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Introduction

Much of my research has been concerned with income inequality in OECD countries. For 40 years, I have been interested in the measurement of inequality. Can we compare the degree of inequality in different countries? How reliable are the data? Does the choice of inequality index affect the conclusions? For 40 years, I have been seeking to understand the causes of inequality. Why are some countries more unequal than others? Why does inequality change over time? How far can inequality be moderated by government policy?

My title refers to "rich" countries, and the empirical evidence cited in this lecture refers to countries of the OECD. I shall not be considering the distribution of income in the world as a whole. This is not because I believe the distribution within rich countries to be more important than global inequality. Quite the reverse. In my view, issues of global social justice are amongst the most pressing that we face. When discussing the impact of globalisation, most people focus on the loss of jobs to China and the benefits from importing cheap products. But they tend to neglect the fact that advances in communication have made apparent, to an extent not previously the case, the large differences in standards of living across the world: the inequality between countries and the inequalities within poor countries. $1 a day has a different meaning in Uganda from $1 or €1 a day in Italy. Even however allowing for differences in purchasing power, the $1 a day poverty line underlying the United Nations Millennium Development Goals is less than 8% of the per capita income of Italy. I shall not be presenting evidence on countries such as Uganda, because I lack the necessary background knowledge. In particular, I have not studied China or India, and what is happening in these two countries is crucial to understanding global inequality.

My title refers to "income", and I shall be concentrating on this dimension of inequality. As you will be well aware, there are many other important dimensions. There is inequality before the law. There is inequality in political power. There is, rightly, much emphasis on reducing inequalities of opportunity. Many people are concerned more that there should be a fair race than that there should be a fair distribution of the prizes. Here, however, I am concerned with the outcome of the race. Moreover, I shall be largely considering one indicator of success: the money income of households. This is only a partial measure of social welfare. It typically leaves out income in kind, such as food grown at home or benefits provided by your employer. It refers only to private resources, and takes no account of the benefits derived from public expenditures, such as those on education and health care. The analysis makes no allowance for within household inequality. Household income may be regarded as less satisfactory than household expenditure as a measure of standard of living: inequality of consumption may have risen less than that of income. On the other hand, the revealed preference of governments, via the medium of their statistical agencies, is for the household distribution of money income, and it is on this definition that I concentrate here. In broad terms, the variable on which I focus is the sum of the earnings of all household members, including self employed earnings, plus income from savings such as interest or dividends, plus state transfers such as pensions, minus income tax and social security contributions. The resulting disposable income may then be adjusted for differences in household size and composition to give the *equivalent disposable income of the household*.

What do we know about the distribution of household equivalent disposable income in different countries? The short answer is that we know a great deal more than we did thirty years ago, when OECD first published such a comparative study. There have been great advances in the availability of data. At that time, there were a number of countries which had no regular source of information on the distribution of income. Italy was quite early to enter the field, in that the Bank of Italy Survey of Household Income and Wealth (*Indagine sui bilanci delle famiglie italiane)* began in 1965 (Brandolini, 1999). This has proved to be a far-sighted investment, and in particular I would like to praise the willingness of the Bank to make the data available to academic and other researchers. In the UK, the question of access has been more difficult, and it was only in the late 1970s that the micro-data, the data on households individually, became regularly available. On a world scale, as a measure of the increase in coverage, we may note that the 1980 *World Development Report* (World Bank, 1980, Table 24) contained income distribution data for 2 low-income countries, 15 middle-income countries, and 11 industrialised market economies. In total, there were data for 28 of the 125 countries listed. A quarter of a century later, the 2005 *World Development Report* (World Bank, 2005) contained data for no fewer than 121 countries. There were blanks for only 13 of the countries listed.

The second problem is that of comparability across countries. When the first OECD study (Sawyer, 1976) was published, a number of countries protested that it put side by side data that were not comparable. The data for France, for example, came from fiscal records, not from a household survey such as the Bank of Italy survey. The tax records catch some people that do not respond to household surveys, particularly those with higher incomes, and some people are covered by surveys who are missing from the tax statistics, in this case particularly those with low incomes. So there are some reasons for expecting tax records to show greater inequality. This led France to argue that the inequality of incomes in their country had been overstated relative to other countries using household surveys.

The problem of comparability has been addressed head on by an important collaborative project, the Luxembourg Income Study (LIS). The LIS project began in 1983 under the joint sponsorship of the government of Luxembourg and the Centre for Population, Poverty, and Policy Studies. The main objective of the LIS project has been to create a micro-database containing social and economic data collected in household surveys from different countries. The database currently contains information for some 25 countries for one or more years. Documentation concerning technical aspects of the survey data is available to users. The website address is http://www.lis.ceps.lu.

The aim of the LIS dataset is to render the data more comparable across countries. I say "more comparable" because it is limited to working with the available sources. In this respect it differs from the European Community Household Panel (ECHP), where the survey was designed on a common basis. It differs from the new *Community Statistics on Income and Living Conditions (EU-SILC)*, which is to become the EU reference source for income, poverty and social exclusion EU-SILC, which again attempts ex ante standardization (Marlier et al, 2006). LIS, in contrast, seeks to make an ex post standardization, using the micro data. The success which it has achieved is perhaps demonstrated by the fact that, when the OECD returned to international comparisons in 1995, using the LIS data (Atkinson, Rainwater and Smeeding, 1995), the findings were generally accepted.

What did they show? Suppose that we measure inequality by the Gini coefficient, a statistical measure summarising the extent of income differences. It varies between 0 (complete equality) and 100 percent (one person gets all the income). There is a clear geographic pattern. The Scandinavian countries, and some of the new Member States of Eastern Europe, have the lowest levels of income inequality, followed by Benelux, Germany, France, and Austria. Then come the Anglo-Saxon countries, in whose ranks we also find Italy. Then comes the United States, and finally the highest Gini coefficients are recorded by Russia and Mexico. The overall range is some 25 percentage points. Such an extent of difference between countries is important. If, following Amartya Sen, we treat the Gini coefficient as measuring the welfare loss from inequality, this means that the US, with a Gini of say 36%, needs a national income about 17% higher to reach the same level of welfare as a country like Norway with a Gini of 25%.

The Gini coefficient, despite its impeccable origins, is only one measure of inequality, and if we use other measures we may reach different conclusions. Suppose for example that, following the theory of justice of John Rawls (1972), we focus on the share of the bottom 20%. In other words, we ask how much of total income goes to the bottom fifth. Then some countries change ranking. Italy for example ranks just above UK in terms of the Gini but has a smaller share for the bottom 20%. But the same broad conclusions emerge, and the contrast between Europe and the United States becomes even more striking. The Finnish national income, for example. can be only 60% of that in the US and still give the same income to the bottom 20%.

Levels of inequality are important, but people are particularly concerned with how they are changing over time. This is one reason that the inverse-U hypothesis of Simon Kuznets (1955) aroused so much interest, and continues to do so. Kuznets argued that income inequality could be expected to change with the level of development. As economies modernised, and he had in mind the Industrial Revolution, the traditional rural agricultural economy would be increasingly replaced by a modern industrialised economy. People would migrate, as they have done in Italy, from a low-wage, relatively equal, sector to a high-wage, more unequal sector. Industrialisation would open up an income gap, and income inequality could be expected to rise. Beyond a certain point, however, migration would become equalising, as most people were in the modern sector. Beyond this point, which he suggested in 1955 had been passed by the US, UK and others, income inequality would fall. We would have an inverted U-pattern.

Now one can see why this theory would appeal. It suggests that rising inequality is only temporary. There are however several major problems. The first is that the period of falling income inequality in a number of European countries also coincided with substantial expansion of government redistribution. Progressive income taxation and the growth of the welfare state had a powerful impact on the disposable income of households. It was also a period when the distribution of wealth became less concentrated, not least on account of the spread of owner-occupation and of popular savings media. The inverse-U theory of Kuznets is a theory of wage income, not a theory of fiscal redistribution, nor of the concentration of capital (although he does refer to this, it does not feature in the model), so that the forces for equalisation lay outside his explanation.

The second major problem is that, in a number of OECD countries, the last 25 years have seen rising, not falling, income inequality. Indeed in the US, the Kuznets effect seemed to stop operating just as he wrote. Many people in the US are firmly convinced that the period of diminishing inequality after the Second World War has been replaced by a period of widening differences. Harrison and Bluestone (1988) have christened it the "great U-turn". According to Alderson and Nielsen, "after four decades of moderating inequality, income inequality in the United States began to increase around 1970. Since then it has risen at a steady rate" (2002, page 1246). They go on to suggest that the upswing has an "international character". Cornia and Court describe how "the Golden Age, a period of stable global economic growth between the 1950s and early-mid 1970s, witnessed declines in income inequality in a number of countries (with some exceptions). This trend was reversed over the last two decades as country after country has experienced an upsurge in income inequality" (2001, page 7). For the US, the rise is evident: the Gini coefficient has risen by some 5 percentage points. On the other hand, the pattern in other OECD countries, particularly the non-Anglo-Saxon countries, is less clear. This has led some to conclude that there has been little sustained distributional change. Gustaffson and Johansson find for 16 industrialised countries that "the correlation between the Gini coefficient and the time-variable is almost zero" and that there is only "a weak U-shaped relationship" (1999, page 591). At the same time, this conclusion applies to the distribution of *income,* whereas if we look at earnings, we find that in the majority of OECD countries (13 out of 20) there was a widening of the earnings distribution in the 1980s and/or the 1990s.

Can we rescue the Kuznets hypothesis? The first point made earlier – that his explanation ignores fiscal redistribution – suggests that we should concentrate on earnings. Indeed it is a theory of individual earnings (not total household earnings). Secondly, his theory is a theory of structural change, and this is not limited to industrialisation. It is natural to add a third sector – the service sector. If this sector has a more dispersed distribution of earnings, ranging from low-paid personal services to high-paid professional services, and with less unionisation, then the replacement of manufacturing by service employment may cause income inequality to begin to rise again. The inverse-U may become a U. Moreover, this explanation can be linked to the commonly advanced hypothesis that rising earnings dispersion is due to globalisation. To do this, of course, we have to go beyond the closed economy framework assumed by Kuznets. The rich countries have to be exporting services (such as those of the City of London) to pay for their increased imports of manufactures.

Stretched in this way, the Kuznets approach may provide a structural change explanation for the evolution of the distribution of earnings. However it is not the only possibility. Lindbeck and Snower (1996), for example, have suggested that the key change has been that in organisational structure. They contrast "Tayloristic" organisations where workers are specialised and co-ordinated by a hierarchy of managers, with "holistic" organisations where there is multi-tasking and flatter hierarchies. They argue that the restructuring of Tayloristic firms into holistic organisations is one explanation of increased earnings dispersion.

Moreover, there are explanations that make no appeal to structural change. There is a widely held view that rising earnings dispersion is due to skill-biased technological change. The impact of information and communication technologies is shifting the demand curve for skilled labour outwards at a faster rate than the supply is increased.

How do these different stories about the evolution of earnings relate to historical experience? I shall focus on the United States for two reasons. The first is that distributional data go back further into the past than in many countries, including Italy. The second is that the American economist Paul Krugman recently gave a crisp summary of "the long term history of inequality in America" in the *International Herald Tribune* 19 August 2006, that I believe needs to be qualified before it becomes part of American folklore.

According to Krugman, there have been four eras of American inequality since 1929. The first is the "Great Compression", from 1929 to 1947. During the 1930s and the Second World War, there is evidence of a substantial narrowing of wage dispersion in the US. This could be interpreted as the second phase of a Kuznets inverted-U, but the evidence of a decline in dispersion for the distribution as a whole dates only from 1939, and we cannot ignore the impact of wartime wage controls. The role of the government involves not just fiscal redistribution but also intervention in the determination of market incomes.

This was followed by the postwar boom, or what in Europe is known as the Golden Age, or Trente Glorieuses. I will come back to this, as I will to the aftermath of the boom – the stagflation period of the 1970s. The fourth period, the "New Gilded Age" according to Krugman, is that commencing in 1980 and ending at some date yet to be determined. Here I have no quarrel with his description of a period when the gains from growth have been largely received by those at the top of the distribution. As we know, this period saw the top 1% more than doubling their share of total income (the same was true in the UK).

Earnings dispersion fell therefore up to the end of the 1940s and rose after the 1980s. This is agreed, but it is on the in-between period that I want to focus and where my conclusions are different from his. According to Krugman, the postwar boom – the Golden Age - was "an era of widely shared growth", and he is not alone in making this claim: "the postwar years of prosperity were marked by … relative stability in earnings inequality. The benefits of economic growth were large and widely distributed (Morris and Western, 1999, page 625). Then, during the Stagflation period, "everyone lost ground". So we have this picture of a third of a century from 1947-1980 of "normality", or as Krugman argues "an era of bipartisanship and political moderation", when earnings dispersion was stable.

If, however, one looks at the evidence on the distribution of earnings from the US Current Population Survey, available annually in tabulated form from 1945, it is apparent that the Great Compression came to an end in 1950 and was replaced by a period of steadily increasing earnings dispersion. The timepath of the top decile follows a sharp V-shape. The same is found if one looks at the evidence for the UK from 1954 and for France from 1950. The Golden Age was in this respect less than "golden". It is true that earnings at the very top (the top 1% and higher) were losing ground, but this was confined to the very top. In the US, the share of the top 1% fell but that of the next 9% was rising (Piketty and Saez, 2003).

If earnings dispersion began to rise in 1950, this casts doubt on any explanation based on recent globalisation. It also casts doubt on explanations based too closely on information and communication technologies. As noted by Card and DiNardo, "many observers date the beginning of "the computer revolution" to the introduction of the IBM-PC in 1981" (2002, page 738). The trade and ICT explanations may have relevance to the more recent period, but for the 1950s and 1960s we have to look elsewhere.

Moreover, the following period, from the late 1960s to 1979, is a particularly important one. It was an era not just of stagflation but of macro economic policies designed explicitly to be redistributive, notably in the form of incomes policies. It was a time of wage guideposts, escalator clauses, and wage restraint. While some allowed proportional increases, others were tilted in favour of the lower-paid. It was a period much influenced by political activism, and there can be little doubt that May 1968 left a political legacy in France and the UK if not on the other side of the Atlantic.

A Different Story at the Top

The picture of the US, the UK and France described above gives a rather different perspective on postwar history from that offered by Krugman. The Great Compression of the 1940s was not followed by a period of Golden Age stability. Instead, the earnings distribution began to widen in the 1950s.

Can we go on to conclude that the postwar period was one in which the dominant tendency was for wage dispersion to rise, in which the 1968-1979 period represented a brief, and ultimately unsuccessful, attempt of governments to hold back the tide? This would be too hasty. The periods of rising earnings dispersion are not identical in their form. In particular, we need to distinguish what is happening at different points in the distribution.

I have already noted that the differing experience in the 1950s of those at the very top of the distribution: they were losing ground, while below them the distribution was spreading out. In contrast, in the 1980s and 1990s, as noted earlier, the decile ratio was widening in 13 out of 20 countries, but this was more the result of what happened at the top than at the bottom. In exactly half (ten out of twenty countries) the bottom decile had fallen as a percentage of the median by more than 2 percent in one or other of the decades. In contrast, for all but one of the twenty countries the top decile rose by more than 2 percent in at least one of the two decades. The widening in the 1950s affected both the top and the bottom decile. The recent widening has affected mainly the top of the distribution. While the bottom decile in the US did indeed fall in the 1980s, it has recovered much of the lost ground. It is the changes in the earnings of the top decile that have had most impact. Moreover, a further important contrast is that in the recent decades the very top groups (the top 1 percent and higher) have been moving in the same direction as the top decile, whereas in the 1950s the very top were falling.

This difference at the top has implications both for explanations and for distributional judgments. As far as explanation is concerned, it is easy to come up with mechanisms that may have led to an acceleration of top salaries. The newspapers are full of explanations in terms of "superstars": the expansion of the market, via both increased communications and the opening of trade, has meant that the most talented are able to extract more of the rent. Alfred Marshall, the famous English economist, made exactly this point more than 100 years ago. But the problem with this explanation is that it can only predict a reduction in top salaries if these factors of technology and trade are reversed. Yet there is no good reason to suppose that they were operating in the opposite direction in the 1950s and 1960s.

The fact that the increase in dispersion has taken place mostly at the top raises issues about the normative evaluation of inequality. Some people may argue that the distribution of income among the rich does not matter: that we should concentrate on those below the poverty line. On the other hand, it is hard to square this with concern that the average US worker has not shared in the growth of the US economy.

Concluding Comment

Looking back over 40 years, I am impressed both by the progress that has been made in understanding income inequality and by the limits to our knowledge. Not only are there large gaps in our empirical knowledge but also false pictures remain long in the mind. There many competing theories but there seems a strange reluctance to recognise that we may need different explanations for different periods of history, for differing countries, and for differing parts of the distribution. A great deal of interesting research lies ahead of us.

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