principle that temporary staff would have equal pay with the hiring company’s regular employees. As for mini-jobs, the income threshold was raised, mini-jobs could now be also treated as second jobs, and the cap on hours worked per week was lifted, enabling wage rates to be reduced. The legislation’s political acceptability relied on the assertion that low-skilled employees with low productivity would be the ones to benefit most from the low-wage sector.

The two deregulated employment forms, temporary agency work and mini-jobs, have gained considerably in importance. The number of temporary agency workers rose from 300,000 in 2003 to around 900,000 in 2011, while over the same period the number of people employed in mini-jobs rose from around 5.5 million to 7.5 million. Among employees in mini-jobs, the share of low-wage workers was 86 per cent in 2010; according to another survey, it was around two-thirds for temporary agency workers. The high share of low-wage work among holders of mini-jobs can be explained primarily by the fact that employees in these jobs are generally paid less than other part-timers, in contravention of the European directive on the equal treatment of part-time workers. As far as temporary agency workers are concerned, the equal pay principle of the European directive on temporary work has been abrogated by collective agreements that amount to wage dumping concluded by the employer-friendly Christian trade union that has virtually no members.

The aim of improving the employment chances of low-skill workers through the expansion of a low-wage sector has not been fulfilled. One of the miscalculations of the 2003 Hartz reforms was the belief that problems stemming from a lack of education and training could be solved by wage reductions. In fact, the unemployment rate among those without vocational training never fell

below 20 per cent, not even during the two economic upturns before and after the financial crisis. This was due to the fact that the minimum employee qualifications stipulated by businesses, which were now very efficiently managed, were higher than before. Old-style physical toil has practically vanished from industrial society and been replaced by basic communications tasks, which demand familiarity with abstract symbols as well as reading, writing and communication skills.<sup>6</sup>

The effect of the Hartz acts on employment levels is their most contentious aspect. Their positive employment effects are often explained with the higher outflows from unemployment since 2005. However, since inflows into unemployment have increased at the same time, despite the economic upturn, flows between employment and unemployment have increased. The reason for the increased flows during the economic upturn is the increased use of fixed-term contracts and temporary agency work, which often lead only to short periods of employment.

The Hartz legislation came into force just as Germany was coming out of a deep recession. In the subsequent upturn, there was a sharp cyclical increase in employment. If the Hartz acts did indeed influence this positive employment trend, then either the upturn must have been more employment-intensive as a result of better matching processes or the upturn was accelerated by the Hartz acts. Horn and Herzog-Stein compared the employment intensity of three economic cycles (1999/Q1-2001/Q1, 2005/Q2-2008/Q1 and 2009/Q2 until the current endpoint).<sup>7</sup> In the first upturn, employment intensity (i.e. the percentage increase in the level of gainful employment when GDP rises by one per cent) was 0.43 per cent, and in the two subsequent upturns it was just 0.35 per cent and 0.39 per cent respectively. Thus, in fact the employment intensity tended to weaken after the Hartz acts. The two upturns after they came into force were almost wholly driven by exports. The Hartz acts had a damping effect on the evolution of wages; this effect was concentrated primarily in the service sector and ruined domestic demand as well as demand for imports, but it had little effect on the export economy. Domestic demand was additionally curbed by public investment cuts. Net public investment in Germany has been negative for years. The consequent deterioration of the infrastructure has an adverse effect on future growth.

5 Mini-jobs are jobs carrying a maximum monthly wage of €450. Those holding them are exempt from tax and other deductions. Employers are required to make a flat-rate 30 per cent contribution. Under European and German legislation, holders of mini-jobs are entitled to the same pay for the same work and also to paid holidays, including statutory holidays, and paid sick leave.

6 G. Bosch, C. Weinkopf: „Einfacharbeit“ im Dienstleistungssektor, in: *Arbeit*, Vol. 20, No. 3, 2011, pp. 173-187.

7 G.A. Horn, A. Herzog-Stein: *Erwerbstätigenrekord dank guter Konjunktur und hoher interner Flexibilität*, in: *Wirtschaftsdienst*, Vol. 92, No. 3, 2012, pp. 151-155.

## Germany is not sharing the responsibility of stimulating European economic growth

Germany has been achieving export surpluses year by year, with few exceptions, since the 1950s. Prior to the introduction of the euro, there was a regularly recurring need for upward revaluations of the Deutschmark to correct imbalances in foreign trade. The introduction of the euro meant exchange-rate adjustments within the eurozone were no longer available as a corrective measure. Also, the German export industry benefits in trade outside the eurozone from the absence of serious pressure to revalue the euro upwards, a consequence of the substantial number of eurozone nations recording import surpluses.

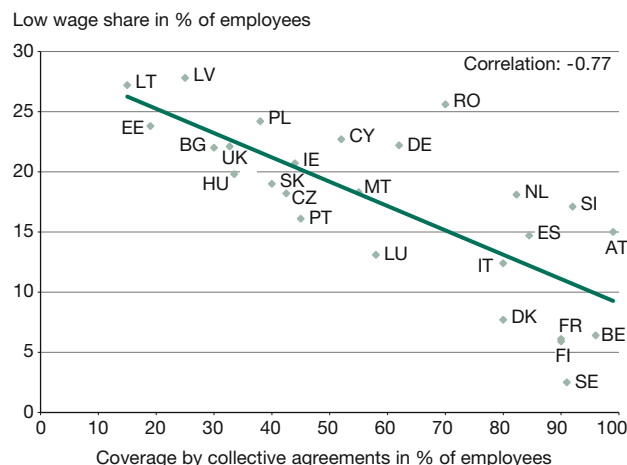
Thus protected inside the eurozone from revaluation, Germany's competitive position has been further enhanced since the late 1990s as a result of below-average wage increases relative to other eurozone countries, which in effect amounts to an internal devaluation. This in turn led to a rise in German export surpluses, which by 2012 were equivalent to about 6.5 per cent of German GNP; in other words, over a mere three-year period, Germany is forced to invest about 20 per cent of its GNP overseas. German surpluses are matched by corresponding deficits in other eurozone countries. Currently, the German economy finds itself in an exceptional situation in Europe as a result of its highly developed international trade links. In 1995 the openness of the economies (total of exports and imports as a proportion of GNP) in Germany, France, Spain and Italy was rated at about 50 per cent. But in 2008 the figure for Germany reached approximately 90 per cent against a rise to only 60 per cent in the other countries.<sup>8</sup>

One of the paradoxes of the economic policy debate in Germany was that the most serious weaknesses were perceived to be in precisely those areas in which Germany is particularly strong, while the strengthening of domestic demand has disappeared from the agenda for many years. For 20 years now, German economic policy has been driven by a one-sided concentration on exports and the aspiration to improve the competitiveness of German industry.

Thus the reasons for the favourable evolution of employment in Germany in recent years are not to be found in the Hartz acts. They are the result of the German manufacturing industry's specialisation, over many years, in high-quality products, driven by a rapid pace of innovation, above-average investment in R&D and a good vo-

<sup>8</sup> H. Joebges, C. Logeay, S. Stephan, R. Zwiener: Deutschlands Exportüberschüsse gehen zu Lasten der Beschäftigten, WISO Diskurs, 2010.

Figure 3  
Coverage by collective agreements (2008/9) and low wage share (2010)



Sources: J. Visser: ICTWSS Database, 2011, for coverage by collective agreements; E. Bezzina: In 2010, 17% of employees in the EU were low-wage earners, Eurostat Statistics in Focus, No. 48/2012, Luxembourg 2012, for low wage share; own calculations.

ational training system. Moreover, the German product portfolio, with its emphasis on capital goods and cars, was well matched to the sharply increasing demand from the BRICS and other developing countries, which meant that the German economy was not wholly dependent on the European market. The Hartz acts enabled the country, even in the strong upturn of 2005 to 2008, to continue its policy of internal devaluation within the eurozone by means of below-average wage increases and unit wage costs relative to other eurozone countries.<sup>9</sup> Since domestic demand and, consequently, imports did not keep pace with the growth in exports, trade imbalances within the eurozone increased – which is one of the principal reasons for the euro crisis.

## The bumpy road to an inclusive German wage-setting system

It is known that minimum wages particularly influence the wage distribution in the lower segment, but only if they are set relatively close to the low-wage threshold. Collectively negotiated wages, on the other hand, tend rather to influence the distribution in the middle segment (see Figure 3). As minimum wages are generally fixed at a level below the low-wage threshold (two-thirds of the median hourly

<sup>9</sup> U. Stein, S. Stephan, R. Zwiener: Zu schwache deutsche Arbeitskostenentwicklung belastet Europäische Währungsunion und soziale Sicherung: Arbeits- und Lohnstückkosten in 2011 und im 1. Halbjahr 2012, IMK Report, No. 77, 2012.

wage), they will reduce the proportion of low-wage workers only if introducing or increasing a minimum wage also brings about an increase in wages further up the scale.

There are two possible mechanisms for such ripple effects. One is that companies seek to earn recognition on the labour market as “good” companies and ensure the loyalty of their workforce – skilled personnel in particular – by paying more than the minimum wage. The second is that trade unions renegotiate the entire wage structure, resulting in pay increases up to higher income levels. Over the last few years, international research has shown that ripple effects are notably more pronounced in countries with widespread adherence to collective pay agreements than in those with less coverage, where companies will generally fix wage levels according to the state of the labour market. It follows that if the aim is not simply to create a lower limit for wages but to strengthen the mid-scale wage levels, it is essential to keep the architecture of the entire wage system in view, with special attention to the interaction of minimum wage and collectively agreed upon wage scales.<sup>10</sup>

The trade unions have reconsidered their rejection of state intervention in the wage-setting process and since the Hartz acts have been campaigning for the introduction of minimum wages. Industry minimum wages have now been agreed to with employers’ associations in 12 industries and have been declared generally binding by the federal government. The effects of minimum wages on pay levels and employment have been investigated in eight industries, in some cases using a difference-in-differences estimation. No negative employment effects were observed.<sup>11</sup> However, a trend change towards a reduction in low-wage employment in Germany has not yet been instigated, since the largest low-wage sectors, such as retailing and hotels and catering, do not have industry minimum wages.

10 D. Grimshaw, G. Bosch: The intersections between minimum wage and collective bargaining institutions, in: D. Grimshaw (ed.): Minimum wages, pay equity, and comparative industrial relations, New York and Abingdon 2013, Routledge, pp. 50-80.

11 G. Bosch, C. Weinkopf: Wirkungen der Mindestlohnregelungen in acht Branchen, Expert report commissioned by Friedrich-Ebert-Stiftung, WISO Diskurs, 2012.

The more recent German research on the effects of minimum wages in particular industries shows that, in West Germany, increases in the minimum wages in industries with high shares of skilled workers shifted the wage curve upwards, with significant ripple effects being observed well above the median wage for the industry in question. In East Germany, on the other hand, the wage structure was compressed, and in some cases there were significant reductions in the higher wages.<sup>12</sup>

Wage inequality in Germany cannot be effectively lessened by a lengthy piecemeal process of introducing a minimum wage industry by industry. There is a need for a national minimum wage which applies across the board and for the same pay for temporary workers and holders of mini-jobs. At the same time, by making it easier to declare wage agreements universally binding, the role of collective wage agreements should be strengthened, so as to enhance the ripple effects of the minimum wage. At present, wage agreements cannot be made generally binding unless the industry in question already has 50 per cent collective agreement coverage. In many low-wage sectors, such as retail, this 50 per cent threshold is not reached; it should be replaced by a “public interest” provision.

The political debate over reform of the German wage system focuses primarily on fair pay, the reduction of social inequality and the strengthening of social cohesion, i.e. national issues. However, many of the experts are perfectly well aware that a further issue at the heart of the debate is modification of the lopsided German export model. The crisis engulfing the euro can only be overcome if Germany, the strongest economy in Europe, takes on responsibility for generating growth by increasing its domestic demand by raising wages. One proposed remedy is that the system of remuneration in Germany must be restored to health by introducing a minimum wage and strengthening existing wage agreements. The new grand coalition government has just agreed to the introduction of a minimum wage of €8.50 per hour beginning in 2015. Another potential remedy is to increase public investment in Germany, preferably under the aegis of a European investment programme.

12 Ibid.

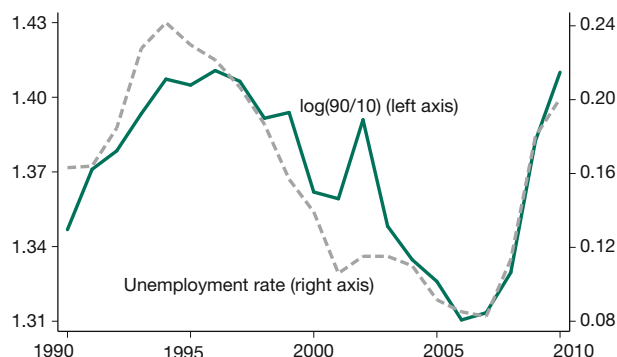
Stéphane Bonhomme and Laura Hospido\*

## Earnings Inequality in Spain

During the last two decades, the Spanish economy experienced a long expansion period between two severe recessions, the 1993 recession and the Great Recession that started in 2008. The two recession episodes were

characterised by sharp drops in GDP growth and increases in unemployment. The unemployment rate decreased from 25 per cent in 1994 to eight per cent in 2007 before increasing again to 21 per cent in 2010. The level and

**Figure 1**  
**Earnings inequality (males) and unemployment in Spain**  
1990–2010



Note: Logarithm of the estimated 90/10 percentile ratio of daily earnings (left axis) and aggregate unemployment rate (right axis).

Sources: Social security data and OECD.

volatility of unemployment are particularly high relative to other OECD countries. An important question then is what have been the consequences of these large cyclical variations on earnings inequality? To date, relatively few papers have analysed the effects of expansion or recession episodes on earnings inequality. The US literature has mostly aimed at explaining trends in inequality over time, but it has not paid similar attention to the cyclical evolution of inequality. As an example, the major explanations for the evolution of US inequality – the influence of skill-biased technical change,<sup>1</sup> job polarisation<sup>2</sup> or de-unionisation<sup>3</sup> – aim at explaining increases in inequality at various points of the earnings distribution while abstracting from cyclical effects.

In two recent papers, we rely on Spanish administrative data to document the evolution of earnings inequality and to analyse the factors that may have contributed to this evolution.<sup>4</sup> In contrast with previous work based on cross-

**Table 1**  
**Changes in log-percentile ratios**  
×100, males

United States*		Spain**			Germany***	
1973-1989	1989-2005	1988-1996	1997-2006	2007-2010	1980-1990	1990-2000
90/10			90/10		85/15	
18.3	16.4	10.8	-9.6	9.7	8.3	10.7
90/50			90/50		85/50	
10.2	14.4	11.0	-3.6	1.6	5.8	5.1
50/10			50/10		50/15	
8.1	2.1	-0.2	-6.0	8.2	2.5	5.6

Sources: \* Hourly inequality measures from D.H. Autor, L.F. Katz, M.S. Kearney: Trends in U.S. Wage Inequality: Re-assessing the Revisionists, *Review of Economics and Statistics*, Vol. 90, 2008, pp. 300–323. \*\* Daily inequality measures estimated from Spanish social security data. \*\*\* Daily inequality measures from C. Dustmann, J. Ludsteck, U. Schonberg: Revisiting the German Wage Structure, in: *Quarterly Journal of Economics*, Vol. 124, 2009, pp. 843–881.

sectional and panel surveys,<sup>5</sup> social security records have large sample sizes, complete coverage of the segment of the population that is engaged with the social security administration and accurate earnings measurements. In addition, these data represent a unique source of consistent information on male earnings in the Spanish labour market for a long period of twenty years.

Figure 1 shows the main descriptive result of our investigation: the evolution of the logarithm of the 90/10 percentile ratio of male daily earnings – a commonly used measure of inequality – between 1990 and 2010. The figure shows that inequality closely followed the evolution of the unemployment rate. During the 1997–2007 expansion, inequality decreased by ten log points, while between 2007 and 2010 it increased by the same amount. These are large fluctuations by international standards. By comparison, male earnings inequality in the US increased by 16 log points between 1989 and 2005, while the increase in German earnings inequality was slightly lower (see Table 1 for an international comparison).

The impact of cyclical fluctuations on daily earnings inequality is a priori ambiguous. For instance, a recession

\* The opinions and analysis here are the responsibility of the authors and, therefore, do not necessarily coincide with those of the Banco de España or the Eurosystem.

1 C. Goldin, L.F. Katz: The Origins of Technology-Skill Complementarity, in: *Quarterly Journal of Economics*, Vol. 113, 1998, pp. 693–732.

2 D.H. Autor, F. Levy, R.J. Murnane: The Skill Content of Recent Technological Change: An Empirical Exploration, in: *Quarterly Journal of Economics*, Vol. 118, 2003, pp. 1279–1334.

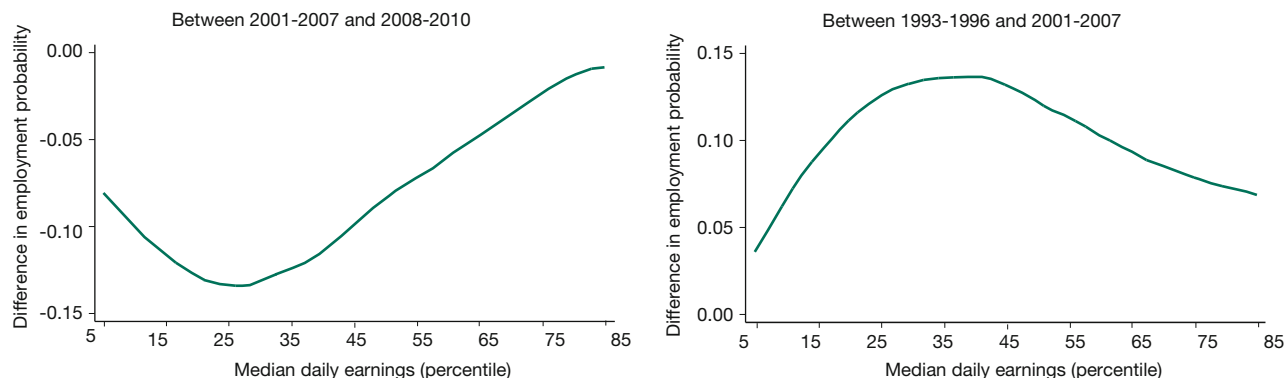
3 T. Lemieux: The Changing Nature of Wage Inequality, in: *Journal of Population Economics*, Vol. 21, No. 1, 2008, pp. 21–48.

4 See S. Bonhomme, L. Hospido: The Cycle of Earnings Inequality: Evidence from Spanish Social Security Data, mimeo, 2013, available at: <http://www.laurahospido.com/InequalitySpainOct2013.pdf>; and S. Bonhomme, L. Hospido: Earnings inequality in Spain: new evidence using tax data, in: *Applied Economics*, Vol. 45, 2013, pp. 4212–4225.

5 See e.g. J. Pijoan-Mas, V. Sanchez-Marcos: Spain is Different: Falling Trends of Inequality, in: *Review of Economic Dynamics*, Vol. 13, 2010, pp. 154–178; R. Carrasco, J.F. Jimeno, A.C. Ortega: Accounting for Changes in the Spanish Wage Distribution: The Role of Employment Composition Effects, Banco de España working paper 1120, 2011; M. Izquierdo, A. Lacuesta: The contribution of changes in employment composition and relative returns to the evolution of wage inequality: the case of Spain, in: *Journal of Population Economics*, Vol. 25, 2012, pp. 511–543; and J. Casado, H. Simón: La evolución de la estructura salarial en España (2002–2010), mimeo, 2013.



**Figure 2**  
**Employment growth as a function of daily earnings**



Notes: y-axis – difference in percentage of days worked by an individual relative to days present in the sample between 2001-2007 and 2008-2010 (left) and between 1993-1996 and 2001-2007 (right). x-axis – rank of an individual in the distribution of median daily earnings during the period. Local linear regression; bandwidth chosen by leave-one-out cross-validation.

Source: Social security data.

can affect wages but also the composition of employment. If the workers who lose their jobs in a recession belong to the bottom of the distribution, composition effects would tend to decrease inequality, given that the resulting distribution would be more compressed. In contrast, if workers in the middle part of the distribution are more likely to lose their jobs, the resulting distribution will be more dispersed and hence inequality will tend to increase. Our results show that the countercyclical evolution of Spanish male earnings inequality was partly driven by changes in the composition of employment, notably in the middle part of the distribution. Figure 2 illustrates this, by showing variations in employment probabilities along the earnings distribution, between the expansion and the 2008 recession (left graph) and between the 1993 recession and the expansion (right graph). The left graph shows that the employment losses during the recent recession have been larger in the lower-middle part of the distribution of daily earnings than in the tails. The right graph shows that employment gains during the expansion were also concentrated in the lower-middle part of the distribution. This non-monotonic pattern is consistent with the decrease in inequality experienced during the expansion, as employment increased in the middle of the distribution. It is also consistent with the rise in inequality in the recent recession, as a large share of lower-middle wage workers lost their jobs.

### The role of skills and experience

We start by providing some evidence on employment and earnings for different skill groups (measured as occupation or education groups) and experience groups (using age as a proxy for experience). The upper graphs of Fig-

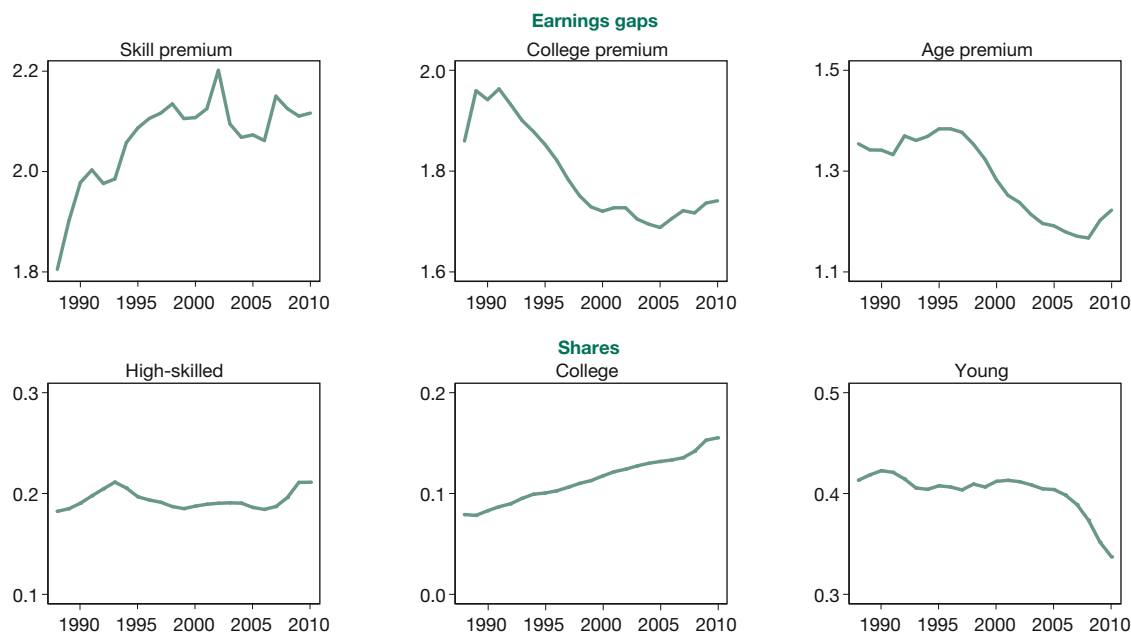
ure 3 show median daily earnings for males by skills group and experience group, while the bottom graphs show the shares of these groups in total male employment.

The top left graph in Figure 3 shows the skill premium, that is, the ratio of the median daily earnings of high-skilled workers to those of medium- and low-skilled workers. This premium increased during the early 1990s and remained comparatively stable from 1997 to 2010. The top central graph shows the evolution of the ratio of the median daily earnings of college graduates to those of non-college graduates. Interestingly, we see that the college premium decreased substantially – by roughly 13 per cent – from the early 1990s until 2005.<sup>6</sup> Indeed, this decline partly contributed to the fall in inequality during the Spanish expansion. Note also a slight increase in the college premium since 2005. The different evolution of the occupation and college earnings premia may in part be due to the fact that, as we see on the bottom graphs, the share of college graduates increased during the period, while the share of high-occupation groups remained relatively constant (except at the end of the period). Lastly, the top right graph shows the ratio of the median daily earnings of older workers (at least 35 years old) to those of young workers. We observe a sizable reduction in this age premium from 1997 to 2007 and a slight increase at the end of the period. Additionally, the bottom graph shows a decrease in the employment share of young workers during the recent recession.

<sup>6</sup> The decline in the college premium in Spain has been documented before; see e.g. J. Pijsan-Mas, V. Sánchez-Marcos, op. cit.; and F. Felgueroso, M. Hidalgo, S. Jiménez-Martín: Explaining the fall of the skill wage premium in Spain, FEDEA Annual Monograph Conference Talent, effort and social mobility, 2010.



Figure 3

**Occupation, education and age groups: earnings gaps and employment**

Notes: The "premia" in the top panel refer to ratios of median daily earnings of i) occupation groups 1-3 to groups 4-10 (skill premium), ii) college to non-college workers (college premium), and iii) workers aged 35 years or more to those younger than 35 (age premium). The bottom panel shows employment shares.

Source: Social security data.

**A sectoral perspective: the role of construction**

In order to better understand the sources of the evolution of male earnings inequality, a sectoral view is particularly helpful. The left graph in Figure 4 uses social security data to show the evolution of the share of vari-

ous sectors of male employment. The construction sector underwent a striking evolution, increasing from 14 per cent to more than 20 per cent between 1997 and 2006, then dropping to 13 per cent in 2010, i.e. less than its 1990 level. This evolution parallels the Spanish housing boom, during which the house price index per square meter ini-

Figure 4

**Employment shares and earnings ranks by sector**

Notes: The left graph shows employment shares by sector. The right graph shows sector-specific averages of ranks of daily earnings in the aggregate distribution.

Source: Social security data.

tially more than doubled in real terms. This was then followed by a housing bust beginning in 2008. Interestingly, the right graph in Figure 4 shows that, on average, construction workers belong to the lower-middle part, rather than the left tail, of the earnings distribution. Moreover, it shows that during the expansion period, the earnings of construction workers increased relative to other sectors. Taken together, these facts suggest that the construction sector in Spain had important consequences for the evolution of earnings inequality.

Figure 5 provides informal evidence of the influence of the construction sector on the evolution of inequality. The dashed lines show the evolution of earnings inequality in a sample in which construction workers are not included, while the solid lines show the evolution of inequality in the full sample. We see that the fall in inequality during the Spanish expansion, and the increase during the recent recession, are less pronounced when the construction sector is removed from the equation. This simple exercise suggests that a substantial part, but not all, of the countercyclical evolution of the male earnings distribution over the past 15 years has been driven by fluctuations in the construction sector.

### A decomposition exercise

In order to quantitatively assess the influence of skills, experience and sectors on inequality, we ran an exercise that decomposes the evolution of inequality into changes in employment composition and changes in labour prices.<sup>7</sup>

In our first decomposition exercise, we use skill and experience groups only. Of the 10.8 point increase in the 90/10 ratio between 1988 and 1996, 60 per cent is due to between-group price effects. Between 1997 and 2006, composition effects explain a third of the fall in the 90/10 percentile ratio. Between-group and within-group price effects thus explain most of the fall in inequality. Moreover, when using education as a proxy for skills, the fall in inequality between 1997 and 2006 is to a great degree attributable to changes in between-group prices (plausibly due to the decrease in the college premium). In contrast, price effects appear to be smaller between 2007 and 2010, during which more than half of the inequality increase is explained by changes in employment composition.

<sup>7</sup> For details see S. Bonhomme, L. Hospido: The Cycle of Earnings Inequality..., op. cit.

**Figure 5**  
**Log(90/10) percentile ratio, with and without the construction sector**



Notes: Solid lines are ratios of estimated unconditional quantiles of daily earnings; dashed lines are ratios of estimated unconditional quantiles of daily earnings in a sample without the construction sector (both in logs). Ratios are normalised at the beginning of each sub-period.

Source: Social security data.

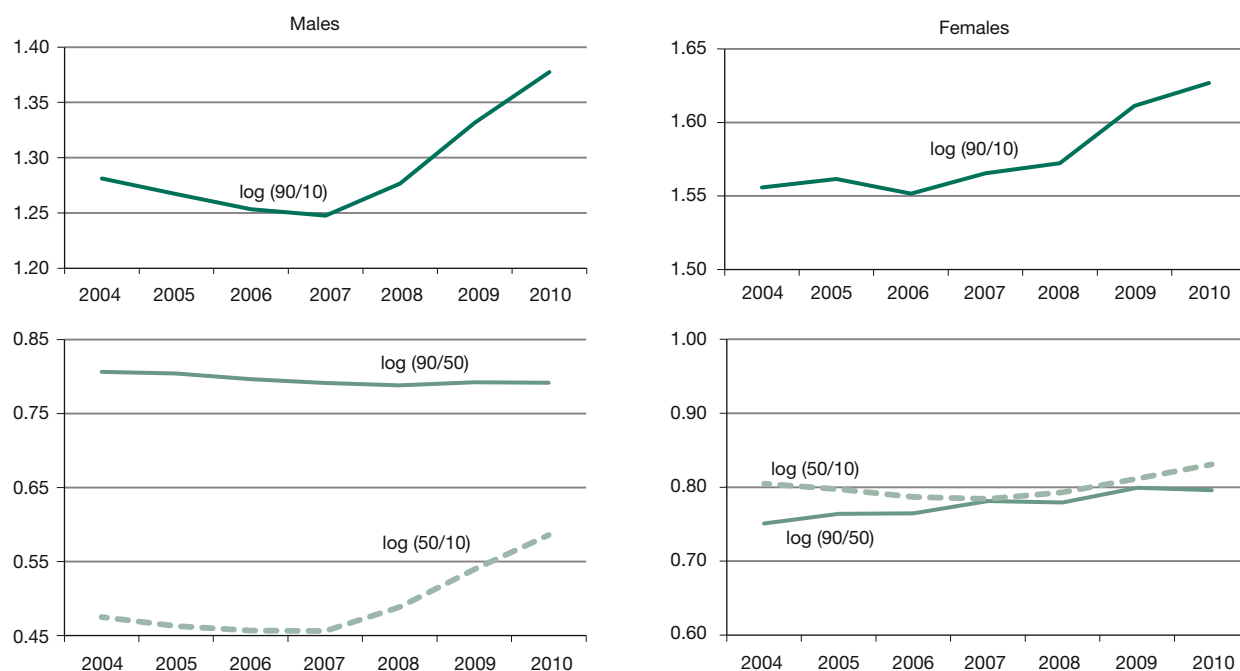
In a second decomposition exercise, we simultaneously take into account skills, experience and sectors. When accounting for sectoral composition in addition to occupation and age, price effects almost fully explain the fall in 90/50 inequality between 1997 and 2006. In addition, when accounting for sectors, composition changes explain a substantial part of the fall and subsequent increase in lower-tail inequality (50/10) between 1997 and 2010. The results of the decomposition thus provide additional evidence that changes in sectoral composition explain part of the recent evolution of inequality in Spain.

### Alternative explanations

While our analysis emphasises the role of the construction sector, other explanations may help to account for the evolution of male earnings inequality in Spain. In an earlier paper, we also consider labour market institutions – such as the minimum wage or the duality between permanent and temporary contracts – and immigration as potential explanations.<sup>8</sup> We argue that the evolution of the minimum wage is unlikely to explain the inequality developments in Spain. Indeed, most of the fall in inequality between 1998 and 2006 was accompanied by a slight decrease in the real minimum wage. Similarly, the minimum wage increased during the recent recession, at the same time as inequality was rising. In addition, while

<sup>8</sup> Ibid.

Figure 6  
Earnings inequality by gender in Spain, 2004-2010



Notes: Logarithm of the observed 90/10, 90/50 or 50/10 percentile ratios of daily earnings.

Source: Tax data.

the large immigration inflow of the early 2000s could be an important factor, our evidence suggests that immigration had relatively small effects on the evolution of Spanish earnings inequality. Lastly, we focus on the distinction between permanent and temporary workers, who enjoy very different levels of labour protection in Spain and effectively make up a dual labour market.<sup>9</sup> We find that the earnings gap between permanent and temporary workers decreased in the period 1998-2006, before starting to increase in the recent recession. One possible interpretation is that, given the high share of temporary contracts in the construction sector, this pattern in part reflects fluctuations in demand for construction workers.

### Female earnings inequality in Spain

The social security dataset is not ideal for documenting female earnings inequality because information before 2004 is retrospective. In a previous paper, we provide evidence suggesting that past cross-sectional distributions

of female earnings become less representative in the earlier period.<sup>10</sup> With this caveat in mind, we have computed inequality measures for women and found that the 90/10 inequality ratio increased by more than 15 log points between the early 1990s and the early 2000s. We also found a countercyclical pattern in the last part of the period, albeit less pronounced than for males.

In the more recent period (2004-2010), tax records with a proper longitudinal design are available for the same individuals as in the social security dataset. We use the tax data to compare male and female earnings distributions (see Figure 6).<sup>11</sup> Although female inequality also increased during the current recession, its evolution appears to follow the business cycle less clearly than male earnings inequality. In addition, while upper-tail inequality (measured by the 90/50 ratio) remains rather stable for males during this period, it shows some increase for females.

9 J. Dolado, C. García-Serrano, J.F. Jimeno: Drawing lessons from the boom of temporary jobs in Spain, in: *Economic Journal*, Vol. 112, 2002, pp. F270-295.

10 S. Bonhomme, L. Hospido: The Cycle of Earnings Inequality..., op. cit.

11 S. Bonhomme, L. Hospido: Earnings inequality in Spain: new evidence using tax data, in: *Applied Economics*, Vol. 45, 2013, pp. 4212-4225.

### Summary and policy implications

The social security data show that male earnings inequality in Spain has varied considerably over the past two decades. However, this evolution presents distinctive features compared to other developed countries such as the US or Germany. Our evidence shows that there was no apparent trend in the evolution of earnings inequality in Spain, but rather marked countercyclical fluctuations. Moreover, in contrast with the US, the evolution of Spanish inequality during the expansion reflected an increase in demand for workers in the lower-middle part of the wage distribution, with relatively low education and high rates of temporality, as well as a demand increase for immigrant workers. Such demand has sharply fallen during the recent recession, with opposite effects on inequality.

The construction sector appears to have played a special role in the countercyclical evolution of male earnings inequality in Spain. The Spanish boom of the late 1990s and

2000s was also a housing boom. Parallel to this evolution, the relative employment of construction workers initially rose and subsequently fell during the housing bust. During the expansion, not only the employment but also the relative earnings of construction workers rose steadily, consistent with the implications of a positive demand shock in this particular sector. Overall, this evidence suggests that policies that fostered the demand for housing had sizable effects on labour market outcomes.

More generally, our findings should motivate further studies of the interactions between the housing market and the labour market, both in the US<sup>12</sup> as well as in other countries that have experienced strong housing booms and busts, such as the UK, Ireland and Denmark.

12 See for example K. Charles, E. Hurst, M. Notowidigdo: *Manufacturing Decline, Housing Booms, and Non-Employment*, NBER Working Paper 18949, 2013.

Ive Marx\*

## Why Direct Income Redistribution Matters if We Are Really Concerned with Reducing Poverty

The idea that more people in paid work is key to improved social inclusion, less poverty and better equality outcomes has become common currency in Europe. At the same time, a keener awareness is emerging that job growth alone may not suffice to ensure that everybody has their share of prosperity. Many people may not be able to gain economic self-reliance and a decent standard of living unless governments invest in human capital and in services that help people to build, enhance and realise their earnings potential. The OECD stresses the crucial importance of human capital investments in the fight against growing inequality and poverty.<sup>1</sup> By the

same token, the European Commission has launched a “Social Investment Package” which also emphasises human capital investment.<sup>2</sup> Publicly-provided or subsidised services of various kinds, particularly education and care services, are seen as key instruments in this package.

All this is in tune with thinking among a number of scholars.<sup>3</sup> Some effectively advocate a radical shift from cash to care/social investment. In an influential report to the Presidency of the European Union, Esping-Andersen et al. called for a radical overhaul of welfare state architectures in Europe, stating:

\* This contribution draws on work performed in the context of the EU FP7 GINI Project. More analysis is available in the form of GINI Discussion Papers and Report. Two volumes with GINI research findings will be published by Oxford University Press in 2014, as B. Nolan, W. Salverda, D. Checchi, I. Marx, A. McKnight, I. Toth, H. Vander Werfhorst (eds.): *Changing Inequalities and Societal Impacts in Rich Countries: Analytical and Comparative Perspectives*, Oxford 2014, Oxford University Press; and W. Salverda, B. Nolan, D. Checchi, I. Marx, A. McKnight, I. Toth, H. Vander Werfhorst (eds.): *Changing Inequalities and Societal Impacts in Rich Countries: Thirty Countries' Experiences*, Oxford 2014, Oxford University Press.

1 OECD: *Divided We Stand. Why Inequality Keeps Rising*, Paris 2011, OECD Publishing.

2 European Commission: *Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Towards Social Investment for Growth and Social Cohesion – including implementing the European Social Fund 2014-2020*, COM (2013) 83 final, 2013.

3 G. Esping-Andersen, D. Gallie, A. Hemerijck, J. Myles: *Why We Need a New Welfare State*, Oxford 2012, Oxford University Press; F. Vandenbroucke, A. Hemerijck, B. Palier: *The EU needs a social investment pact*, OSE Working Paper, May 2011; N. Morel, B. Palier, J. Palme (eds.): *Towards a Social Investment Welfare State? Ideas Policies and Challenges*, Bristol 2012, The Policy Press.

As the new social risks weigh most heavily on the younger cohorts, we explicitly advocate a reallocation of social expenditures towards family services, active labour market policy, early childhood education and vocational training, so as to ensure productivity improvement and high employment for both men and women in the knowledge-based economy.<sup>4</sup>

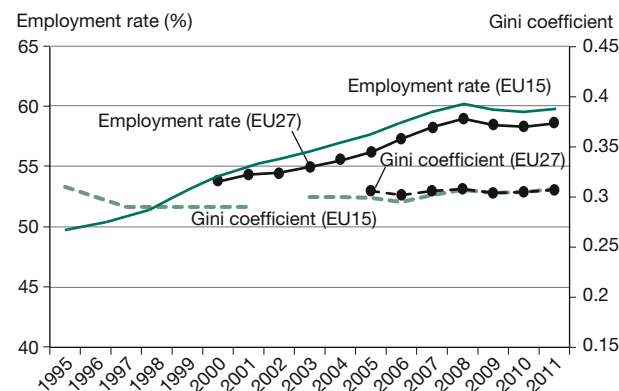
This article claims that while employment and social investment are important, effective cash redistribution matters at least as much, especially when it comes to immediate poverty alleviation among those who are affected here and now. Furthermore, and in the longer run, human and social investment policies may not yield optimal outcomes unless they are directly backed up by effective redistributive efforts. The importance of direct cash redistribution requires increased recognition, and it may well imply some rebalancing of priorities in some countries, including at the European level.

I argue that job growth is not enough. Job growth has not yielded the hoped for reductions in poverty in the past, and we should not expect otherwise for any future job growth. If we are really interested in reducing poverty in the foreseeable future, we need to revalue cash transfer systems, both for the employed and the unemployed alike. While there is scope for incremental improvement by augmenting the existing principal channels of direct redistribution – social insurance and social assistance – there probably are systemic limits to this approach. We need to think about new ways of redistributing income.

### Why employment growth is not enough

There is considerable intuitive appeal to the notion that “the best protection against poverty is a job” – a ubiquitous political slogan. People who are not employed tend to occupy the lower strata of the income distribution. If more jobs become available and low-income people take up these jobs and improve their income situations, the result is a selective rise of incomes at the lower end of the spectrum and thus a reduction in both income inequality and in the share of the population in poverty relative to the median. The important proviso of course is that work pays more on average than remaining inactive. The period before the current crisis saw a strong rise in employment levels in the EU. These did

**Figure 1**  
**Rising employment, stagnant inequality**



Source: Eurostat.

not come about by accident.<sup>5</sup> In most EU countries, a marked policy shift had taken place towards boosting labour market participation levels and reducing benefit dependency among those of working age.

So how did employment growth affect the economic position of people at the bottom of the distribution? Employment increased quite substantially in many European countries prior to the crisis. Yet those increases were not reflected in a corresponding decrease in income inequality or the poverty rate (see Figure 1). At the very minimum, it can be said that highly significant net employment gains did not yield lower household inequality levels and that in more than one instance employment growth was in fact accompanied by rising inequality and relative income poverty.

Why was that? Distributive outcomes result from a large number of often complexly interrelated factors, and many factors not immediately related to labour market trends account for observed inequality and poverty trends. There are three principal reasons why past job growth did not produce poverty declines: a) because past job growth did not sufficiently benefit poor people, while at the same time the adequacy of minimum income protection deteriorated; b) because getting a job does not always raise income enough to escape poverty; and c) because median equivalent income shifted upwards in association with job growth and the policies that stimulate job growth. There are many other factors,

4 G. Esping-Andersen et al., op. cit.

5 T. Van Rie, I. Marx: The European Union at Work? The European Employment Strategy from Crisis to Crisis, in: Journal of Common Market Studies, Vol. 50, No. 2, 2012, pp. 335-356.

often country-specific, that also play a role, but we will briefly highlight these three.

First, most people who are considered at risk of poverty live in so-called “workless households”, i.e. households in which no working age adult has an attachment to the labour market.<sup>6</sup> People of working age living in such workless households face the highest poverty rates by far, and they – along with their dependent children, if any – also tend to experience the most severe financial hardship. The concentration of non-employment within the same household may be due to many factors, including educational homogamy, geographical concentration and the pointed tax/benefit impact on couples. In this light, it is perhaps not altogether surprising that employment growth did not produce commensurate drops in workless household rates. In many countries, job growth resulted in more double or multi-earner households, but only to a more limited extent in fewer no-earner households.<sup>7</sup> While the positions of households that acquired additional income improved, the relative income position of (near) jobless households deteriorated because of the general erosion of minimum income protection levels, certainly in terms of social assistance but also in some cases at the level of social insurance.

A second reason why employment growth does not necessarily result in less poverty is that a job may not pay enough to escape poverty. This is what is commonly referred to as “in-work poverty”. What poor, jobless people often require is not just a job, but a job that pays significantly more than their benefits. This applies at the individual level, but it crucially also applies at the household level.

A third reason why past employment growth did not translate into lower relative poverty rates is because of the poverty line dynamics associated with employment growth and, more indirectly, the policies, particularly at the macro level, which stimulate job growth. If employment growth results in rising median living standards but not in rising living standards in the lower segments of the distribution, the effect may well be a rise in relative income poverty. This is in effect what we observe in a number of countries. The poorest did not manage to take full advantage of growing demand for labour where

and when this happened, and their plight was further exacerbated by the fact that passive protection levels, as provided through social insurance and social assistance, eroded relative to wages and living standards.

### The inadequacy of minimum income protection

Adequate protection against severe financial poverty is arguably the first duty of the welfare state. It is also an explicitly stated priority of redistributive and policy efforts in many countries and at the EU level, where a poverty reduction target is part of the Europe 2020 strategy. Additionally, minimum income protection provisions mark the floor for other income maintenance provisions; minimum social insurance levels and minimum wages are almost always above the level of the social safety net. In that sense, indicators of minimum income protection also tell us something about the generosity of other income maintenance provisions.

In this section, we draw on the CSB Minimum Income Protection Indicators (MIPI) dataset.<sup>8</sup> In this dataset, net income packages are calculated using the so-called model family approach, where the income package of households in various situations (varying by household composition and income levels) is simulated, taking into account taxes and all relevant benefits for which such households are eligible. The importance of adequate social safety nets really hit home when the economic downturn of a magnitude unseen in decades struck in 2008. Despite some differences among individual countries, unemployment levels generally surged, causing dramatically increased demands for income protection. Safety nets played particularly important roles as the final barrier against severe poverty and the disruptive consequences thereof.

Yet minimum income benefit packages for the able-bodied of working age have become increasingly inadequate in providing income levels sufficient to raise households above the EU at-risk-of-poverty rate, defined as 60 per cent of median equivalent income in each country. The overall tendency in the 1990s was one of almost uniform erosion of benefit levels relative to the development of wages. This downward trend in the relative income position of families receiving social assistance changed somewhat in the 2000s, when the erosion of the level of benefit packages came to a halt

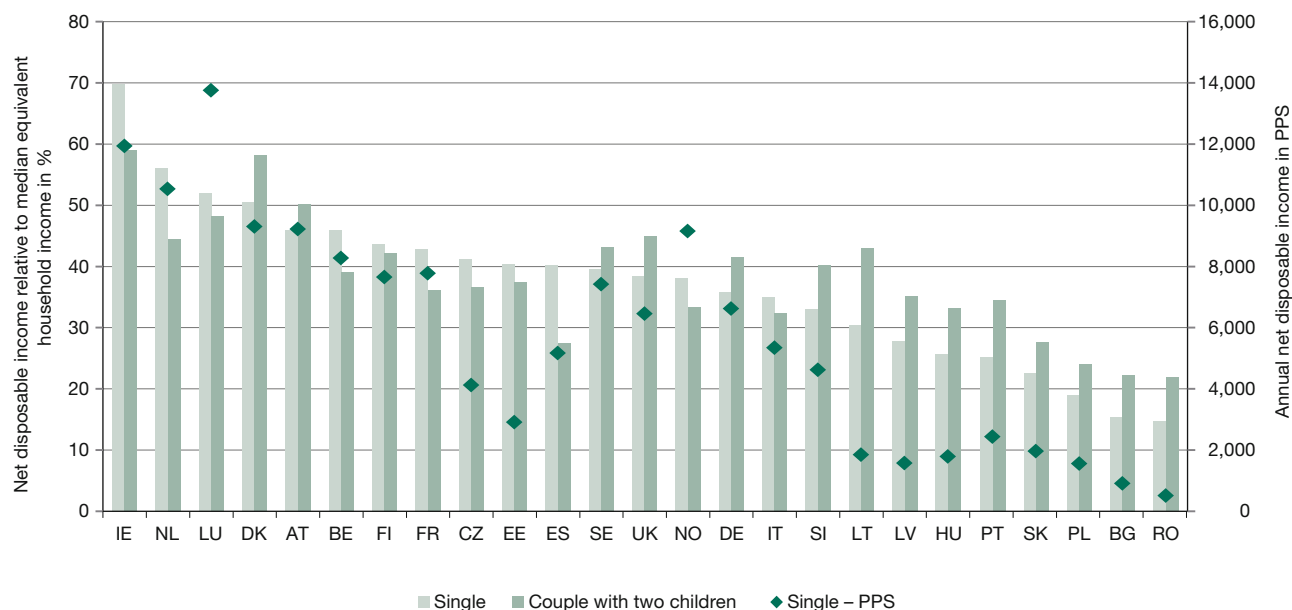
6 M. de Graaf-Zijl, B. Nolan: Household joblessness and its impact on poverty and deprivation in Europe, in: *Journal of European Social Policy*, Vol. 21, 2011, pp. 413-431.

7 V. Corluy, F. Vandenbroucke: Household joblessness, in: B. Cantillon, F. Vandenbroucke (eds.): *Reconciling Work and Poverty Reduction. How successful are European welfare states?*, Oxford 2013, Oxford University Press.

8 N. Van Mechelen, S. Marchal, T. Goedemé, I. Marx, B. Cantillon: *The CSB-Minimum Income Protection Indicators Dataset (CSB-MIPI)*, Herman Deleeck Centre for Social Policy, University of Antwerp, 2011.



Figure 2  
Net minimum income packages, 2012



Note: In some countries, such as the Italy and Bulgaria, time limits apply, either formal or discretionary. In order to avoid additional assumptions, the levels displayed here do not take these time limits into account. Where minimum income protection is a regional or local responsibility, levels refer to the situation in a large city or region (for Spain: Catalonia, for Italy: Milan, for Norway: Oslo, for Sweden: Stockholm). Poverty thresholds as available on Eurostat, 2011, referring to 2010 income (exception: Ireland, for which 2011 data was not yet published).

Sources: N. Van Mechelen, S. Marchal, T. Goedemé, I. Marx, B. Cantillon: The CSB-Minimum Income Protection Indicators Dataset (CSB-MIPI), Herman Deleeck Centre for Social Policy, University of Antwerp, 2011; Eurostat, 2011.

in a number of countries. In the first years of the crisis, a small number of countries took extra steps to increase protection levels.<sup>9</sup> However, despite a number of positive developments, net incomes of minimum income recipients continue to fall well short of the EU at-risk-of-poverty threshold in all but a few EU countries, as shown in Figure 2. The size of the gap between the level of the social safety net and the poverty threshold varies across countries and family types, but it is generally quite substantial.

### Are effective income protection arrangements affordable and feasible?

Why are social safety nets not more adequate? There are at least two potential impediments: first, adequate

social safety nets are not affordable, and second, adequate social safety nets undermine the work ethic and people's willingness to work.

Are adequate social safety nets too costly? Final safety net provisions (social assistance schemes) generally constitute only a fraction of total social transfer spending, with the bulk of outlays going to pensions, unemployment and disability insurance, child benefits, and other benefits. Vandenbroucke et al. have made tentative calculations of the redistributive effort required to lift all equivalent household incomes to the 60 per cent of median level.<sup>10</sup> In most European countries, this expenditure amounts to less than five per cent of the aggregate equivalent household income that is above the 60 per cent threshold. Nowhere is it higher than nine

9 S. Marchal, I. Marx, N. Van Mechelen: The Great Wake-Up Call? Social Citizenship and minimum income provisions in times of crisis, in: Journal of Social Policy, 2014 (forthcoming).

10 F. Vandenbroucke, B. Cantillon, N. Van Mechelen, T. Goedemé, A. Van Lancker: The EU and Minimum Income Protection: Clarifying the Policy Conundrum, in: I. Marx, K. Nelson (eds.): Minimum Income Protection in Flux, Basingstoke 2013, Palgrave MacMillan.

per cent. Such a mechanical calculation ignores incentive effects and behavioural changes (more poor people may prefer social assistance to low-paid jobs; the non-poor may reduce their work effort). The real cost of such an operation is probably higher than the mechanical effect, and the calculation may be seen as indicating a lower boundary for the distributive effort that is required. Still, the calculation also illustrates that the cost of an adequate social safety net is not necessarily outside the realm of the conceivable.

Are adequate social safety nets compatible with work incentives? Despite recurring concerns over the potential work disincentive effects of social safety nets, empirical studies tell a more nuanced story.<sup>11</sup> The income gap between full-time dependence on minimum income benefits and a full-time job at the minimum wage (or the lowest prevailing wage) is in fact quite substantial in most European countries, especially for single persons. In some countries and under certain circumstances, particular groups such as lone parents with young children gain relatively little from moving into a low-paid job, especially when childcare costs are accounted for. Partial transitions into work – moving to a small, part-time job – also do not pay in certain circumstances. But generally speaking, long-term dependence on social assistance benefits is not an attractive financial option relative to a full-time minimum wage job in most of Europe. The hypothetical Europe-wide introduction of social assistance minimum levels equal to 60 per cent of median income would, however, create a financial inactivity trap in many countries.<sup>12</sup> In countries such as Bulgaria, Estonia, Slovenia and Lithuania, the net income of a single benefit recipient would be between 25-30 per cent higher than the equivalent income of a single person working at the minimum wage; in Spain and the Czech Republic, the relative advantage of the benefit claimant would amount to around 15 per cent. This implies that if such countries would wish to move towards better final safety net provisions, minimum income floors would have to be raised at least in step.

This would require substantial increases in minimum wages or in effective wage floors. In 2013, 20 member states of the European Union have a national minimum

wage, set either by the government, often in cooperation with or on the advice of the social partners, or by the social partners themselves in a national agreement. Using 2010 data, Figure 3 illustrates that only for single people and only in certain countries do net income packages at the minimum wage level (taking into account taxes and individual social security contributions as well as social benefits) reach or exceed the EU at-risk-of-poverty threshold, set at 60 per cent of median equivalent household income in each country. For lone parents and sole breadwinners with a partner and children to support, net income packages at the minimum wage are below this threshold almost everywhere, usually by a wide margin. This is the case despite shifts over the past decade towards tax relief and additional income support provisions for low-paid workers.<sup>13</sup>

When it comes to the question of whether and to what level minimum wages and hence minimum income benefits in general could be increased, opinions clearly diverge. Martin and Immervoll contend that “[o]n balance, the evidence shows that an appropriately-set minimum wage need not have large negative effects on job prospects, especially if wage floors are properly differentiated (e.g. lower rates for young workers) and non-wage labour costs are kept in check.”<sup>14</sup>

Concerns about work disincentive effects of social safety nets are legitimate, as are concerns over potential negative employment effects of minimum wages, especially if these were to be set at levels high enough to keep households solely reliant on minimum wage jobs out of poverty. The fact remains, however, that countries like Denmark or the Netherlands combine what are comparatively among the highest levels of minimum protection for workers and non-workers alike with labour market outcomes that on various dimensions are also among the best in the industrialised world.

Elaborate active labour market policies, specifically activation efforts directed at social assistance recipients, coupled with intensive monitoring and sanctioning of non-compliance, appear to play a key role here. The strength of overall labour demand may also be a key contextual factor for such associated policies and practices to effectively result in low levels of long-term

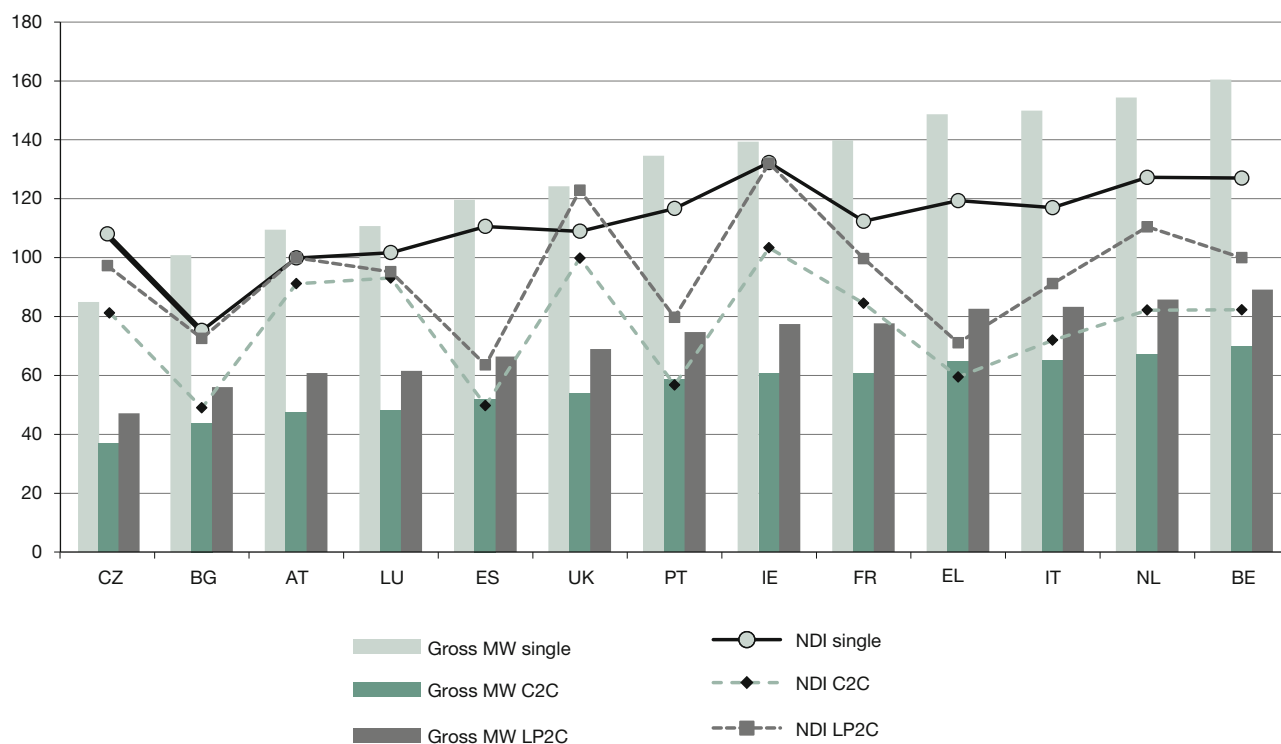
11 H. Immervoll: Minimum-Income Benefits in OECD Countries: Policy Design, Effectiveness and Challenges, in: D. Besharov, K. Couch (eds.): *Measuring Poverty, Income Inequality, and Social Exclusion. Lessons from Europe*, Oxford 2012, Oxford University Press; S. Marchal, N. Van Mechelen: *Activation Regimes*, GINI Discussion Paper, 2013.

12 See F. Vandenbroucke, B. Cantillon, N. Van Mechelen, T. Goedemé, A. Van Lancker: *The EU and Minimum ...*, op. cit.; S. Marchal, N. Van Mechelen, op. cit.

13 I. Marx, S. Marchal, B. Nolan: *Mind the Gap: Net Incomes of Minimum Wage Workers in the EU and the US*, in: I. Marx, K. Nelson (eds.): *Minimum Income Protection in Flux*, Hampshire 2012, Palgrave Macmillan.

14 J.P. Martin, H. Immervoll: *The minimum wage: making it pay*, OECD Observer 261, 2007.

**Figure 3**  
**Gross minimum wages and net incomes at minimum wage, 2012**  
 in % of the relative poverty threshold



Note: MW = Minimum wage, NDI = Net disposable income, C2C = Couple with two children, LP2C = Lone parent with two children. Poverty thresholds as available on Eurostat, 2011, referring to 2010 income (exception: Ireland, for which 2011 data was not yet published).

Sources: N. Van Mechelen, S. Marchal, T. Goedemé, I. Marx, B. Cantillon: The CSB-Minimum Income Protection Indicators Dataset (CSB-MIPI), Herman Deleeck Centre for Social Policy, University of Antwerp, 2011; Eurostat, 2011.

dependence. Replicating the activation, empowerment and sanctioning aspects associated with comparatively generous systems may well be difficult enough in itself. Replicating a context where job growth is strong and where jobs are sufficiently rewarding and attractive may be even more difficult. In that sense, we may not want to be overly optimistic about the possibilities of introducing similarly generous minimum income protection provisions in other settings.

### Do we need new redistributive mechanisms?

It is increasingly argued that more effective redistribution will not come from augmenting/expanding the traditional channels of income support, for example from

more generous social insurance or social assistance levels or from higher minimum wages. These are seen not only as failing to address today's social risks and needs, but as exacerbating underlying problems such as exclusion from the labour market and entrapment in passive benefit dependency. They are considered by some as standing in the way of innovative mechanisms of social protection that are pro-active and self-sufficiency enhancing, such as active labour market policies and services such as child care, and improved education and training.

An alternative option, then, is to consider other forms of (targeted) income supplements for households that provide some level of income protection but that are also conducive to labour market participation.

Kenworthy describes such a programme:

Given the importance of employment and working hours for the market incomes of low-end households, policy makers must guard against programmes that provide attractive benefits without encouraging or requiring employment. An ideal transfer would be one that both boosts the incomes of low-earning households and promotes employment by able working-aged adults. As it happens such a programme exists. Referred to variously as “in-work benefit” or “employment-conditional earnings subsidy”, it is best exemplified by the Working Tax Credit (WTC) in the United Kingdom and the Earned Income Tax Credit (EITC) in the United States.<sup>15</sup>

Under these schemes, households with low earnings do not pay taxes but instead receive additional money through the tax system. Negative income taxes have been garnering increased interest of late. Several European countries have contemplated introducing Anglo-Saxon-style tax credits, or have done so in some form. Yet the reality is that most of these schemes exhibit only a faint resemblance to the American EITC or the British WTC. Interest in EITC-type schemes remains strong, however, in the public debate and in the academic literature. That interest seems entirely legitimate. The empirical evidence shows the American EITC, in combination with other policy reforms and several increases in the minimum wage, to have produced some significant results, including marked increases in labour market participation and improvements in living standards among some segments of the population, especially single-parent households. It needs to be noted, however, that these initial results happened in favourable economic circumstances, including strong labour demand and low unemployment.

There are potential downsides to subsidising low-paid work. While the EITC is intended to encourage work, EITC-induced increases in labour supply may drive wages down, shifting the intended transfer towards employers. In addition, whether EITC-type schemes can work equally cost-effectively elsewhere, as Kenworthy and others suggest, is not self-evident.<sup>16</sup> Micro-simulation studies suggest that in-work benefit schemes that work well in certain settings do not necessarily perform

equally well in a different context.<sup>17</sup> Family composition, individual earnings distributions and family income structures drive outcomes in a very substantial way. It remains to be explored whether alternative designs are conceivable that have better outcomes in continental European settings and that are realistically affordable.

## Conclusion

Richer countries appear to face an uphill battle to keep economic inequality in check. The evidence that income inequality has been trending upwards is relatively robust, although important discrepancies sometimes exist across the data. Patterns of rising income inequality are also not consistent with accounts emphasising the role of exogenous drivers like globalisation and skill-biased technological change. Rises in inequality, where these have taken place, have mostly occurred in short spells that suggest an equally important role for policy and institutional change within countries. Rising inequality may be seen as problematic for a host of reasons. Whether rising inequality is actually harmful to a range of wider societal outcomes, including health, crime or social cohesion, remains a subject of much debate.

There can be no doubt, however, that people at the very bottom of the income distribution do face very real consequences from having insufficient financial resources. Financial poverty affects health, material living conditions, social ties, etc. It also affects child development and later chances in life. In other words, from the viewpoint of the empirical evidence, there is a clear imperative to redistribute income so as to alleviate poverty and promote equality of opportunities. This brings the state, and its redistributive role, back to centre stage. A substantial role for the state, including in the form of direct income redistribution and poverty alleviation, is essential if we are really concerned with reducing poverty. It is also compatible with a well-functioning and dynamic economy. In fact, the best performers among the rich countries have one thing in common: a large welfare state that invests in people, stimulating and supporting them to be active and adequately protecting them when everything else fails. This continues to offer the best prospect for rich countries pursuing growth with equality.

15 L. Kenworthy: *Economic growth, social policy and poverty*, Oxford 2011, p. 44, Oxford University Press.

16 Ibid.

17 I. Marx, J. Vanhille, G. Verbist: *Combating in-work poverty in Continental Europe: an investigation using the Belgian case*, in: *Journal of Social Policy*, Vol. 41, No. 1, 2012, pp. 19-41; F. Figari: *Can in-work benefits improve social inclusion in the southern European countries?*, in: *Journal of European Social Policy*, Vol. 20, 2011, pp. 301-315.