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WIDER Annual Lectures 3

Is Rising Inequality Inevitable? A Critique of the Transatlantic Consensus

Anthony B. Atkinson

November 1999

UNU World Institute for
Development Economics Research
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**Is Rising Income Inequality
Inevitable? A Critique of
the Transatlantic Consensus**

Anthony B. Atkinson

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CONTENTS

LIST OF FIGURES	iv
FOREWORD	v
ACKNOWLEDGEMENTS	vi
ABOUT THE AUTHOR	vii
INTRODUCTION: IS RISING INCOME INEQUALITY INEVITABLE?	1
I RISING INEQUALITY AND THE TRANSATLANTIC CONSENSUS	3
1.1 Transatlantic Consensus	6
1.2 Unresolved questions	8
II AN ALTERNATIVE APPROACH TO EXPLAINING EARNINGS INEQUALITY	11
2.1 Determinants of wage differentials	13
2.2 The reputational approach	14
III CAN REDISTRIBUTION OFFSET MARKET INEQUALITY?	18
3.1 Actual redistributive experience	18
3.2 How much freedom do national governments possess?	21
IV CONCLUSIONS	23
REFERENCES	25

LIST OF FIGURES

Figure 1	Changes in income inequality	4
Figure 2	Changes in earnings inequality	5
Figure 3	Earnings distribution in France and USA	8
Figure 4	Tilt in UK earnings distribution	12
Figure 5	Redistributive impact of budget	20

FOREWORD

UNU/WIDER has taken a keen interest in the issue of income inequality and its recent rise across much of the developing and developed world. I therefore have great pleasure in introducing the 1999 WIDER Annual Lecture entitled *Is Rising Income Inequality Inevitable? A Critique of the Transatlantic Consensus*, by Professor Anthony Atkinson, Warden of Nuffield College, Oxford University. Professor Atkinson delivered the lecture in Oslo on 1 November 1999. We are indebted to the Royal Ministry of Foreign Affairs of Norway for sponsoring the meeting, and to the Centre for Development and Environment (SUM), University of Oslo, for hosting it.

In this thought-provoking lecture, Professor Atkinson focuses on the rise in income inequality in a large number of industrialized countries over the last two decades. This phenomenon, which first became apparent in the United States and the United Kingdom, is now occurring in a number of other countries as well. However, the experience is not uniform across countries, and this suggests that policy matters. Thus, rising inequality is not necessarily inevitable, in contrast to the widely held belief (of the Transatlantic Consensus) that it is an unavoidable consequence of the present revolution in information technology, or the globalization of trade and finance.

Professor Atkinson's thorough analysis of the data shows that the world is working in more complex ways than those described in simple technological and trade explanations of inequality and its trend. The latter theories see wage differentials as nothing more than the outcome of supply and demand, thereby ignoring the role of conventions and social norms. But newer economic theories show that supply and demand only place limits on possible wage differentials, while social forces determine where wages actually lie between those limits. These newer models also indicate that shifts in pay norms can result in widening wage differentials, and thus higher income inequality. Moreover, Professor Atkinson reminds us that progressive income taxation and social transfers can substantially reduce the income inequalities that may arise in the market place. National governments do therefore have room for manoeuvre, especially in influencing social norms which are as important, perhaps more important, in determining the distribution of income as the much cited trends in trade and technology. Thus, Professor Atkinson's contribution to the debate is both timely and highly relevant. The reduction of income inequality should be an urgent goal for governments and the international community, and I urge everyone to reflect upon the analysis and conclusions of this 1999 WIDER Annual Lecture.

Giovanni Andrea Cornia
Director, UNU/WIDER
Helsinki, November 1999

ACKNOWLEDGEMENTS

This is a revised version of 1999 WIDER Annual Lecture, delivered on 1 November 1999 at the University of Oslo. I would like to thank the Royal Ministry of Foreign Affairs of Norway, and the Centre for Development and the Environment (SUM) at the University of Oslo, for their generous hospitality.

I am grateful to Andrea Cornia and Matti Pohjola for their most helpful comments on the previous draft. Part of the material was presented at a conference marking the 10th Anniversary of DELTA in Paris, and a number of useful suggestions made there are reflected in the revised version.

Anthony B. Atkinson

ABOUT THE AUTHOR



Anthony B. Atkinson is Warden of Nuffield College, Oxford. He was previously Professor of Political Economy at the University of Cambridge, and Chairman of the Suntory Toyota International Centre at the London School of Economics. He is a Fellow of the British Academy, and has been President of the Royal Economic Society, of the Econometric Society, of the European Economic Association and of the International Economic Association. He is an Honorary Member of the American Economic Association. He has served on the Royal Commission on the Distribution of Income and Wealth, the Pension Law Review Committee, and the Commission on Social Justice.

Professor Atkinson is currently a member of the Conseil d'Analyse Economique, advising the French Prime Minister. He is author of *Unequal Shares*, *The Economics of Equality*, *Lectures on Public Economics* (with J. E. Stiglitz), *Poverty and Society Security*, *Public Economic in Action*, *Incomes and the Welfare State*, *Three Lectures on Poverty in Europe* and *The Economic Consequences of Rolling Back the Welfare State*.

INTRODUCTION: IS RISING INCOME INEQUALITY INEVITABLE?

This lecture addresses one of the most important economic issues facing our societies and the world as a whole: rising income inequality. There is a widely held belief that rising inequality is inevitable. Increased inequality is the result of forces, such as technological change, over which we have no control, or the globalization of world trade, which people believe, despite historical evidence to the contrary, to be irreversible. Kuznets (1955) suggested that income inequality might be expected to follow an inverse-U shape, first rising with industrialization and then declining. Today, the Kuznets curve is commonly believed to have doubled back on itself: the period of falling inequality has been succeeded by a reversal of the trend. Seen in this way, the third quarter of the twentieth century was a Golden Age not just for growth and employment, but also for its achievement in lowering economic inequality. On this basis, the marked rise in wage and income inequality observed in the United States and the United Kingdom in recent decades will unavoidably be followed by rises in other countries, and indeed world-wide. Policy can make little difference.

In this lecture, I take issue with the assertion that rising inequality is inevitable. It may in fact turn out that the twenty-first century sees rising inequality, but this is not inescapable. We do have some choice. In challenging the popular position, I focus on the experience of OECD countries, since it is these that I know best, but what is happening in industrialized economies cannot be divorced from what is happening in developing countries. Indeed, one frequently expressed view is that increased wage dispersion in the OECD countries is due to increased competition from low-wage economies. This is a view which it seems particularly appropriate to examine in the WIDER Annual Lecture. (I have discussed the rival view that increased wage dispersion is due to technological change in Atkinson (2000)).

The lecture falls into three main parts. In the first, I present a critique of the 'Transatlantic Consensus', a term I use to describe what has rapidly become the generally accepted explanation of the rise in inequality in OECD countries. Economists are sometimes accused of being slow to react to changing events—that they are always seeking to explain the last generation's economic problems. In my view, economists are in fact quick to respond to changing issues; indeed they could rather be faulted for being too fashion conscious. In the field of income inequality, there has been a swift response. There has become established a Transatlantic Consensus that increased income inequality in the United States and high unemployment in Continental Europe are due to a shift of demand away from unskilled workers towards skilled workers. I refer to it as a 'Transatlantic Consensus' because it provides a unified explanation as to how a single cause has a

differential impact on the United States and on mainland Europe. It also captures the fact that this view has been widely influential in the policy-making of international institutions on both sides of the Atlantic, such as the IMF and the OECD. This consensus is however open to question. The first part of my lecture elaborates the underlying theory of distribution, treating in particular the international trade aspects, and argues that the Consensus view has so far fallen short of providing a complete explanation.

Is there an alternative? The second part of the lecture seeks to describe a different approach to explaining rising earnings inequality. One ingredient is a move from a simple skilled/unskilled dichotomy of the labour force to the more realistic assumption of a continuum of earnings capacity. This allows us to focus on the fact that it is not just the unskilled who have lost relative to the median but that the median worker has lost relative to high earners. There has in fact been a 'tilt' in the earnings/skill nexus. The second ingredient in the alternative approach proposed here is the explicit recognition of the role of social conventions or social codes in pay determination. Social conventions may allow the resolution of problems of incomplete contracting, where supply and demand considerations only place limits on the possible wage differentials. Changes in wage differentials may reflect shifts in such social conventions. Social codes, or pay norms, may play an intrinsic, and not just an instrumental, role, where people attach weight to the loss of reputation that follows from breach of the code. The cost of breaking the code depends on the degree of adherence, which is endogenous, and increased pay dispersion may have arisen on account of a shift from a high- to a low-adherence equilibrium.

The first two parts of the lecture concentrate on the determinants of what people receive as wages in the market place. (Capital incomes are also important, but are not discussed in this lecture.) But market incomes are significantly modified by government policy. Many people in OECD countries, like the retired or the unemployed, receive very little in the way of market incomes. They survive because of state transfers (retirement pensions, unemployment insurance, etc) financed by social security and other taxes. In the third part of the lecture, I show how the government budget has played a major role in offsetting the rise in inequality in market incomes—a rise that pre-dates the present concerns. The degree of offset differs, however, across countries, and across time in any one country. This suggests that national policy may be influential, but also raises the question as to the degree to which national governments can preserve autonomy in their redistributive policy in an increasingly integrated world.

I RISING INEQUALITY AND THE TRANSATLANTIC CONSENSUS

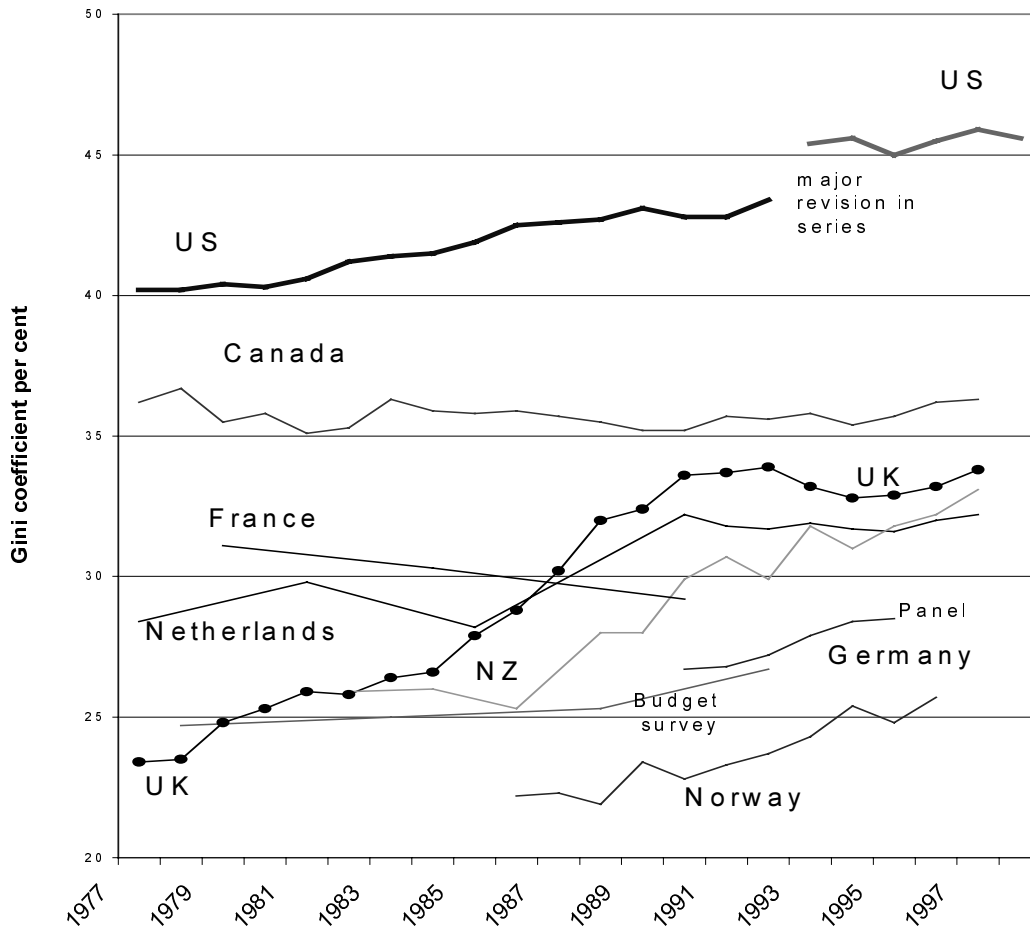
The phenomenon of rising inequality of income in industrialized countries¹ was first noticed in the United States, where inequality as measured by the Gini coefficient began to rise in the 1970s—see Figure 1. (The Gini coefficient is a summary measure of inequality, varying between 0 when we all have identical incomes and 100 per cent when one person scoops the entire pool.) The rise in the United States has attracted most attention, but my own country, the United Kingdom, has seen an even larger increase. In the period 1977 to 1990, the Gini coefficient for the distribution by individuals of equivalent household disposable income in the United Kingdom rose by some 10 percentage points, from around 23 per cent to around 33 per cent (see Figure 1). This increase is 2½ times the increase in the United States over that period.²

The first point that I want to make therefore is that experience is not uniform across OECD countries. Even if it were true that all OECD countries have seen increased income inequality, the extent and timing of the increase has differed. Among Anglo-Saxon countries, there has been a sharp rise in income inequality in New Zealand, but little apparent increase in Canada. The last of these is striking, as Smeeding (1999) has emphasized. We have two North American countries, sharing a long frontier, with considerable cross-border economic flows, where the degree of integration has increased with NAFTA, and yet the time paths of income inequality are noticeably different. In the Nordic countries there has too been a variety of experience. In their study of the distributional impact of rising unemployment, Aaberge *et al.* (1997) found that, in the period in question, inequality of disposable income did not respond at all in Finland and relatively little in Denmark, but rose, albeit modestly, in Sweden and Norway—the situation for Norway is shown in Figure 1. In other European countries, there is a similar diversity of experience. In Germany, taking the Western Länder for purposes of comparability over time, the Gini coefficient has increased by some 3 percentage points since the 1970s, as may be seen by piecing together the two series in Figure 1, and the increase in the Netherlands in the second half of the 1980s was similar in magnitude. In France, there was no increase in the 1980s.

¹ I do not discuss income inequality in developing countries. For general surveys, see Adelman and Robinson (1989) and Kanbur (2000); for discussion of the determinants of income distribution in developing countries, see, among others, Bourguignon and Morrisson (1998), Cornia (1999), and Stewart and Berry (1999).

² It should be noted that the series for different countries are based on different definitions. The United States figures are for gross income and are unadjusted for household size, whereas the United Kingdom figures relate to disposable income adjusted for household size using an equivalence scale. Not only are the levels not comparable, but also differences in definition may affect the measurement of trends over time.

FIGURE 1
CHANGES IN INCOME INEQUALITY



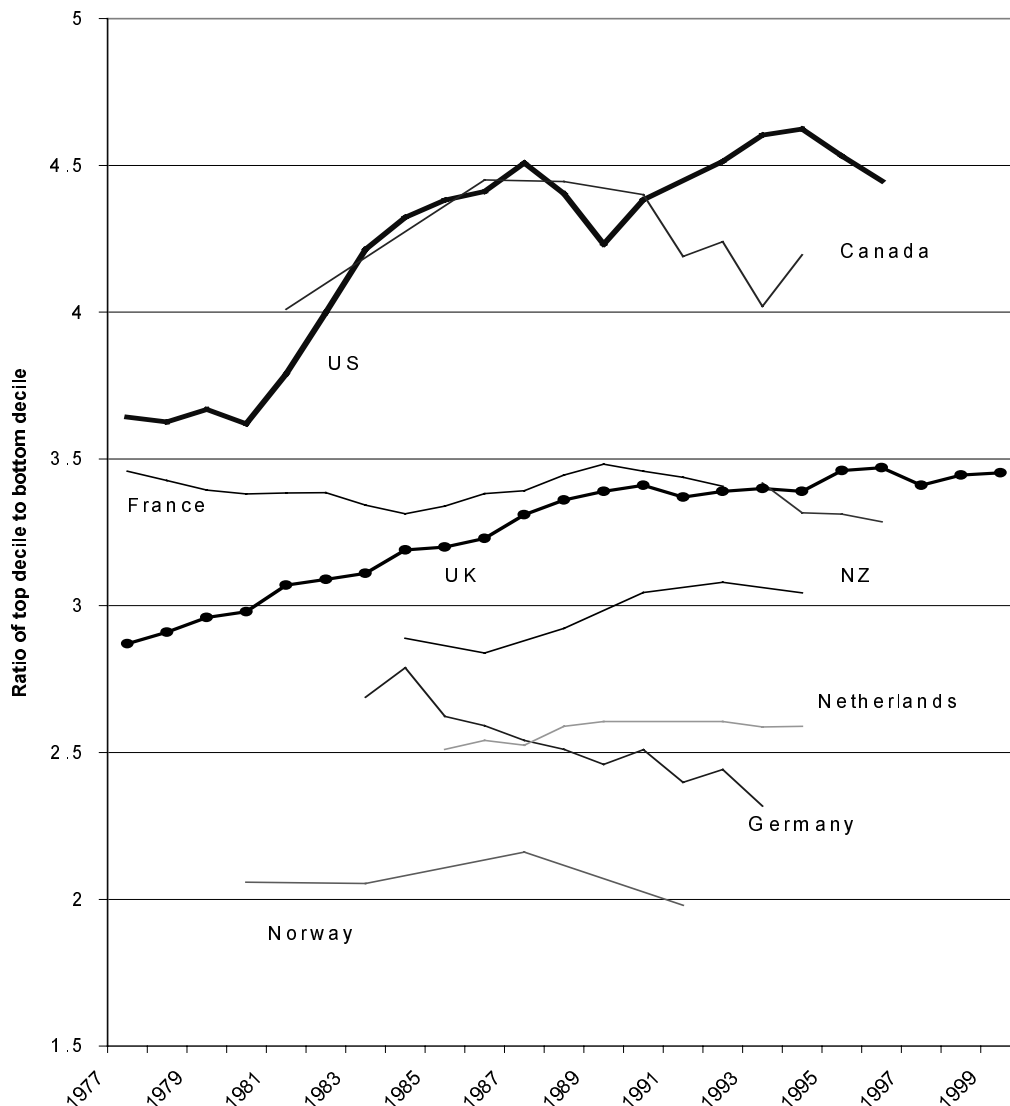
Sources: Canada, Statistics Canada (1996: Text Table VI) and Statistics Canada (1999 Appendix Table III). France, (1975=100) Atkinson (1997b: Table FR2 Synthèses series). (West) Germany, (1978=100) Becker, (1996: Tabelle 1) and Hauser (1996: Tabelle 1) linked at 1993 using Becker (1998: Tabelle 4). Netherlands, supplied by Central Bureau of Statistics. New Zealand, Statistics New Zealand (1999). Norway, Epland (1998). United Kingdom, up to 1993 from Atkinson (1997b: Table UK3) series constructed by Goodman and Webb (1994); 1994/5-1997/8 from Clark and Taylor (1999: Figure 2 and text). Figures prior to 1993 from Family Expenditure Survey; figures from 1994/5 from Family Resources Survey. United States, US Department of Commerce (1999:Table: B-3, B-6).

The figures just cited refer to the inequality of *disposable household incomes*; there is similar diversity in the experience with regard to *gross individual earnings*. Figure 2 shows estimates (based largely on data assembled by the OECD) of the changes since 1977 in the ratio of earnings at the top decile to those at the bottom decile (the 'decile ratio').³ The picture is again one of diversity. The United States, the United Kingdom and New Zealand are in this case more similar in the extent of

³ Cross-country earnings data are usually made available in the form of decile ratios, rather than Gini coefficients, and I have followed this convention. Again it should be stressed that the data are not comparable across countries: some for instance relate to male workers, others to all workers.

the increase in dispersion. For other countries, the pattern is mixed, with a rise and then a fall in Canada and Norway, a fall in Germany, a rise in the Netherlands, and variation about a level trend in France. Certainly for the first half of the 1990s there is no dominating pattern. As has been observed by the OECD, drawing on evidence for a larger number of countries, 'No clear tendency emerges of a generalized increase in earnings inequality over the first half of the 1990s. Of the 16 countries ... dispersion increased in half, and was either broadly unchanged or declined somewhat in the rest' (1996: 63).

FIGURE 2
CHANGES IN EARNINGS INEQUALITY



Sources: Canada (1981=100), (West) Germany (1983=100), Netherlands (1985=100), New Zealand (1984=100) and Norway (1980=100). OECD (1996: Table 3.1). France, Bayet and Julhès (1996: 48). United Kingdom, Atkinson and Micklewright (1992: Table BE1) linked at 1990 to Department of Employment (1999: Table A30.2). United States, Karoly (1994: Table 2B.2), weekly (consistent) wage and salary income, linked at 1979 and 1987, linked in 1989 to OECD (1996: Table 3.1, which refers to male earnings).

The second point to be made about the evidence for incomes and earnings is that, while economists tend to talk glibly about 'trends' in income inequality, this is not necessarily a good way of describing the observed changes over time. As I argued in my Presidential Address to the Royal Economic Society (Atkinson, 1997a), it may be more instructive to think in terms of 'episodes' when inequality rose or fell. This is well illustrated by the United Kingdom in Figure 1. There has not been a continuous upward trend in the United Kingdom. In the 1980s, inequality increased, and it then accelerated. But from 1990 to 1997, under the premiership of John Major, the Gini coefficient appears to have cycled rather than trended upward. Equally, the 1999 report of the United States Government (US Department of Commerce, 1999: xiii) commented that there had been no significant annual increase since 1993 (when there was a major revision in the methodology). While there may be cyclical influences in operation disguising the trend, the 1990s do not look like the 1980s in the United States and the United Kingdom. A third example is provided by the Netherlands. Inequality in disposable income clearly increased, but it appears to have been a step increase in the second half of the 1980s, not a continuing trend (the same appears to be true of earnings dispersion in Figure 2). To describe recent experience as an inexorable trend is not therefore correct empirically, and it may well put us on the wrong track when seeking to explain the evolution of inequality, which is my main concern here.

1.1 Transatlantic Consensus

As already noted, economists seem to have moved rapidly to a consensus view, where increased income inequality is identified with increased inequality of potential earnings (and hence actual earnings or employment), and where increased wage inequality is attributed to a shift in relative demand away from unskilled to skilled workers. There is debate about the causes of the shift in relative demand—see, for example, Burtless (1995) and Dewatripont *et al.* (1999). It may be liberalization of international trade and increased trade flows; it may be heightened competition from newly industrializing countries (Wood, 1994). Or, the shift may be the result of technical change biased towards skilled labour, with the introduction of automation and information technology. Or it could be the outcome of technical change biased towards sectors using skilled labour. In this lecture, given its international focus, I concentrate on the international trade version of the story,⁴ without in any way suggesting that technological change is unimportant.

The trade story is well summarized in a recent CEPR bulletin: 'developed countries have become increasingly open to trade with developing countries. The latter are rich in unskilled labour, it is argued: they can supply goods where production is

⁴ Increased competition from imports from newly industrializing countries is only one aspect of the globalization of the economy. Among the important dimensions not discussed here is the globalization of capital markets, allowing the free movement of financial capital, which may well have had a significant effect on income inequality.

"unskilled-intensive", such as T-shirts from China, at a fraction of developed country costs. Hence unskilled wages in developed countries must fall' (CEPR, 1999: 5).

This can be formally demonstrated in a standard trade theory model of the Heckscher-Ohlin type, where there are two blocs of countries (industrialized and newly industrializing, respectively), each with two sectors of production. The sectors produce tradable goods using two different types of labour (skilled and unskilled) in different mixes: one 'high technology' sector uses skilled labour relatively intensively (at all relative wage rates), whereas the other sector is relatively unskilled-intensive (for simplicity, other factors of production such as capital or land are ignored, as are non-traded goods and services). A reduction in the barriers to trade leads to a new equilibrium where the industrialized countries expand their output of the high technology sector and contract that of the other good, and the relative wage of skilled labour rises.

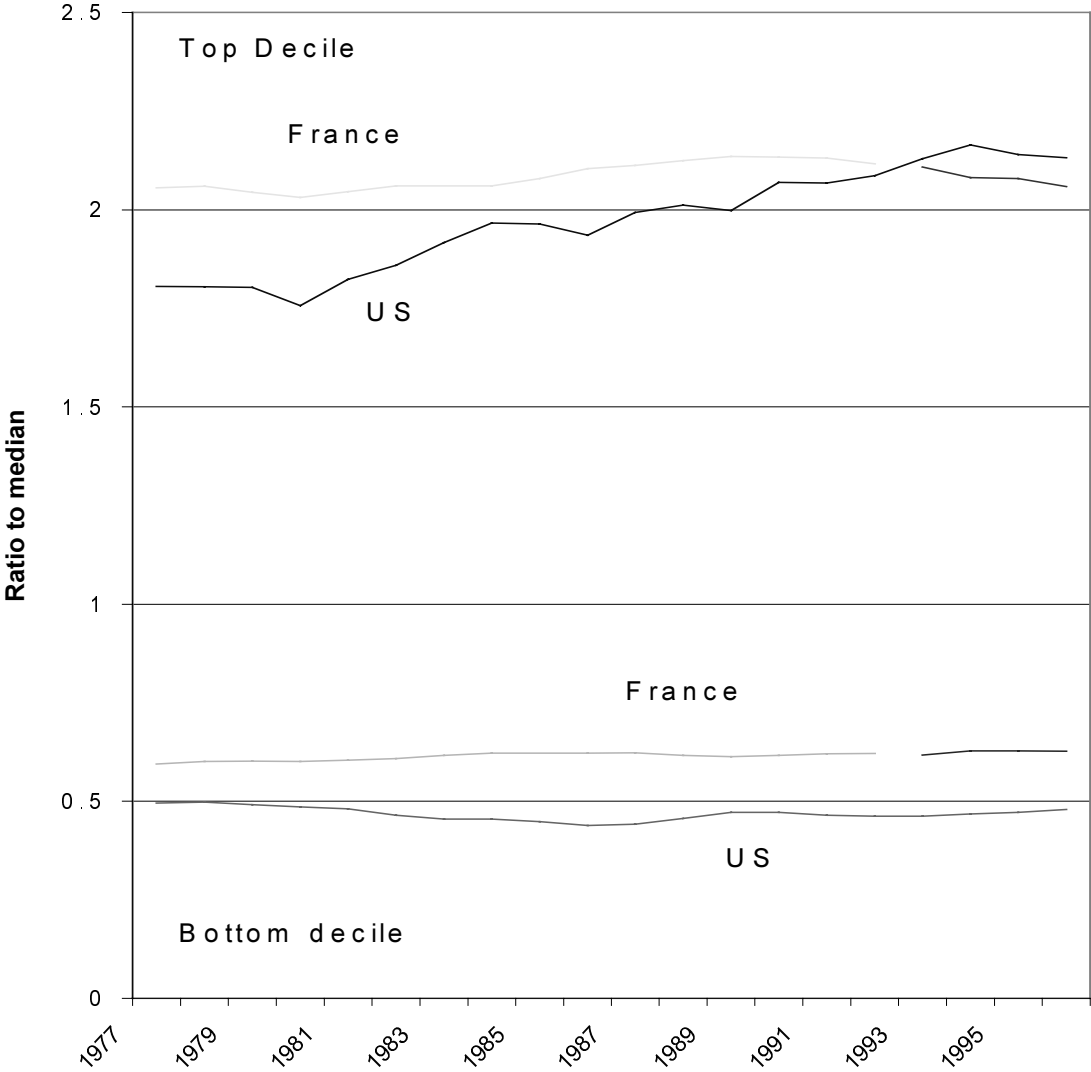
All models are abstractions, but that just sketched is an over-simplification in one important respect: the industrialized countries have very different structures. We need to allow for at least two distinct groupings within the OECD: Continental Europe and the United States (plus probably the United Kingdom and other Anglo-Saxon countries; Japan should perhaps be treated on its own). In what follows, I posit a three-bloc model, referred to as US, EZ (euro zone) and NIC (newly industrializing). The relevant difference here between the two industrialized blocs (US and EZ) is the existence in the latter of effective minimum wage protection, or social security benefit levels, preventing wages from falling at the bottom. The demand shift story then predicts not increased wage dispersion but increased unemployment. According to Krugman, 'the upward trend in unemployment [in Europe] is the result of market forces that "want" to produce greater inequality of earnings. The collision between these market forces and the attempts of the welfare state to limit inequality then lead to higher unemployment' (Krugman, 1994: 60).

So we appear to have unified explanation for what is happening on both sides of the Atlantic: widening wage dispersion in the US and raised unemployment in the EZ. The position as far as earnings are concerned is shown for France and the United States in Figure 3. In the French case, the bottom decile of earnings for male workers was 59 per cent of the median in 1977 and had actually risen slightly to 62 per cent in 1987, whereas the United States percentage fell from 50 per cent to 44 per cent over the same period. I will come back in a moment to what happened post-1987.

Moreover, even though the step is not usually taken, we could explain differences *within* the two industrialized blocs in the speed and timing of the rise in earnings inequality by reference to changes in the supply of skilled labour in response to the emerging increased skill premium. Differential performance across countries in the

race between technological development and education, as it was described by Tinbergen (1975), does not, in the Heckscher-Ohlin model, cause the unskilled/skilled wage relationship to differ across countries, but the distribution of earnings *is* potentially affected by changes in the proportions of unskilled workers (and of the unemployed). The unskilled/skilled wage differential is not a complete summary statistic, as is obvious from considering the case of the decile ratio where one group is more than 90 per cent of the total.

FIGURE 3
EARNINGS DISTRIBUTION IN FRANCE AND USA



Sources: Bernstein and Michel (1997: Table 4) and Friez and Julhès (1998: 43).

1.2 Unresolved questions

The relation between wage dispersion and increased international competition has been seen as a classic example of the power of economic theorizing. A textbook

model can be applied directly to explain real world observations. At the end of his survey on growing world trade, Krugman (1995) observes that 'the time has come' for general-equilibrium trade theory. By this he meant that one of the most important contributions of trade theory is its general equilibrium perspective, of seeing the world economy as a whole. But in seeing the world as a whole, we need to go beyond the two-country model which has dominated trade theory, since, as has recently been brought out by Davis (1998a, 1998b), the conclusions can be misleading. In drawing its conclusions, the 'Transatlantic Consensus' in effect carries out parallel analyses of the impact on the United States and the impact on Europe of the opening of trade with the NICs. As noted earlier, we require at least a three-bloc model. When we look at the world in this way, we see, extending the analysis of Davis, that the standard Heckscher-Ohlin trade theory falls short of yielding the predictions assumed in the Transatlantic Consensus.

Suppose first that the conditions for factor price equalization hold. These conditions are strong, requiring that countries differ in their productive capacities only in their factor endowments, having identical (constant returns to scale) production functions. The conditions require that there be equal numbers of goods and factors, and that countries produce all goods. From strong assumptions follow strong implications. In particular, where there are no factor-intensity reversals, free international trade leads to the equalization of factor prices—see, for example, Bhagwati (1964), Chipman (1966) and Dixit and Norman (1980). Put in terms of two factors (skilled and unskilled labour) and two goods, there is a one-to-one relation between the relative goods prices and the skilled/unskilled wage ratio (the assumption that there are no factor-intensity reversals, means that one of the two goods uses skilled labour relatively intensively at all relative wage rates). If we now suppose that one of the two industrialized blocs (the EZ) imposes a minimum relative wage for unskilled labour, then this determines the goods relative prices and the wage of skilled labour. In the absence of specialization, the US will adjust to the EZ-determined relative price. The United States has a flexible wage, but the wages of the unskilled rise to the European level (and those of the skilled fall) as the US expands its exports to the EZ of the good which uses unskilled labour intensively. There will be unemployment of unskilled labour in EZ, but not in the US.

Before questioning the underlying assumptions, we should note the implications of this analysis for the Transatlantic Consensus. If the combined US+EZ trading economy is opened to trade with the NIC, then, providing the EZ continues to produce the good intensive in unskilled labour, the goods price remains unchanged. The US is unaffected and the impact of the trade is entirely on unemployment in EZ. In neither region is wage inequality affected. We have one part of the Transatlantic Consensus but not the other. As put by Davis: 'So long as Europe maintains a commitment to both free trade and a high-wage policy, America is fully insulated from the NIC shock' (1998: 485). The factor price equalization result should not be taken too literally: '[it is] a very ambitious proposition. ... One ought

to be satisfied with the more plausible Marshallian way of putting things: free trade sets up a tendency to factor price equalization' (Hahn, 1998: 18). But, translated to the present context, this means that there is a *tendency* for the low paid in the United States to be sheltered by European unemployment.

On this basis, trade theory can explain the widening of wage inequality in the United States only to the extent that the conditions of the standard Heckscher-Ohlin model do *not* hold. In order for this to be satisfactorily treated, we need to model the reasons why the factor price equalization theorem does not apply. One reason is that the EZ, with its minimum wage, may cease to produce the good in which unskilled labour is used intensively; it becomes specialized in the high-technology good, importing the other good from the US, where the wages of the unskilled are no longer tied to those in Europe. In this case, opening of trade with NIC will drive the relative price of the high-technology good higher, and, reading across from goods prices to factor prices, hence widen wage differentials in the US. The US side of the story is now in place. In EZ however, wage inequality will rise, and unemployment fall (as unskilled labour is substituted for skilled in the production of the high technology good). The effect will be intensified if there are also non-traded goods and services which use unskilled labour. We lose therefore the EZ arm of the Consensus.

In brief, the theoretical basis for the Consensus does not appear to be a simple application of standard international trade theory of the Heckscher-Ohlin variety. The model needs to be richer. This enrichment could take the form of more realistic assumptions about the trading economies, such as introducing imperfect competition and product differentiation, or non-traded goods, or allowing for productivity differences, or for transport costs, or incorporating the effect of the Common Agricultural Policy in the EZ. All of these could well lead to an enhanced trade theory which can explain the observed changes in the US and the EZ, but work remains to be done. Alternatively, we could look elsewhere.

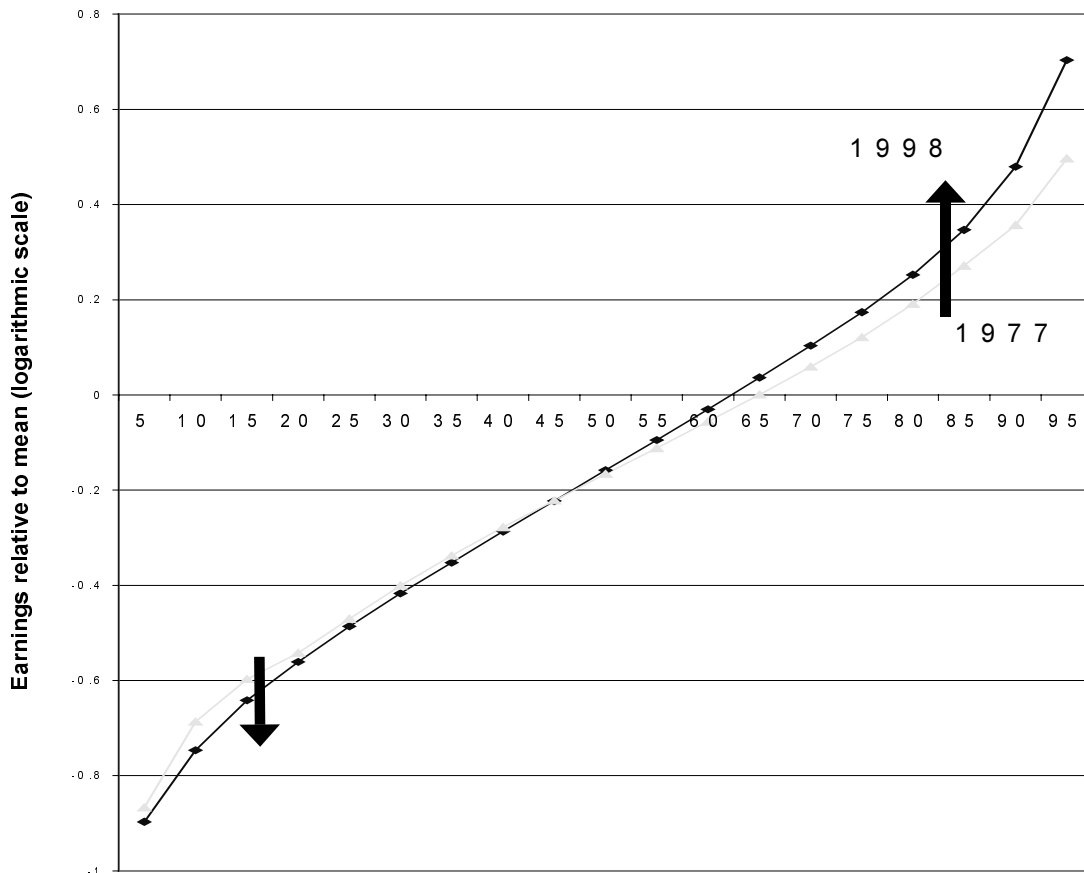
II AN ALTERNATIVE APPROACH TO EXPLAINING EARNINGS INEQUALITY

In this section of the lecture, I want to suggest two ingredients of an alternative approach to explaining earnings dispersion. The first is to abandon the simple unskilled/skilled distinction. A century ago, it might have been relatively easy to apply such a dichotomy. In Aldous Shipyard in Brightlingsea, where my sailing boat was built in 1899, the shipwrights were skilled craftsmen and the men with brooms who kept the slipways free of mud were unskilled. Today's attempts to implement the distinction are less satisfactory. As noted by Cooper (1995: 366), the practice adopted in many studies of treating all production workers as unskilled and non-production as skilled seems too coarse. In some cases, skill is equated with formal education, and increased wage inequality is associated with the increased return to college-educated workers since the 1970s. But identifying 'skilled' with 'college-educated' shifts the basis for the definition, and makes no allowance for mismatch between the educational qualifications of workers and the requirements of the job they hold.

What I would like to consider instead is a continuum of earnings. One reason for so doing is empirical. From Figure 3, it may be seen that the most significant widening is not that at the bottom of the United States earnings distribution. In fact, the bottom decile, where the unskilled may be expected to be found, has actually been rising relative to the median in the United States over the last 10 years, rather than falling. Between 1987 and 1996 the ratio increased from the 44 per cent mentioned earlier back to 48 per cent. It is true that earnings dispersion has been widening, but this is because of what is happening higher up the scale. From Figure 3, it may be seen that in the United States the top decile's pay rose over the two decades from around 1.8 times the median to around 2.15. In contrast, in France the top decile did not go up significantly relative to the median over the period as a whole. Of course, the ratio in France was initially higher,⁵ so that one can represent the United States widening as 'catching up', but in terms of changes over time the main phenomenon which needs to be explained is the rotation of the wage/rank relationship. This tilt is illustrated for the United Kingdom in Figure 4. It is not just a question of those at the bottom losing out (the downward arrow)—indeed, in the second ten-year period from 1989 to 1999 the ratio of the bottom decile to the median in the United Kingdom rose slightly. Increased wage dispersion is due more to what has happened in the upper part of the distribution (upward arrow).

⁵ There are also issues of comparability of the data—in particular the degree to which remuneration in kind and stock options are omitted.

FIGURE 4
TILT IN UK EARNINGS DISTRIBUTION



Sources: 1977 earnings data for all workers whose pay was not affected by absence from Atkinson and Micklewright (1992: Table BE1). 1998 from Department of Employment, New Earnings Survey (1998: Table UK 9.1) for all workers whose pay was not affected by absence, paid at adult rates. The former covers Great Britain, the latter United Kingdom.

In order to understand this, we have to move to a continuum of earnings. This is not of course new. A continuum of earnings has been studied in labour economics and in public economics (as in the optimum income tax literature). But it has not been treated explicitly in the present context. Krugman drew just such a tilt in his popular exposition (1994), but did not carry it through to the more formal model (1995). In order to see the implications for international trade, let us suppose that there are two goods, for one of which (the 'high-technology' sector) output is proportional to individual productivity, but in the other (the 'low-technology' sector), all workers are equally productive. Average productivity in the high-technology sector depends on the proportion of the labour force employed. The expansion of international trade, so that the relative price of the low-technology good falls, means that wages fall relatively in that sector, although the proportion employed also falls (the

number of less favoured workers is endogenous in this case).⁶ This does not however account for the tilt in the upper half of the distribution. Real wages may rise in the high-technology sector, but they rise by the same percentage for the median (assuming the sector accounts for more than half of employment) as they do for the top decile. To understand the tilt, we have, I believe, to investigate the determinants of wage differentials.

2.1 Determinants of wage differentials

The Transatlantic Consensus can be described as a triumph of 'Supply and Demand'. A major economic phenomenon is explained by nothing more than the supply and demand curves which are learned by a first year student. This contrasts markedly with earlier writing on wage differentials, where there has been a creative tension between market force and alternative explanations of wage differentials. Phelps Brown, for instance, opened his *The Inequality of Pay* (1977) by contrasting the 'economist's' approach to pay determination with that of the 'sociologist': the economist sees people as engaged in rational, impersonal transactions; the sociologist sees people interacting as members of a society.

How can we move beyond a simple supply and demand representation? Starting from the economist's position, we could suppose that supply and demand only place limits on the possible wage differentials, with other factors such as bargaining or social convention determining where between these limits wages actually lie. Such a 'range theory' of wage differentials was advanced by Lester (1952) and the way in which a range of negotiation can arise has been illustrated by models of job matching: 'Having come together, the firm and worker have a joint surplus ... there is a wage that makes the worker indifferent between taking this job and waiting for his next job opportunity. There is a wage that makes the firm indifferent between hiring this worker and waiting for the next available worker. The bargaining problem is to agree on a wage between these two limits' (Diamond, 1982: 219).

The quasi-rents are typically assumed in the job search literature to be shared out as a result of a process of bilateral bargaining, the division reflecting relative bargaining power. On this basis, the tilt in the wage distribution could reflect changes in the relative bargaining power at different points on the wage scale (see, for example, Fortin and Lemieux, 1997). Decline in trade union membership and diminution of union power may have reduced the union wage premium in the lower part of the distribution, whereas individual negotiation higher up the scale may have allowed the better-paid to capture more of the gains from productivity increases. Or, where wage dispersion is negatively correlated with the degree of centralization of

⁶ As a result, the mean earnings may fall in the high-technology sector, as well. This aspect of the 'Roy model' of self-selection by workers, applied to international trade, is noted in the survey of assignment models by Sattinger (1993).

wage bargaining (Rowthorn, 1992), increased dispersion may be due to a decline in centralized bargaining.

Where there is a degree of indeterminacy of the market equilibrium, pay norms may play a role. Introduction of a notion of fairness or equity provides a route to removing the indeterminacy where 'individual incentives are not by themselves generally sufficient to determine a unique equilibrium' (MacLeod and Malcomson, 1998: 400).

In this context, observance of social norms may be consistent with individual rationality and indeed instrumental in achieving efficient outcomes. Where contracts are not legally enforceable, then general acceptance of a convention may allow firms or workers to make investments which would not be profitable if there were a risk that the agreement would later be renegotiated in breach of the convention. This view of social norms attributes no weight to any intrinsic value attached to respecting the convention: 'A central assumption of the strategic interpretation of custom is that the rules selected as coordination devices are used *in a purely instrumental manner*. All phenomena of rule obedience, commitment, etc., are assumed to be of only secondary importance' (Schlicht, 1998: 132).

In this regard, economists can learn from sociology and anthropology, as stressed by Akerlof (1980), who describes a model where individual utility depends not only on income but also on reputation which is based on conformity with the social code. The loss of reputation if one departs from the social code depends on the proportion who believe in the code, which is undermined if people cease to observe it. He shows that there may be a long-run equilibrium with the persistence of a 'fair', rather than market-clearing, wage and involuntary unemployment.

2.2 The reputational approach

This reputational approach can be applied to the relation between wages and productivity. Suppose that there is a social code, or pay norm, that limits the extent to which individual earnings increase with earnings potential. Where this code is followed, people are paid a fraction of their productivity plus a uniform amount. Such a policy involves a degree of redistribution and low productivity workers can be expected to subscribe to the pay norm. But other workers will also accept it; even where they could be paid more if they broke the norm, since—if they believe in the norm—by breaking it they would suffer a loss of reputation.⁷ The extent of the loss rises with the proportion of the population who at that time believe in the norm, a proportion which is assumed to adjust over time in a way described below.

⁷ They may also accept wage compression as a form of insurance against wage risk, given that this cannot be secured through private insurance. Agell and Lommerud (1992) examine the arguments why unions may on this ground adopt strongly egalitarian wage policies (see also Agell, 1999).

Employers are also concerned with their reputations. When they create a job, it is determined in advance whether or not it is paid according to the pay norm. The profitability of the job depends not only on the pay but also on the acceptance of the job by the worker with which it is matched. Matching is assumed to follow a random process, but is only successful where employer and worker either both observe the code or both do not.⁸ Employers determine their pay policy (i.e., whether or not to observe the social code) on the basis of comparing expected profitability, which depends on the proportion, and characteristics, of workers who accept different pay offers.⁹ The expected profitability of breaking the social code has to exceed the consequential loss of reputation, which is assumed to vary across employers, so that some employers may observe the code while others depart from it. There will therefore be a proportion of jobs which accord with the pay norm. If the proportion of the population who believe in the pay norm is less (greater) than this, then the extent of belief grows (falls).

There is therefore a dynamic process of adjustment. As Akerlof has shown, the process is likely to be of the 'tipping' kind identified by Schelling (1978). Interior equilibria for the proportion believing in the social code may be unstable, and, depending on the initial conditions, a society converges to a high level of conformity with the social code, or to the virtual absence of conformity. In this kind of situation, an exogenous shock may shift the key relationship and switch the society from an equilibrium with conformity to the pay norm, and hence relatively low wage differentials, to an equilibrium where everyone is paid on the basis of their productivity. Such an exogenous shock may have been a fall in the weight attached by employers to reputation. Or, reflecting changes in the capital market, it may be that greater weight is attached to short-run profits. As a result, there are, as it has been put by Summers, 'market forces that have tended to pay everyone more like salespersons—on the basis of what they produce' (1999: 102).

We may therefore observe a discrete change in the wage distribution: an episode of increasing dispersion (not a continuing trend). Such periods of rapid change in differentials have been noted at earlier times. In his account of wage differentials moving in the opposite direction, Reder states that, 'The long-run decline in the skill margin in advanced countries has not occurred slowly and steadily. Instead, the skill margin appears to have remained constant for relatively long periods of time and then to have declined sharply within a very few years' (1962: 408).

⁸ It might be the case that a worker would prefer a job paying according to the norm but that the loss of reputation from breaking the code was less than the loss from unemployment. However, it is assumed that employers do not engage workers who take a different view of the social code on the grounds that they will lack motivation.

⁹ In the model considered, differences in productivity lead to differences in wages (even if not proportionately). The case where firms have a company wage policy, paying a rate for the job, unrelated to productivity, is analysed by Manning (1994).

One route by which shifts in pay norms may be brought about is government incomes policy. In the United Kingdom, it is worth remembering that in 1973 the Conservative Government's Stage Two Incomes Policy set a group pay limit of GB£1 plus 4 per cent, with an individual maximum increase of GB£250 a year. Although now distant history, Labour's *Attack on Inflation* in 1975 restricted increases to GB£6 a week, with no increase for those earning more than GB£8,500 a year. The wage norm may, alternatively, be enforced through the process of collective bargaining. In Norway, according to Kahn (1998), the agreement negotiated between the LO (trade union federation) and the employers organization (NHO) allowed in 1989 for a uniform 3 kronor per hour increase (with a 1 kronor supplement in export industries), and the 1990 contract allowed for a larger absolute increase for the low-paid. (Evidence about the role of fairness in collective bargaining at the micro-level in Norway is provided by Strøm (1995).)

The pay norm model, in addition to helping explain episodes of rising or falling wage dispersion, can also be used to explain differences across countries. The support for pay norms depends, for instance, on the extent of differences in underlying productivity. Where people are relatively homogeneous, then there is more likely to be adherence to an egalitarian pay norm, so that the two elements, one exogenous (productivity differences) and one endogenous (degree of adherence to the code) combine to explain smaller wage dispersion. Moreover, the shifting pay norm explanation can be introduced into the model of trade with a continuum of abilities. A shift from a redistributive pay norm to a payment strictly on the basis of productivity can have the effect of reducing the supply of the high-technology good at any relative price. This arises because the condition for equilibrium in the labour market is based on the marginal worker, who ceases to gain from the redistributive pay norm. Paying wages purely on productivity benefits those higher up the scale. There is a shift in the offer curve. If there is a bloc of countries, say the EZ, where no such shift in the pay norm has happened, then they will see an increased demand for their exports. This clearly not the whole story, but—just as international trade theory has begun to incorporate considerations of efficiency wages¹⁰—a model with a richer treatment of the labour market seems well worth exploring.

The view of rising wage dispersion advanced here is certainly not the only way of explaining what has happened in the upper part of the earnings distribution in the United States and the United Kingdom. At the very top, particularly when one introduces the value of stock options, the 'superstar theory' of Rosen (1981) appears to have considerable relevance. But the reputational approach to pay norms seems well worth exploring further, and it has a number of implications for policy. In part, the widely advocated policies of skills acquisition remain valid, although the mechanism by which they operate is rather different. The support for a redistributive pay norm depends on the extent of dispersion of productive abilities. Ensuring relatively homogeneous skills in the population may ensure continued

¹⁰ A different model of fair wages in an open economy is provided by Agell and Lundborg (1995).

support for a redistributive pay norm. In part, the policy implications are different. The role of public sector pay policy is an example. The adoption of performance related pay in the public sector can be expected to influence pay norms elsewhere. Such a shift in the public sector may cause a discrete change in the economy as a whole.

III CAN REDISTRIBUTION OFFSET MARKET INEQUALITY?

To this juncture, I have been considering what people receive as wages in the market place. But market incomes are significantly modified by income taxation and by social transfers financed out of the government budget. In the third part of the lecture, I examine how far fiscal redistribution offsets any rise in inequality in market incomes.

3.1 Actual redistributive experience

In Figure 5 are assembled estimates of the overall degree of inequality (measured by the Gini coefficient) before and after redistribution for three OECD countries. The selection of countries is determined by the availability in each country of a long time-series of official estimates of the redistributive impact of the government budget,¹¹ but they have in common a rise over the two decades in the inequality of market incomes, shown by the dashed lines in Figure 5. In Canada the Gini coefficient for market income increased by some 5 percentage points, in the United Kingdom by around 8 points; and in Finland (from 1981) by more than 10 points.

There is again diversity of experience both across countries and across time. Here I focus on the difference between the market and disposable income series. In the case of the United Kingdom, inequality of market income increased over the period as a whole, but the Gini coefficient for disposable income showed scarcely any rise over the first part of the period. From 1977 to 1984, the redistributive impact of cash transfers and taxation increased by enough to offset the more unequal market incomes: the Gini coefficient for market income rose by 6 percentage points but that for disposable income by only 1 point. After 1984, however, the story in the United Kingdom is quite different, reflecting a major reduction in the progressivity of income taxation and cutbacks in benefit levels and coverage. Inequality in market income continued to rise, but between 1984 and 1990 the Gini coefficient for post-tax income increased much more sharply (marked by the upward arrow in Figure 5). Measured in terms of the difference between the two coefficients, the redistributive contribution of transfers and taxes fell from 19 percentage points (the difference between the two Gini coefficients in 1984) to 11 percentage points in 1990. The reduction in redistributive impact was attributable to a smaller impact of cash transfers (minus 5 percentage points), less progressive direct taxes (minus 1 percentage point) and more regressive indirect taxes (minus 2 percentage points).

The United Kingdom experience may be contrasted with that of Canada. The coverage of the Canadian data is different, in that disposable income refers to

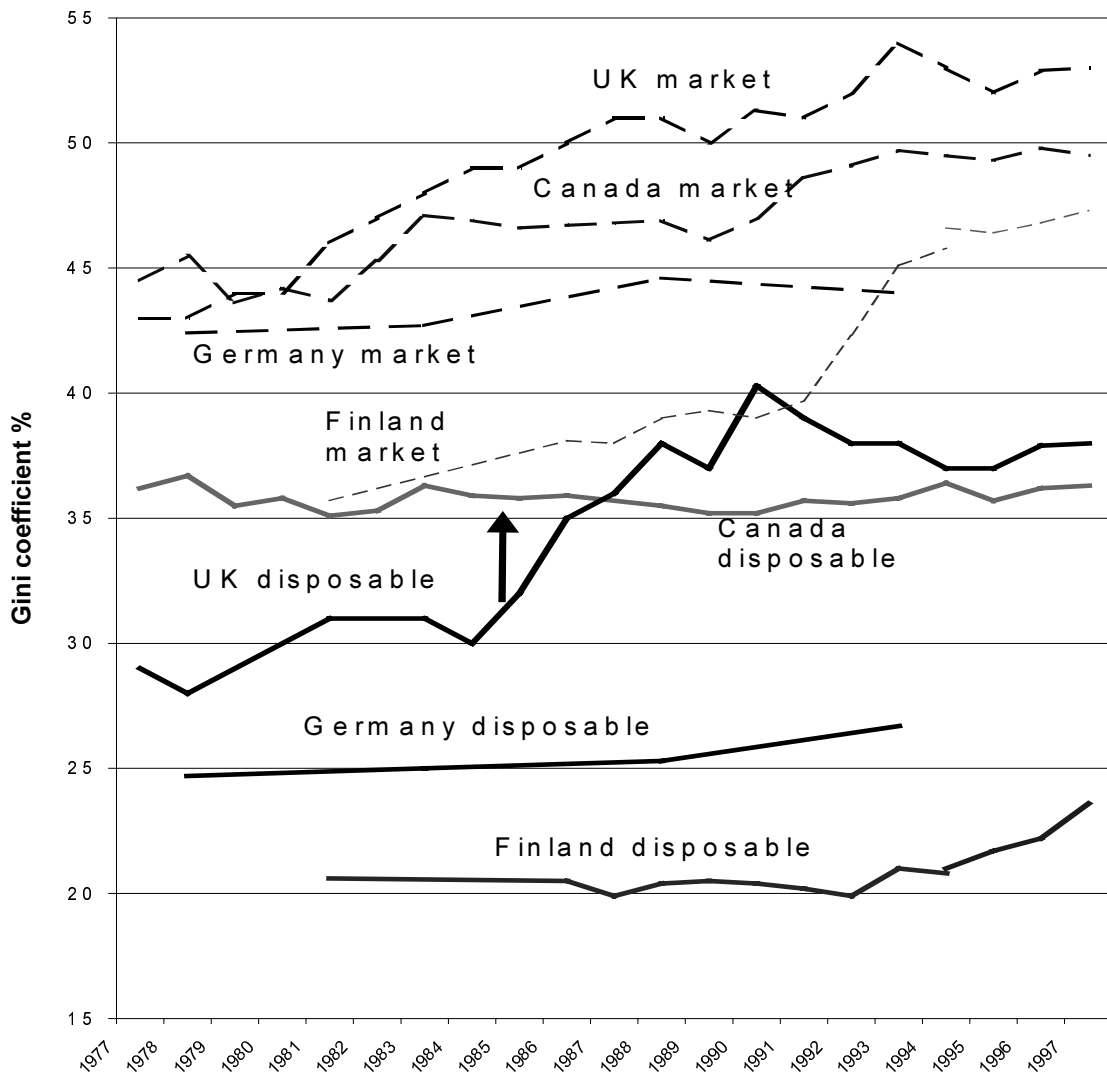
¹¹ Evidence from academic studies exists for other OECD countries: for example, for Germany, see Becker and Hauser (1997) and Hauser (1999).

income after direct taxes but before indirect taxes. This may affect the comparison not only of *levels* but also of *trends*. However, the difference in trends from the United Kingdom is so striking that this cannot be explained solely by definitions. Over the period 1980-94 as a whole, the Gini coefficient for market income rose by some 5 percentage points, whereas that for disposable income in 1994 was not significantly higher than 17 years earlier. The picture for Finland in the 1980s and 1990s contains elements of similarity with both Canada and the United Kingdom. The 'Canadian' period was that up to 1994. From 1981 to 1994 the Gini coefficient for market income in Finland rose by ten percentage points, particularly post 1990 with the economic difficulties faced at that time. This was however offset by the government budget to the extent that inequality in disposable income did not increase. As is brought out by Uusitalo (1998), the main contributors were transfer payments; the redistributive impact of taxation did not increase in line with the inequality of market income, and actually fell after 1989. Since 1994, however, the picture in Finland has changed as a result of policy measures cutting the redistributive impact of transfers, which have led inequality of disposable income to rise more than that of market income.

The first conclusion I draw is that in all three countries there have been substantial periods of time when the government has succeeded through fiscal policy in offsetting rising inequality of market incomes. The same has been observed in other countries. In the case of France, Piketty has summarized the findings of Bourguignon and Martinez (1997) as showing that (from 1979 to 1994) 'inequality of primary incomes among working-age households has grown substantially in France since the late 1970s. [The rise in social transfers] is entirely responsible for the relative stability of the distribution of disposable income' (1999: 842).

Of course, it is possible that the redistributive policy has itself caused rising inequality of market incomes. The incidence of taxes and transfers is an important issue (see for example Atkinson, 1999). But to the extent that rising market inequality is due to outside factors, as I have been discussing in this lecture, countries have succeeded in offsetting its effect for significant periods of time. We would indeed expect the government budget to attenuate the impact of rising wage inequality on household disposable incomes. Progressive income taxation should mean that the Gini coefficient of disposable income rises less than that of market incomes. Where a shift in demand away from unskilled workers leads to a rise in unemployment, as posited by the Transatlantic Consensus in the case of Europe, the impact on household disposable incomes is moderated by the existence of other income sources within the household and by the payment of unemployment benefit. An unskilled man who becomes unemployed may be supported by his skilled partner who keeps her job. Countries differ in the rate of replacement in unemployment insurance, but even the least generous systems in OECD countries offer some financial protection against unemployment.

FIGURE 5
REDISTRIBUTIVE IMPACT OF BUDGET



Sources: UK distribution among households of equalized original income and post-tax income. There are breaks in the series in 1990, 1992 and 1996/97 (although a figure is given for this year on the previous basis). *Economic Trends* (1998, April: 58, for 1977, 1979, 1981, 1983, 1985, 1987, 1989, 1991, 1993-94 to 1996-97), (1994, December: 65, for 1978, 1980, 1982, 1984, 1986, 1988, 1992), and (1993, January: 159, for 1990). It should be noted that the definition of the post-tax series differs from the disposable income series in Figure 1. Canada, Statistics Canada (1996: Text Table VI) and Statistics Canada (1999: Appendix Table III). Finland, Statistics Finland (1999: Asetelma 3).

Fiscal policy would therefore moderate rising market inequality. The same is true where the explanation of rising wage inequality is the alternative one advanced here, based on changes in pay norms. A tilt in the wage/skill nexus would lead to increased revenue from a progressive tax. The distribution of disposable income would again show less increase in inequality. This alternative approach does however raise the issue of *changes* in fiscal policy. There is the possibility that the shift in norms may extend beyond the labour market to influence attitudes to redistribution. The shift from a relatively egalitarian pay norm to one where pay is

related more closely to productivity may be accompanied by shifts in the attitudes of voters to redistributive policy, causing governments to become less willing to finance transfers and to levy progressive taxes. The fiscal changes may reinforce, rather than moderate, the tilt in the wage distribution.

As we have seen, there have been periods in two of the three countries when inequality of disposable income has increased as a result of policy choices. The United Kingdom and Finnish governments have, to varying degrees, scaled back redistributive transfers. This raises the question as to whether the explanation for these policy shifts is to be found in the national political economy of these countries or whether they too are the product of external forces. Do national governments in fact have room to manoeuvre? Are these fiscal choices, reducing tax progression and cutting the welfare state, in fact ones that all governments will in time be forced to follow?

3.2 How much freedom do national governments possess?

The constraints on national policy choices could take several different forms. They may be external economic forces, common to many countries, such as those that arise from increased competitiveness in international trade or increased factor mobility. Where social transfers are financed by payroll taxes on employers, these taxes enter wage costs and raise the prices of the country's goods and services. Firms find it harder, or less profitable, to sell their products abroad. However, in the standard trade model, the exchange rate would adjust, with a depreciation of the currency offsetting the price rise, shifting the burden onto the factors of production (assumed to be in fixed supply). Of course, this assumes that the exchange rate can adjust, and we have to distinguish here between trade between currency unions and trade within currency areas. Within the European Monetary Union this instrument of correction is not available, and this may limit the autonomy of individual member states. On the other hand, the costs of the European Welfare State as a whole can be offset by depreciation of the euro vis-à-vis other currencies, such as the dollar. Autonomy still remains, but at the European level. The constraints on governments could be those of factor mobility. An increased tax burden resulting from social transfers could lead to the out-migration of capital or labour. In the case of labour, there are reasons to doubt whether this will be of sufficient quantitative importance, at least in the foreseeable future. The position with regard to capital is more difficult, and it is possible that this may limit the choice of tax base, but this still leaves open possibilities for the progressive taxation of wage income.

There remains however a further dimension to the argument—and perhaps the more important. Rather than *real* tax competition, based on external economic changes, there may be *virtual* tax competition, based on national threats of the movement of labour or capital. Hirschman (1970) distinguished between 'exit' and 'voice' as reactions to economic change. Workers who perceive that taxes are lower in other member states may not migrate but may seek to exercise political power to achieve

lower taxes at home. Comparisons of personal, or corporate, tax rates with those in other member countries may play a role in national election campaigns. I believe that these public choice aspects may be the most important restrictions on the freedom of national governments to carry out social protection. They cannot however be described as purely external, since they arise as a result of interaction with domestic politics. This brings one back to the different explanations of rising wage inequality. As already noted, if one adopts the alternative approach outlined here, based on shifting pay norms, then one has to recognize that the same norms are likely to influence public as well as private decisions. A society which shifts away from redistributive pay norms is likely to shift away from fiscal redistribution. But this is not inevitable, and can be influenced, just as the pay distribution can be influenced, by public policy. National governments are not, on this approach, faced with absolute external constraints. There is scope for political leadership.

IV CONCLUSIONS

In Carol Shields' novel, *Happenstance* (1991), one reads the book from one end and gets the wife's story, and then can turn it upside down and read from the other end the husband's story of the same five days. The Husband's story is, in broad terms, one of a person whose five days were at the mercy of outside disturbing events. The wife's story, again loosely interpreted, is influenced and constrained by social custom (the original version of this half was called *A Fairly Conventional Woman*).

Equally, I have presented in this lecture two different perspectives. One, the husband's story, is the Transatlantic Consensus which sees rising inequality as the product of exogenous, inevitable events. Wage inequality in industrialized OECD countries, or unemployment, is increasing on account of technical change biased against unskilled workers, or, the explanation on which I have focused here, on account of the liberalization of international trade and increased competition from newly industrializing countries. The other version, the wife's story, sees inequality as at least in part socially generated. There has been a tilt in the wage/productivity relationship, affecting the well-paid as well as the low-paid. There has been a shift away from a redistributive pay norm to one where market forces dominate. Social conventions in the labour market have changed within individual countries, and this may spill over into other spheres and to other countries.

What do these two stories imply for the inevitability of rising inequality? How do they affect the way in which we see the two key elements on which I have focused: increased inequality of earning power, and redistribution through the government budget? On the first view—the Transatlantic Consensus—there is nothing to be done about rising market inequality. It is pure supply and demand. On the other hand, this does not imply rising inequality of disposable income: there are steps which governments can take to offset rising inequality of market incomes. The experience of a range of countries has shown that tax and transfer systems have been remarkably successful in counteracting the rise in inequality due to unemployment (Atkinson, 1998). The differing experience across OECD countries, described in Section 1, with regard to inequality in disposable household income is in part a reflection of differences in national redistributive policies.

What about the alternative view which I have put forward because I have doubts about the Transatlantic Consensus on both theoretical and empirical grounds? The Consensus has been advertised as a triumph of trade theory, but in fact the conclusions do not follow directly from standard application of international trade theory of the Heckscher-Ohlin variety. The model needs to be richer. Empirically, the Consensus does not readily explain the tilt in the upper part of the distribution (to understand which a simple unskilled/skilled distinction does not seem adequate).

The alternative approach described here argues that the relation between skill and pay reflects social conventions, where adherence to the pay norm is endogenously determined. A view which gives prominence to norms about pay has of course to recognize that the same norms may govern redistribution. If, as I am suggesting, widening wage dispersion in part arises on account of shifting norms, then the same shift may have reduced the willingness of governments to redistribute. Both elements move in the same direction. But the fact that the driving force is social in origin, rather than trade or technology, means that there is more scope for political leadership. The evolution of social norms is influenceable by policy decisions.

In any two accounts of a marriage, there are undoubtedly elements of truth on both sides, even if one tends to sympathize more with one than the other. However, whether the reader adheres to the Transatlantic Consensus, or is persuaded of the need to look at the role of social norms, it remains the case that rising inequality is not inevitable.

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