

**INCOME MOBILITY: POLICY GOALS AND OUTCOMES IN 'THREE WORLDS OF WELFARE CAPITALISM'**

**Bruce Headey**  
**University of Melbourne**

**Ruud Muffels**  
**Tilburg University**

**Conference of Users of the German Socio-Economic Panel, Berlin, July 3-4, 2002**

## ABSTRACT

Measures of *income mobility* should be valuable for assessing performance in achieving national policy goals. We propose a portfolio of such measures to assess policy goals relating to 1. economic growth and rising living standards

2. equality of opportunity 3. equality of outcomes 4. income security and

5. social solidarity. The types of mobility which may meet these goals are labelled *absolute mobility* (goals 1 and 3), *relative mobility* (goal 2), *wave or risk mobility* (goal 4) and *shared directional mobility* (goal 5).

The measures are used to assess policy performance in 1987-96 in the US, Germany and the Netherlands. These countries are taken as cases (perhaps 'best cases' in terms of economic performance) of Esping-Andersen's (1990) 'three worlds of welfare capitalism'. The US is a liberal welfare-capitalist regime, Germany is a conservative corporatist regime, and the Netherlands is a (borderline) social democratic regime.

In our analysis we separate the *impact of government* - the three welfare-capitalist states – from the impact of factor markets on mobility. In practice, this involves measuring the net impact of taxes and transfers. Results show remarkably different patterns of mobility, and the very different impacts of government in the three countries. They are only partly in line with Esping-Andersen's expectations of the performance of liberal, corporatist and social democratic welfare-capitalist states. The Netherlands performs 'best' in relation to the goals it gives priority and most of the goals to which the other two regimes give priority. In the latter part of the paper we seek to explain the different patterns of mobility, using unbalanced panel regression models. Included are variables relating to household composition (needs), human and economic capital, and life events.

The data come from long running socio-economic panel surveys: the PSID for the US, the GSOEP for Germany and the SEP for the Netherlands.

## INCOME MOBILITY: POLICY GOALS AND OUTCOMES IN ‘THREE WORLDS OF WELFARE CAPITALISM’

There is an almost infinite number of ways in which income mobility or income dynamics could be conceptualised and measured, but no agreement among social scientists about which measures are most useful for analytic or policy purposes. The well developed sub-field of poverty dynamics is an exception, and may be drawn on to a limited extent for guidance on how to measure mobility more generally (Jenkins, 2000). The most commonly used measures of mobility at present are changes in the *quantile ranks* of income units between time periods (e.g. changes in percentile or quintile ranks between t1 and t2), but it is often not clear why these measures are selected; they are just common practice. The purpose of this paper is to suggest ways of conceiving and measuring mobility which are valuable from a public policy standpoint, which help us to assess whether public policy goals are being achieved (for previous reviews, see Fields and Ok, 1996; Jenkins, 2000; van Klerm, 2001). To lead into this – and assuming that public policy goals broadly reflect public demands – we begin by discussing measures of mobility which an individual or family might find relevant as they thought about their own subjective economic welfare and reflected on how it had changed during, say, the last decade.

In the main part of the paper the suggested measures will be used to assess policy outcomes in the US, Germany and the Netherlands in the decade 1987-96. These three countries may be regarded as examples – indeed, as leading economic performers – in what Esping-Andersen (1990) termed ‘the three worlds of welfare capitalism’. In this typology Germany is viewed as the prototypical conservative, *corporatist* type of welfare-capitalist regime, the Netherlands is a *social democratic* regime (albeit a borderline one in Esping-Andersen’s framework), and the US is the leading *liberal* regime. More will be said about policy goals and programs when we outline *expectations* about mobility in the three types of welfare-capitalist state. Here we just note that it is fortunate that long running panel data are available for Germany, the Netherlands and the US, and that one’s choice of mobility measures makes an enormous difference to assessment of which country is most mobile, and indeed to an understanding of what kinds of policy packages they are delivering to their citizens.

In outline the argument of the paper is as follows:

- Measures of income mobility should be valuable for assessing national policy performance.
- A portfolio of measures is proposed assessing policy goals relating to
  - (1) economic growth and rising living standards
  - (2) equality of opportunity
  - (3) equality of outcomes
  - (4) income security and
  - (5) social solidarity.

- The types of mobility which may meet these goals can be labelled *absolute mobility* (goals 1 and 3), *relative mobility* (goal 2), *wave mobility or income risk* (goal 4) and *shared directional mobility* (goal 5).
- It is important to separate the *impact of government* – the three welfare-capitalist states – from the impact of the market on mobility. In practice, this involves measuring the net impact of taxes and transfers.
- Results show remarkably different patterns of mobility and the very different impact of government in the three countries, and are only partly in line with Esping-Andersen's and our *expectations* about mobility in corporatist, liberal and social democratic welfare-capitalist states.
- In the latter part of the paper we seek to explain the different patterns of mobility, using panel regression models. Results again highlight the impact of the three types of welfare-capitalist state.

It should be noted that the paper only deals with prime age (working age) households defined as those with male or female heads aged 25 to 59. These are the households mainly affected by the equity and efficiency goals which we assess via income mobility measures. The issues facing retirement age households and younger student age households are quite different.

### ***Subjective economic welfare – then policy goals***

As an approach to inferring policy goals relating to mobility, we begin by asking what changes in income an individual or family might wish for in reviewing its economic welfare – subjective welfare – over the last decade or so. For present purposes we will define subjective economic welfare as satisfaction with one's material standard of living.

The individual or family might first ask:

*How much has our income gone up or down in real terms in the last ten years?*

This is a question relating to *absolute mobility*, and it is reasonable to suppose that subjective welfare is greatly affected by absolute mobility. The public policy goal which absolute mobility translates into is *rising GDP per capita*, where the benefits are dispersed widely rather than concentrated on particular groups.

A second question that might be asked is:

*How have I/we done – how has my income changed – relative to other people in this country? Am I getting ahead, am I doing as well as I and others would have expected?*

This is a question about *relative mobility* and translates into the public policy goal of *equality of opportunity*, or at least widespread opportunities. Clearly, however, equality of opportunity means different things to different people. To Europeans it often means making sure that people from poor or

underprivileged backgrounds have the opportunity to get ahead. To many Americans it perhaps means the opportunity to strike it rich, to make a fortune. We shall assess performance relating to both these alternatives. Another issue is that in measuring relative mobility we need to specify ‘relative to what?’ A peer group or income yardstick has to be used to assess how relatively well or badly particular individuals or households are faring. Alternative yardsticks are discussed in the Methods section.

A third question which might spring to mind is:

*Have I had a rough ride or an easy ride? Has my income been stable and secure, or has it been risky and precarious?*

This raises issues about security of living standards and there is every reason to suppose that people’s subjective welfare is substantially affected by their perceptions of income security. We can label this dimension of mobility *wave mobility* or *income risk*. The relevant public policy goal, which welfare states promote to a greater or lesser extent, is *income security*.

#### ***Additional public policy goals – collective goals***

So far we have three dimensions of mobility – absolute mobility, relative mobility and income risk – which affect subjective welfare and can readily be translated into public policy goals. We now add two policy goals of a collective nature. One is *income equality* – one aspect of equality of outcomes - and the other is *income solidarity*. Income equality, for someone who believes in it, is a collective rather than an individual goal in that it makes little sense to say, “I want my income to become more equal to other people’s”, but a person could reasonably say, “I want our society to become more equal”. Income equality is closely related to income mobility, because the more people’s incomes fluctuate over time, the more equal they become in the medium and long term. This linkage led Shorrocks (1978) to propose that multi-year measures of income equality could serve as measures of mobility.

The final goal considered here - income solidarity, an aspect of social solidarity – is presumably what people have in mind when they worry about social exclusion, when they worry that some members of society are not enjoying the fruits of economic growth, not sharing in the general prosperity. The collective goal of social solidarity may be expressed as, “I want us to stick together as a society – to share the gains and share the losses”. In this view, government policy should promote a shared economic fate, not allowing some sections of society to get ahead while others flounder, and perhaps ensuring that during a recession all sections bear the losses or sacrifices required. In terms of income mobility this goal would be met if people’s incomes in a particular country all went up together in economic booms, and then went down in recessions.

Table 1 is an attempt to put the discussion into a framework:

Table 1  
Dimensions of Mobility: Linking Mobility to Subjective Welfare and Public Policy Goals

SUBJECTIVE WELFARE GOALS	GOVERNMENT POLICY GOALS	INCOME MOBILITY: TYPE OF MEASURE
'I want an increased standard of living'	Economic efficiency: high growth in GDP, rising living standards	Absolute mobility
'I want the chance to get ahead;' 'I want the chance to strike it rich'	Equality of opportunity	Relative mobility
'I want income security – low risk'	Income security/stability	Wave mobility/income risk
'I want us to have a fair and equal society'	Equality of outcomes	Income equality (produced by high absolute mobility)
'I want us to stick together – share the gains & losses'	Social solidarity: avoid social exclusion	Shared directional mobility (gains, losses)

The table just summarises subjective welfare goals (column 1), the public policy goals into which they may be translated (column 2) and the dimensions of income mobility we need to measure to assess goal achievement (column 3).

What expectations or hypotheses would we have about policy performance in relation to these goals in a liberal welfare-capitalist state (the US), a corporatist state (Germany) and a social democratic regime (the Netherlands)? The following expectations are extrapolated directly from Esping-Andersen (1990) and our own previous research on these countries (Goodin, Headey, Muffels and Dirven, 1999). Each expectation is based on predicting that countries or welfare-capitalist regimes will perform best in achieving the policy goals which Esping-Andersen claims they give top priority, and perform less well in regard to lower priority goals.

*Rising living standards, economic efficiency, absolute mobility*

Liberal welfare-capitalist states are regarded as giving top priority to economic efficiency and rising living standards. They organise their welfare states on a two-tiered basis so that benefits paid to working age people are at quite low replacement rates (low benefits relative to normal market income) and minimise work disincentives (Esping-Andersen, 1990). So our first *expectation (E1)* is that the US, as a liberal state, would perform best among these three countries in promoting rising living standards and high real absolute increases in income. We have no specific expectation about the comparative performance of Germany and the Netherlands.

*E1: The liberal US performed best in regard to promoting rising living standards and absolute mobility. (No expectation regarding Germany and the Netherlands).*

*The chance to get ahead, equal opportunity, relative mobility*

If equality of opportunity is defined in the European way, meaning the chance for underprivileged people to get ahead, then our expectation would be that the social democratic regime, the Netherlands, would perform best, followed by the US, then Germany. The reasoning here is that social democrats give very high priority to opening doors to underprivileged people, and a liberal regime also gives weight to the opportunity to move from rags to riches. A corporatist regime, on the other hand, gives highest priority to maintenance of the existing social structure, which in practice means maintaining household income relativities, so we would not expect it to promote equality of opportunity in the sense used here. On the other hand, if equality of opportunity is defined the American way, as the chance to strike it rich, then we would expect the US to achieve the best results, and make no prediction for Germany and the Netherlands.

*E2a: (Equality of opportunity as opportunities for the under-privileged) Social democratic Netherlands ranked first, followed by the US, then Germany.*

*E2b: (Equality of opportunity as the chance to strike it rich) The liberal US ranked first, followed by the Netherlands, then Germany.*

*Income security, low wave mobility, low risk*

The key priority of a conservative corporatist regime is to maintain household disposable income relativities in order to maintain social stability. So, on this basis, we would expect Germany to have performed best in stabilising incomes and providing security in that sense. Social democratic Netherlands would be expected to rank second, with the liberal US – a regime expected to give little or no priority to security for working age households – ranking third.

*E3: Corporatist Germany performed best in minimising income risk and providing stable household disposable incomes. The Netherlands ranked second and the US third.*

*Equality of outcomes, income equality*

Quite clearly, a social democratic regime would be expected to give higher priority to equality of outcomes than the other two types. On grounds of general knowledge of the systems rather than ‘theory’, we would expect the German regime to produce more equal outcomes than the US.

*E4: Social democratic Netherlands ranked first in producing a relatively equal household income distribution, Germany ranked second, and the US third.*

*Sticking together, social solidarity, shared directional mobility*

Both a corporatist and a social democratic regime might be expected to value social solidarity in the sense that they would try to ensure that households incomes moved in shared directions – up in booms and down in recessions. This is not a goal to which one would expect the US to give any priority.

*E5: Corporatist Germany and social democratic Netherlands ranked first equal in promoting shared directional mobility. The US ranked third.*

In the main body of the paper we present results assessing these expectations and also seek to account for the differing national patterns of mobility.

## **METHODS**

### ***The three panels***

The three panel surveys analysed here are the American Panel Study of Income Dynamics (PSID), the German Socio-Economic Panel (GSOEP) and the Dutch Socio-Economic Panel (SEP). All have over 15,000 respondents and they are the only three national economic panels to have run for ten consecutive years or more.

The PSID began in 1968 and has continued ever since. Low income households were initially oversampled, because the study was partly paid for by the Office of Economic Opportunity. One respondent answers on behalf of each household and the sample is renewed and kept more or less representative by interviewing ‘split-offs’; that is, people who leave their original household and move to a new one (e.g. children leaving home to get married). Longitudinal weights are used to adjust for panel attrition and other sources of sample bias.

The GSOEP and the SEP both began in 1984. The GSOEP initially oversampled foreigners (guest-worker households) and also added a supplementary post-unification immigrant sample in 1995. The German and Dutch panels also follow split-offs and also, of course, require use of longitudinal weights whenever multi-year analysis is undertaken. The PSID and GSOEP files have been adapted for comparability by the German Institute for Economic Research (DIW) and Cornell University (Cornell University, 2001). We have prepared an equivalent Dutch file.

This paper covers the years 1987-96, being the last decade of data available for all three countries. Only West German data are used, since East Germans were not interviewed until 1990. In all three countries analysis is restricted to households headed by men or women of prime working age (25-59).

## *Measures*

### *Equivalised income*

The aim is to measure mobility in households' material standard of living. So, following usual practice, all income measures have been equivalised, in this case by use of the International Experts' equivalence scale, which requires dividing incomes by the square root of household size (Buhmann et al, 1988). This is almost the same as the current OECD equivalence scale of 1.0 for the first adult, 0.5 for other adults and 0.3 for children. In parts of the paper we shall want to look at the impact of government – the tax-transfer system – on mobility. For this purpose it makes sense to equivalise market incomes too, in order to compare mobility of market or pre-government incomes with disposable or post-government incomes. The formula used for assessing the impact of government, derived from Kakwani (1986) and Ringen (1991), is:

*Impact of government (%) = (pre-government mobility – post-government mobility)/pre-government mobility \* 100.*

### *Measuring four types of income mobility*

*Absolute mobility* is simply the absolute (inflation adjusted) change in households' disposable incomes during the decade. This is used to measure policy goals relating to (a) economic efficiency and rising living standards (b) aspects of equality of opportunity and (c) aspects of equality of outcomes.

Measurement of *relative mobility* requires a choice of standards or yardsticks – change in income relative to what? Perhaps the two standards most obviously relevant to policy goals and subjective welfare are mobility measured as change in income percentile rank and mobility as gains/losses relative to national median income. For the first measure we compare the percentile rank of each person's income in 1996 with his/her starting rank in 1987. Similarly, mobility relative to national median income is the percentage of median income one received in 1996 compared to 1987.

The best way to measure *wave mobility* or *income risk* is not obvious. At first sight a valid measure would be the mean or median coefficient of variation of the ten annual incomes people in each country received in 1987-96. But this measure is open to the objection that it confounds upside and downside risk; the coefficient would be the same if one's income steadily increased or steadily declined throughout the decade. Probably when policy makers or the public think about income security they really only have in mind security against downside risk. So the measure we propose to use, after some trial and error, is the number of times in the decade a person's income in the current year declined by more than 10% in real

terms compared to the previous year. This very straightforward measure uncovers large differences among the countries.

A measure of *shared directional mobility* should capture the extent to which a nation’s people share the same economic fate – get richer or poorer together. This is assessed by measuring the percentage of the population whose own real incomes rose or fell by within plus or minus 10% of national per capita economic growth during the decade.....or between plus or minus 25%, or plus or minus 25-50%, or at the extreme by over 50% more than the national economy, or over 50% less.

## RESULTS

We now compare how the three countries – the three types of welfare-capitalism – performed in relation to policy goals.

### *Goal 1 – rising living standards, economic efficiency, absolute mobility*

First, background information on economic growth in the three countries – growth which provides the fuel for the household income changes which are our main interest.

Table 2  
Economic Growth Per Capita In 1987-96<sup>a</sup>

	US	Germany	Netherlands
Real economic growth	23.9%	24.7%	28.0%
Population growth	9.5%	8.3%	7.4%
Economic growth per capita	14.4%	16.4%	20.6%

a. Calculated from growth indices in OECD *Economic Outlook* (1999).

Our first expectation or hypothesis proves false. The liberal US welfare-capitalist regime, which gives highest priority to economic efficiency and growth, did not in this period have the highest growth rate. The comparison is a fair one because in all three countries the decade began and ended with reasonable growth and there was a recession in the middle. The American recession was the worst; the Dutch one was barely a pause. (If the period were extended to the present the American and Dutch relative performances would be the same, but Germany would slip back). The widespread impression that the US economy has outperformed the economies of most of Western Europe in the last ten to fifteen years is not correct in per capita growth terms, although it is true in employment terms.

Now evidence that relates more directly to rising living standards, to absolute mobility of incomes. Table 3 shows mean and median increases in real equivalent incomes and the percentage of the population in each country whose incomes were higher at the end of the decade than the beginning (‘winners’).

TABLE 3  
ECONOMIC EFFICIENCY & RISING LIVING STANDARDS  
HOUSEHOLDS WITH HEADS AGED 25-59  
ABSOLUTE MOBILITY 1987-96

	US: pregov y %	postgov y %	Gov. imp.	Germany: pregov y %	postgov y %	Gov. imp.	Netherlands: pregov y %	postgov y %	Gov. imp.
Average rise	74.6	58.3	- 21.8%	45.5	31.6	- 30.5%	61.6	49.0	- 20.5%
Median rise	13.5	25.7	+ 90.3%	24.1	21.1	- 12.4%	11.3	19.8	+ 75.2%
Winners	59.6	66.0	+ 6.7%	67.6	68.8	+ 1.8%	60.0	69.1	+ 15.2%

- Government impact (%)= (Pregov. y mobility % - Postgov. y mobility)/Pregov. y mobility \* 100.

The comparisons here do not show a clear pattern. American mean and median increases in disposable income were highest but there were slightly more ‘winners’ in the Netherlands and Germany than in the US. The evidence on the impact of government (the third column for each country) implies that the American and Dutch tax-transfer systems – or really the tax side – favoured middle income earners more than the German, having a more positive impact on median incomes and on the percentage who emerged as ‘winners’. Parenthetically, one might comment that if this is how the Kohl Government treated middle income earners it is surprising it lasted as long as it did. The main point, however, is that our expectation that living standards would have risen most strongly in liberal US is not confirmed. In practice, the performance of the three types of regime in promoting rising living standards was quite similar.

*Goal 2a – equality of opportunity for the under-privileged*

Our first measure of equality of opportunity, changes in people’s percentile rank in the income distribution, is the measure most commonly used by sociologists. Arguably, though, it has the drawback that it is easier to move up and down the ranks in a society with a more equal income distribution than in a more unequal society, because the same dollar gain or loss will produce more movement in the more equal society (Fritzell, 1990; Gustafsson,1994). Table 4 is intended to answer the question, ‘What was the median change in rank by 1996 of people starting in different quintiles in 1987?’ In practice, we show results only for the top and bottom quintiles because these are the only ones for which the international comparison shows differences. (In all countries members of the 2<sup>nd</sup> quintile moved up a bit on average, the 4<sup>th</sup> quintile moved down a bit, and the middle quintile stayed put).

TABLE 4  
 EQUALITY OF OPPORTUNITY: THE CHANCE TO GET AHEAD  
 HOUSEHOLDS WITH HEADS AGED 25-59  
 PERCENTILE RANKS MOBILITY 1987-96

	US: Pregov. y median percentile change	Postgov. y median percentile change	Gov. impact %	Germany: Pregov. y median percentile change	Postgov. y median percentile change	Gov. impact %	Neths: Pregov. y median percentile change	Postgov. y median percentile change	Gov. impact %
Bottom quintile	+8	+8	0%	+14	+15	+7.1%	+13	+14	+7.7%
Top quintile	-7	-8	+14.3%	-9	-8	-11.1%	-15	-17	+11.8

Results here are not quite in line with expectations. In the social democratic regime, the Netherlands, there was the greatest mobility, but it was especially marked at the top end of the distribution rather than the bottom. Opportunity for the lowest quintile to get ahead was just as high in Germany (the difference between the two countries not being significant at the .05 level). Both European countries recorded higher mobility at the bottom end than the US. At the top end the Netherlands stands out as a country in which, exaggerating slightly, one might say ‘it is easy to get rich, but hard to stay rich’. The impact of government in all three countries is negligible. The tax-transfer system does reduce inequality in all three countries (Goodin, Headey, Muffels and Dirven, 1999) but it does little to alter people’s income ranks; perhaps a politically dangerous thing to do.

Table 5 provides a second measure of equality of opportunity – mobility relative to national median income. This measure is not undermined by being likely to show more apparent mobility in a more equal society than an unequal one. The table shows median outcomes in 1996 for people starting in the top and bottom quintiles in 1987.

TABLE 5  
 EQUALITY OF OPPORTUNITY: THE CHANCE TO GET AHEAD  
 HOUSEHOLDS WITH HEADS AGED 25-59  
 MOBILITY RELATIVE TO MEDIAN (MAINSTREAM) INCOME 1987-96

	US:			Germany:			Neths:		
	Pregov. y median percentile change	Postgov. y median percentile change	Gov. impact %	Pregov. y median percentile change	Postgov. y median percentile change	Gov. impact %	Pregov. y median percentile change	Postgov. y median percentile change	Gov. impact %
Bottom quintile	+17	+17	0%	+14	+13	-7.1%	+13	+13	0%
Top quintile	-30	-32	+6.7	-36	-23	-36.1	-48	-37	-22.9

Here results are plainly not in line with expectations. On this measure the US bottom quintile had most chance to get ahead – moving up 17% relative to national median disposable income in 1996 compared to their position in 1987. The Dutch and German bottom quintiles both gained 13% relative to median income. At the top end of the distribution there is considerably more mobility, and it again appears that the Netherlands is a hard place in which to retain a high income. The impact of government is again negligible at the bottom end, and also at the top end in the US. In the Netherlands and Germany, which tax more heavily than the US, the decline in the incomes of people who started in the top quintile in 1987 is cushioned by government, being considerably less in post-tax than pre-tax terms. It appears that if people’s incomes decline in the European countries they can get more valuable tax concessions than are available in the US. This is perhaps somewhat counter-intuitive and, as noted, may be principally a result of the fact that the Europeans pay much higher taxes in the first place, and so can more readily find ways of reducing them when income losses occur.

*Goal 2b – equality of opportunity; the chance to strike it rich*

We next consider what might be thought of as an American version of equality of opportunity – the chance to strike it rich, or at least to become much richer than you were. Table 6 shows the percentage of people in the three countries recorded big (and small) income gains, and just for symmetry, percentages who recorded big (and small) losses.

TABLE 6  
EQUALITY OF OPPORTUNITY: THE CHANCE TO STRIKE IT RICH  
HOUSEHOLDS WITH HEADS AGED 25-59  
ABSOLUTE MOBILITY: INCOME GAINS AND LOSSES 1987-96

Gain/loss %	US:			Germany:			Netherlands:		
	Pregov. %	Postgov. %	Gov. imp. %	Pregov. %	Postgov. %	Gov. imp. %	Pregov. %	Postgov. %	Gov. imp. %
Over 100	15.1	17.3	+14.6%	12.9	7.8	-39.5%	11.0	7.0	-34.4%
+ 50-100	13.3	17.2		19.6	17.3		13.9	17.7	
+ 25-50	13.3	15.9		16.9	21.0		14.5	19.5	
+ 0-25	17.9	15.6		18.3	22.8		20.6	25.1	
- 0-25	16.4	15.4		12.5	16.9		18.8	17.6	
- 25-50	12.8	10.2		9.0	9.4		11.2	9.5	
- 50-100	10.8	8.3		10.8	5.0		10.0	3.7	
	(100.0)	(100.0)		(100.0)	(100.0)		(100.0)	(100.0)	

It certainly seems that more Americans recorded very big increases in disposable income in this decade – increases over 100% - than Germans or Dutch. Furthermore the American tax-transfer system helped those who helped themselves by actually slightly increasing the numbers whose income doubled. In

Germany and the Netherlands the percentages whose pre-tax incomes doubled were lower, and the effect of the tax system was to reduce their numbers a lot further.

More detailed analysis shows that the American story here is at least partly a rags to riches story.....more so than in Germany and the Netherlands. Of the 17.3% of Americans who doubled their income, more than two-thirds (12.2% of the population) were coming off a low base, having started the decade in the bottom half of the distribution. By contrast, in the European countries the very large majority of those who became this much better off started in the top half of the distribution. Again, however, the overall shape of the income distribution affects the comparison. The American bottom quintile is relatively much less well off than the German and Dutch poor, so in a sense it is 'easier' for them to double their income.

### *Goal 3 – equality of outcomes*

Shorrocks (1978) Mobility (M) measure is based on the idea that income mobility and income equality are closely linked, so that the more people's incomes fluctuate relative to each other over time, the more equal society will become in the long run. It follows that one way to measure mobility is to see how much lower an inequality coefficient (say Gini, or as in Table 7, Theil-0) is over a period of years combined (in this case ten years) than it was for the weighted average of the years. Table 7 gives Shorrocks M for the three countries (bottom row) and also governmental impact on equality for one year periods and the full ten years combined. Theil-0 (the mean logarithmic deviation of incomes) is preferred as an inequality coefficient because, unlike many other measures, it gives equal weight to reductions in inequality at both ends of the distribution.

TABLE 7  
 EQUALITY OF OUTCOMES: A FAIR AND EQUAL SOCIETY?  
 HOUSEHOLDS WITH HEADS AGED 25-59  
 SHORROCKS M (MOBILITY): THEIL COEFFICIENTS 1987-96

	US. Pregov y.	Postgov. y	Gov. impact	Germany Pregov. y	Postgov. y	Gov. impact	Neths Pregov. y	Postgov. y	Gov. impact
Theil 1987	.266	.203	-23.7%	.149	.092	-38.3%	.137	.082	-40.1%
Theil 1996	.377	.377	0.0%	.179	.110	-38.5%	.191	.108	-43.5%
Theil: weighted annual average	.322	.290	-9.9%	.164	.101	-38.4%	.154	.095	-38.3%
Theil 1987-96	.246	.222	-9.8%	.121	.083	-31.4%	.104	.061	-41.3%
Shorrocks M	23.6%	23.4%		26.2%	17.8%		32.5%	35.8%	

Our expectation was that the Netherlands, as a social democratic regime, would achieve greatest equality of outcomes and the US least, and this proved to be the case. Market or pre-government income inequality was lowest in the Netherlands and government there then did a bit more than in Germany and much less than in the US to reduce disposable income inequality. Over ten years, using the Theil-0 measure, the differences in inequality among these regimes are massive. German inequality is over 60% lower than American (Theil-0 is 0.083 compared with 0.222) and Dutch is 25% lower than German (0.061 compared with 0.083).

The Shorrocks M coefficients give further evidence, bolstering results in Table 3 and 4, that in many respects the Netherlands is also the most mobile society. Using this measure, mobility of disposable incomes is considerably higher than in the US, which in turn is more mobile than Germany. The evidence about the impact of government is fascinating. The corporatist conservative regime, Germany, actually reduced mobility – just what a conservative regime ‘should’ do – and the American government had virtually no impact, which is fine for a liberal regime. The Dutch social democratic regime apparently increased mobility to a moderate extent (compare Tables 4 and 5).

*Goal 4 – income security, income risk, wave mobility*

Our expectation was that income security – the absence or reduction of downside risk – would be highest in corporatist Germany and lowest in liberal US, with the Netherlands in between. Table 8 compares downside risk in the three countries and also shows the impact of government.

Table 8  
INCOME RISK: HOW SECURE WAS MY INCOME?  
HOUSEHOLDS WITH HEADS AGED 25-59  
WAVE MOBILITY: INCOME FELL >10% IN 3 OR MORE YEARS

	US. Pregov. y %	Postgov. y %	Gov. impact	Germany: Pregov. y %	Postgov. y %	Gov. impact	Neths: Pregov. y %	Postgov. y %	Gov. impact
All households	56.1	54.3	-3.2%	42.5	36.2	-14.8%	57.1	37.3	-34.7%
Top quintile	44.2	41.8	-5.4%	44.9	36.4	-18.9%	57.1	33.6	-41.2%
Middle quintile	52.0	51.1	-1.7%	38.6	33.4	-13.5%	54.2	37.9	-26.4%
Bottom quintile	75.6	73.8	-2.4%	53.9	44.1	-18.2%	58.7	46.3	-21.1%

The results indicate that income security was much higher in Germany and the Netherlands than the US, but the difference between the two European countries was not significant at the 0.05 level. The Dutch government actually did most to reduce insecurity but fluctuations in market incomes were higher there than in Germany, so in a sense the Dutch government needed to do more if it valued security. The liberal US regime does almost nothing to reduce insecurity, in line with its market-driven preferences.

As a stark observation it is astonishing – at least for an academic – to see how insecure many people’s incomes are. Over half of Americans experienced a drop in disposable income of more than 10% in three or more years in this decade, and nearly three-quarters of those in the bottom quintile (the quintiles are here defined by average annual income over the decade). In Germany insecurity of market incomes was lower than in the other two countries, the government intervened to further reduce downside risk, and the end result was still that over one-third experienced a fall of over 10% in three or more years. The Dutch working age population had market incomes just as insecure as Americans, but government interventions produced a final outcome similar to Germany. There is perhaps some suggestion here that the Dutch government allows the labour market to do its job in allocating incomes and providing individual incentives at the workplace, but then protects families through the tax-transfer system.

*Goal 5 – social solidarity, shared directional mobility*

The final goal we consider – social solidarity – is measured by the extent to which, in each country, people’s incomes tracked the level of national economic growth over the period. Table 9 shows percentages of the population whose pre- and post-government incomes increased by within plus or minus 25% of the national growth rate for the decade, between 25-50%, by over 50%, and by less than 50% of the national figure. For example, the American growth rate for the whole period was 14.4% (see Table 2), so those whose incomes grew by within plus or minus 50% of the national rate were those whose gains were in the 7.2%-21.6% range.

Table 9  
 SOCIAL SOLIDARITY: SHARING THE FRUITS OF GROWTH?  
 HOUSEHOLDS WITH HEADS AGED 25-59  
 INCOME INCREASES RELATIVE TO GROWTH IN G.D.P. PER CAP. 1987-96

Own y increase relative to GDP	US: Pregov. y %	Postgov. y %	Gov. impact	Germany: Pregov. y %	Postgov. y %	Gov. impact	Netherlands: Pregov. y %	Postgov. y %	Gov. impact
within 25% band	4.9	4.8	-2.0%	6.1	8.7	+42.6%	8.0	11.3	+41.3%
within 25-50% band	5.3	4.7	-11.3%	6.8	7.8	+14.7%	8.5	11.3	+32.9%
over 50% band	44.1	52.4	-18.8%	49.5	46.3	+6.5%	34.9	38.7	-10.9%
below 50% band	45.6 (100.0)	38.2 (100.0)	+16.2%	37.6 (100.0)	37.2 (100.0)	+1.1%	48.6 (100.0)	39.0 (100.0)	+19.8%

As perhaps could have been guessed from the data on income (in)stability in the previous table, there are in fact rather few individuals whose own real income increases are closely in line with national growth. Our expectation was that corporatist Germany and social democratic Netherlands would have higher income/social solidarity than liberal US. In fact, solidarity of this kind is clearly highest in the Netherlands, Germany is in between and the US is lowest. But even in the Netherlands only 22.6% had income gains within 50% of the national growth rate. In Germany the comparable figure was 16.5%, and in the US 9.5%. At this stage social solidarity, or the avoidance of social exclusion, appears to be a policy goal to which increasing lip service is paid in much of Europe, but there is little evidence of action.

*Summary ranking of countries in regard to policy goals*

We now pull results together in a rather crude way by ranking the three countries in terms of how well they achieve the various policy goals; always remembering that in some cases they were not trying to achieve anything, not prioritising a particular goal.

Table 10  
SUMMARY: RESULTS RELATING TO FIVE NATIONAL POLICY GOALS  
EXPECTATIONS CONFIRMED OR FALSE?

Policy goals	Expectations: ranks	Results: ranks	Government's impact	Comments
Economic growth & rising living standards	U.S. 1 Germany 2= Netherlands 2=	Netherlands 1 Germany 2 U.S.A. 3	no idea	Expectations false, although U.S. did have the highest rise in mean income (but lowest % winners)
Equality of opportunity: chance to get ahead	U.S. 1 Netherlands 2 Germany 3	Perc. ranks mobility: Neths 1, Ger 2, US 3 Mobility re median y: Neths 1, US 2, Ger 3	Government has almost no impact, esp. on perc. ranks: don't mess with social ranks!	Expectations false. Results depend on which relative standard is used. U.S. not first on either. German rich immobile, largely due to Gov.
Equality of opportunity: chance to strike it rich	U.S. 1 Germany 2 Netherlands 3	U.S. 1 Germany 2 Netherlands 3	U.S. Gov. actually increases % who gain over 100%	Expectations confirmed: not much diff. between Ger. and Neths.
Equality of outcomes	Neths 1 Germany 2 U.S. 3	Neths 1 Germany 2 U.S. 3	Dutch and German Govs. greatly reduce inequality and boost disposable income mobility. U.S. Gov. does little redistrib.	Expectations confirmed
Income security	Germany 1 Neths 2 U.S. 3	Germany 1= Netherlands 1= U.S.	Gov. considerably reduces 'adverse' y instability in Ger and Neths. Almost no impact in U.S.	Expectations mainly confirmed. German instability slightly less but Dutch Gov. does more risk reduction;
Social solidarity	Germany 1= Netherlands 1= U.S. 3	Netherlands 1 Germany 2 U.S. 3	Gov. has little impact in reducing dispersion of gains; U.S. Gov. actually increases dispersion reduce serious losses	Expectations only partly confirmed: Neths has somewhat greater 'solidarity' than Germany

A first comment (which the rankings inadequately show) is that these three countries, or three different regimes, deliver remarkably different policy packages to their citizens. The US is the place to be if you want the chance to strike it rich and don't mind considerable poverty and inequality. Germany is fine if you value the corporatist goal of household income security (although results for the Netherlands were much the same) but don't much care about equality of opportunity. The Netherlands, in this decade, has been a pretty good place to be whatever your policy goals. It ranked first or first equal on all goals – rising living standards, equality of opportunity and outcomes, income security and solidarity - except the chance to 'strike it rich'. (However, for those starting in the upper half of the distribution, the prospects of doubling income were virtually the same as in the US).

Largely because the Netherlands performed so well (fuelled by the highest economic growth rate), some of our initial expectations proved false. The liberal regime was outperformed in relation to its priorities of rising living standards and some aspects of equality of opportunity, and the corporatist regime was equalled in regard to income security and outperformed in regard to social solidarity.

The fourth column of Table 10, dealing with governmental impact on incomes and mobility, indicates that governments do little to change the income ranks of working age households (a measure of equality of opportunity) and little to promote income solidarity. These aspects of income mobility are left to the market. On the other hand, the Dutch and German governments do a great deal through the tax-transfer system to increase equality of outcomes (and reduce poverty, although this is not analysed here) and income security.

#### *Accounting for international differences in mobility*

Clearly the next step is to try and account for the differing national patterns of mobility. At this stage we have only just begun this work, starting with absolute mobility. Table 11 is an initial attempt to account for changes in absolute incomes between 1987 and 1996, where the dependent variables are (inflation adjusted) dollars, deutschmarks and guilders. Four sets of 'explanatory' variables were entered in sequence: (1) household composition (needs) (2) human and financial capital (3) variables relating to work hours and non-labour income and (4) government income (taxes and transfers). As is usual in labour economics, only labour supply and income variables which were considered to be wholly or partly subject to choice were treated as explanatory variables. On this basis the supply of work hours by all household members, and the hourly rates of household members other than the head were included in equations. The head's hourly rate was assumed not to be a matter of choice and was therefore omitted.

Table 11  
Accounting For Changes in Disposable Equivalent Incomes 1987-96  
Households with Heads aged 25-59

	US (n~9000)	Germany (n~5000)	Netherlands (n~4500)	
<i>Dependent variable = Δ equivalent income (\$,DM, FL)</i>				
<i>Coefficients bs (with t- values in parentheses).</i>				
<b>Eq1 household composition</b>				
head's sex(m=1,f=0)	-1227(ns)	195(ns)	3536(ns)	
Δ head's sex to f..	4121(ns)	-6433(6.71)	13130(7.37)	
Δ head's sex to m.	6679(2.49)	4252(2.09)	4091(ns)	
head's age	62(ns)	51(ns)	-63(ns)	
Δ head's age (yrs)	475(7.67)	380(12.66)	109(2.45)	
head's marital status	9847(4.54)	1135(ns)	-5659(3.00)	
Δ head's mar. status <sup>a</sup>	7526(4.12)	5064(6.19)	-4673(3.12)	
household size	-2824(7.80)	-201(ns)	885(ns)	
Δ household size	-1781(4.78)	-549(2.22)	-2483(8.20)	
	R <sup>2</sup> = .03	R <sup>2</sup> = .10		R <sup>2</sup> = .03
<b>Eq2 as above +human &amp; financial capital</b>				
head's yrs of educ.	2308(12.41)	570(5.17)	2018(5.17)	
Δ head's yrs of educ.	881(ns)	1378(8.37)	2137(4.64)	
household's assets <sup>b</sup>	na	1631(5.70)	0(ns)	
Δ household's assets		1263(4.56)	1(9.82)	
	R <sup>2</sup> = .05	R <sup>2</sup> = .14		R <sup>2</sup> = .06
<b>Eq3 as above + market income &amp; work hours</b>				
Δ head's work hours	2(6.10)	4(14.57)	4(13.32)	
Δ HH others' hourly rate	40(7.15)	90(10.60)	174(17.17)	
Δ HH others' work hours	3(8.05)	5(26.72)	3(12.11)	
Δ asset income	1(57.44)	1(18.86)	1(8.57)	
Δ homeowner rent	1(66.22)	1(20.00)	na	
	R <sup>2</sup> = .69	R <sup>2</sup> = .59		R <sup>2</sup> = .23
<b>Eq4 as above + government income</b>				
Δ government inc. <sup>c</sup>	-0(ns)	-1(19.05)	-1(83.55)	
	R <sup>2</sup> = .69	R <sup>2</sup> = .67		R <sup>2</sup> = .72

ns = not significant at the .05 level.

a. 1=partnered, 0=not partnered.

b. In Germany assets are a 0-5 scale, depending on whether the household owns each of five assets. In the Netherlands a monetary value is given.

c. Transfers minus taxes.

The results indicate that, in liberal US, market decisions accounted for nearly all changes in disposable incomes in 1987-96. Changes in household labour supply, in secondary earners' hourly rates and asset incomes accounted for nearly all the variance. The impact of governmental taxes and transfers (entered as a final step in the regressions) did not account for any additional variance at all. In corporatist Germany market decisions also accounted for most variance, but household needs variables counted for rather more

than in the other two countries, and the impact of government was quite considerable. In the Dutch social democratic regime the impact of government on mobility was huge; social democracy at work.

## **DISCUSSION**

What are the broader implications and policy learning implications (if any) of our results? In general, the finding that these three Western welfare-capitalist regimes deliver such remarkably different policy packages may be seen as counter-evidence to the view that globalisation and other forces are somehow imposing policy convergence. Welfare states and tax-transfer systems remain very different, even within the Western world; convergence in these areas seems quite limited.

The implications of Dutch policy performance in this decade (and since) are probably of greater practical import. The Dutch government appears to have combined equity and efficiency in ways which suggest that, with skilled policy design, the so-called ‘big trade-off’ (Okun, 1975) between these two desiderata is not unavoidable and can perhaps largely avoided (Headey, Goodin, Muffels and Dirven, 2000). There is some indication that OECD and other international organisations have tentatively come to this view and occasionally hold up Dutch performance as something from which other West European countries can learn (OECD, 1998, 1999). Of course, this might be naive; the subsequent performance of previously lauded ‘miracle economies’ gives cause for scepticism. Even so, in our own work we think it worthwhile to continue comparing the performance of different types of welfare-capitalist regime. We need much more detailed and policy specific explanations of differential policy performance if valuable lessons of policy design and transfer are to be derived.

## REFERENCES

- Buhmann, B., Rainwater, L., Schmaus, G. and Smeeding, T.M. (1988) 'Equivalence scales, well-being, inequality and poverty: sensitivity estimates across ten countries, using the Luxembourg Income Study (LIS) database', *Review of Income and Wealth*, 34, 115-42.
- Cornell University, Department of Policy Analysis and Management and the German Institute for Economic Research (2001) *GSOEP-PSID-SLID Equivalent File\_1980-2000*. Ithaca, Cornell University.
- Esping-Andersen, G. (1990) *The Three Worlds of Welfare Capitalism*. Oxford, Polity.
- Fields, G.S. and Ok E.A. (1996) 'The meaning and measurement of income mobility', *Journal of Economic Theory*, 71, 349-77.
- Fritzell, J (1990) 'The dynamics of income redistribution: economic mobility in Sweden compared to the United States', *Social Science Research*, 19, 17-46.
- Goodin, R.E., Headey B.W., Muffels, R. and Dirven, H.J. (1999) *The Real Worlds of Welfare Capitalism*. Cambridge, Cambridge U.P.
- Gustafsson, B (1994) 'The degree and pattern of income mobility in Sweden', *The Review of Income and Wealth*, 40, 67-86.
- Headey, B.W., Goodin, R.E., Muffels, R. & Dirven, H.J. (2000) "Is there a trade-off between economic efficiency and a generous welfare state? A comparison of best cases of 'the three worlds of welfare-capitalism'", *Social Indicators Research*, 50, 115-157.
- ??Jenkins, S.P. (2000) *European Journal of Population Economics*
- Kakwani, N (1986) *Analysing Redistribution Policies*. Cambridge, Cambridge U.P.
- OECD (1998) *Employment Outlook*. Paris, OECD.
- OECD (1999) *Economic Outlook*. Paris, OECD.
- Okun, A.M. (1975) *Equality and Efficiency: The Big Trade-Off*. Washington D.C., Brookings Institution.
- Ringen, S. (1991) "Households, standard of living and inequality", *The Review of Income and Wealth*, 37, 1-13.
- Shorrocks, A.F. (1978) 'Income inequality and income mobility', *Journal of Economic Theory*, 46, 376-93.
- van Klerm, P. (2001) *Essays on Income Mobility and Income Distribution Dynamics*. University of Notre Dame de la Paix, Naumur, Ph.D thesis.