

Institute for Social and Economic Research



**Taking the long view:
the ISER Report 2005/6**

Contents

Inside front cover:

About ISER

1: Introducing the directors

2-3: Women and work:

European comparisons

4-5: Ethnicity and life chances

6-7: Disability and employment

8-9: Residential mobility in Britain

10-11: Illicit behaviour

**12-13: Modelling taxes and benefits
across Europe**

**14-15: Dependent interviewing in
panel surveys**

16: Further information

Inside back cover:

Research staff

About ISER

The Institute for Social and Economic Research (ISER) specialises in the production and analysis of large and often complex datasets. It collects and uses longitudinal data – evidence that tracks changes in the lives of the same individuals over time – household and other panel studies, as well as diary studies, and cross-national and historical comparative materials.

ISER is an interdisciplinary institute, with specialists in demography, economics, sociology, social policy and social statistics. It is an independent department of the University of Essex and is core-funded by the university and the UK's Economic and Social Research Council (ESRC). ISER is organised as two divisions: a research centre; and a resource centre.

The research centre: MiSoC

The Research Centre on Micro-Social Change (MiSoC) is the base for ISER's substantive research. The core-funded programme is founded on a central theme – the analysis of life chances, taking a longitudinal perspective on people's careers, incomes, family lives and so on. Related topics include time use and consumption, and the effects of locality and ethnicity.

The resource centre: ULSC

The UK Longitudinal Studies Centre (ULSC) is the national resource centre for promoting longitudinal research and for the design, management and support of longitudinal surveys. ULSC activities include managing the British Household Panel Survey (BHPS), the first wave of which collected data on more than 10,000 respondents from 5,000 UK households in 1991. The ULSC also runs a methodological research programme to improve longitudinal survey and analysis methods.

International links

The institute has a strongly international atmosphere, with the majority of its researchers originating from outside the UK. We frequently collaborate with research teams in other countries in comparative analytical programmes (see page 12), in the organisation of international conferences, in the production of cross-national datasets and in the development of new national panel surveys. ISER also regularly hosts visits from researchers and research groups on the Essex campus (see the box on page 9), offering analytical advice as well as access to data resources.

Introducing the directors

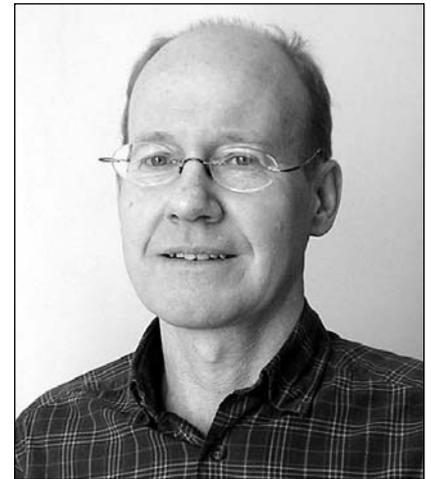
Stephen Jenkins (pictured) is the new director of ISER. A New Zealander by origin, Stephen has lived and worked in the UK since he took his DPhil at the University of York, arriving at Essex in 1994. An applied economist, many of his publications address technical issues such as the use of panel data for survival analysis or the measurement of inequality. He is most widely known, though, for his pioneering and authoritative analysis of income dynamics, using the BHPS to ask ‘do the poor stay poor?’

Stephen has an impressive array of international affiliations, including the past presidency of the European Society for Population Economics, research associate appointments in Berlin, Bonn and Turin, and advisory roles in Dublin, Copenhagen and London. As ISER’s director of graduate studies over the past few years, Stephen has greatly expanded the PhD programme and improved its supervisory procedures. These successes augur well for his three-year spell in charge of the institute as a whole.

Nick Buck continues as director of the UK Longitudinal Studies Centre (ULSC), the survey research wing of ISER’s activities. Nick is one of the substantial cadre of staff members who have been here since the early days of the BHPS development work in 1989, and has been closely associated with the success of the survey. As his responsibilities have expanded, he has become known to the social research community as ‘Mr BHPS’.

Nick’s ULSC responsibilities are much wider than the design and management of a single survey, and he plays a major role in developing ESRC’s strategy for longitudinal data sources. A sociologist by training, he is the joint editor and author of two recent books on urban issues. Nick has been an associate director of the institute since 1996, and has served as acting director for the six months October 2005 to March 2006; these roles have been consolidated with the new title of deputy director.

The third member of the team is **Steve Pudney**, who was appointed director of the Research Centre on Micro-Social Change (MiSoC) in the autumn. Steve joined ISER in 2004 following a highly successful spell as head of the University of Leicester’s economics department, and was until recently a member of ESRC’s Research Grants Board.



At ISER, Steve Pudney is applying advanced econometric techniques to the interpretation of policy issues such as the take-up of social security benefits and the market for illicit drugs. As well as being directly responsible to ESRC for the delivery of MiSoC’s agreed objectives, he has a broader role as co-ordinator of ISER’s substantive research programme as a whole.

These changes are occasioned by the departure of ISER’s former director, **Jonathan Gershuny**, to the professorship of sociology at the University of Oxford. ‘J’ (as he is always known) had been director of MiSoC and of ISER since 1993. The institute has blossomed under his leadership, as evidenced by a steady growth in revenue and staffing, and by the high quality and quantity of the research output. He has even managed to combine his management responsibilities with a stream of highly original research publications of his own: try typing ‘Busyness’ (sic) or ‘Allerednic’ (Cinderella spelled backwards) into the search engine on our website. He bequeaths a thriving research community to his successors.

J’s former responsibilities as director are now being shared by the three members of the new team, all existing members of the institute’s staff. We are recruiting a new professor of sociology to help maintain the balance in our interdisciplinary research programme.

Women and work: European comparisons

The gender pay gap is wider than the average for both high- and low-paid women – there are ‘glass ceilings’ and ‘sticky floors’



Across Europe, more and more women are working. By 2003, over half of working-age women in the European Union (EU) were in jobs, and EU governments aim to increase this proportion to 60% by 2010.

As well as providing a potential boost to the European economy, rising female employment can help women make the most of their skills and increase their financial independence. But despite women's success in entering the labour market, their working lives are still more complicated than men's. They must stop working, at least temporarily, if they have children, and many face a difficult balancing act between work and family life.

Institutional provisions like rights to parental leave, support for childcare and pay legislation influence the extent of women's integration into the labour market. ISER researchers Mark Bryan and Chiara Pronzato have been comparing women's employment experiences across Europe to highlight the effects of different national institutions. Their research uses harmonised data from the European Community Household Panel (ECHP) survey, which followed samples of households (including the BHPS) in different EU countries over eight years.

The research by Mark Bryan – conducted jointly with Wiji Arulampalam and Alison Booth – shows that women's pay is still lagging behind that of men. The gap varies substantially from country to country. In the 11 EU countries examined, the gender pay gaps range from 12% (in Denmark) to 23% (in Finland), after taking account of the different qualifications and types of jobs done by men and women.

Using an advanced statistical technique called quantile regression, the researchers were able to look behind these average figures to measure the gender pay gap at different points in the pay distribution. They find that the average figures typically hide larger differences at the top of the pay scale, so that high-paid women are doing even worse compared with their male counterparts than is suggested by the average gap.

This points to some form of ‘glass ceiling’ that makes it difficult for women to advance to the top of the pay ladder. In Denmark, for example, the gender pay gap is 21% for those who are in the top tenth of the pay scale compared with 10% for those on average earnings.

In some countries, there is also evidence of ‘sticky floors’, in other words the pay gap between low-paid women and men is bigger than the average figure. An example is Austria, where the gap is 24% for the bottom tenth of earners but 20% for average earners.

What explains these differing gender pay gaps? Part of the answer may be to do with discrimination, but what role do economic institutions play? Some institutions can affect the gender pay gap directly. Minimum wages, for example, tend to benefit women more than men because of women’s lower average pay, and they close the gender gap directly for low-paid workers. Collective bargaining institutions can also lead to compressed pay scales that reduce the gender pay gap. Other institutions have an indirect impact on women’s pay by affecting their ability and incentives to remain in the labour force throughout the lifecycle.

But often the impact of institutions is not clear-cut. ‘Family-friendly’ working arrangements (such as parental leave, childcare provision and flexible working patterns) can help parents stay in the labour market but may also reduce the ‘cost’ of leaving for short periods. Since these provisions are used predominantly by women, the net result may be that women fall behind men in their careers.

Overall, there is evidence that countries with more unequal wage distributions (such as Ireland, Spain and the UK) have wider average gender pay gaps, sometimes with even wider gaps for low-paid workers (sticky floors), but with less pronounced glass ceiling effects. Countries with more family-friendly working arrangements (such as Denmark and the Netherlands) tend to have lower average gender pay gaps and no sticky floors; sometimes though, they have significantly wider pay gaps for high-paid women.

One interpretation is that family-friendly policies encourage labour market participation by low- and medium-paid women but do not support the sort of commitment associated with top jobs. Until women’s presence in these jobs increases or men in top jobs take up family-friendly work arrangements and share the domestic burden, these wide pay gaps are likely to remain.

The research by Chiara Pronzato focuses on women’s employment after childbirth. Again using the ECHP, she selects women who had a child during the survey and follows

them over time. In most of Europe, just 25% of mothers return to work before the child is a year old. As the child gets older, things are dramatically different across countries: in the UK, 50% of mothers are already working by the time the child is 2 years old, but in Ireland this does not happen until the child is 3 and in Italy not until the child is 4.

The time mothers take before returning to work depends, to different degrees, on their qualifications and skills and on their rights to parental leave. The three countries where mothers return to work fastest – Belgium, the Netherlands and Portugal – are actually those where women have the shortest parental leave (three months). Mothers in countries with long parental leave (three years in Austria, Finland, France, Germany and Spain) tend to delay their return. But in some of these countries, there are strong incentives for women not to give up their careers, like job protection, maternity benefits (earnings-related but time-limited) and preservation of pension and seniority rights.

The time that mothers take before returning to work depends on both their rights to parental leave and their qualifications and skills

Across Europe, women’s qualifications and skills are important predictors of their labour market participation, but the role played by education is stronger in southern countries, where there are fewer policies on work-life balance. In these countries, ‘human capital’ has a bigger effect on participation than in countries where childcare is more widely available. Indeed, it is interesting to observe that more educated women are quite similar among countries, and most of the difference in mothers’ participation in Europe is due to differences in participation among less educated women.

Finally, women in Ireland, Germany, the Netherlands and the UK tend to choose part-time work so as to balance work and family life while their counterparts in southern countries tend to work in small family enterprises or without a permanent contract. Flexible employment arrangements can help women participate in the labour market – but they could lower the rewards from working and have a negative impact on women’s future careers.

Ethnicity and life chances

Educational achievements have made children of working-class parents from some ethnic minorities more upwardly mobile than their white counterparts



Various studies have looked at whether members of Britain's minority ethnic groups are less likely to have a job than their white counterparts. Recent ISER research by Lucinda Platt and Noah Uhrig has been focusing on broader questions about the kinds of jobs they have, the importance of location for their employment outcomes, and the changing occupational and class positions of ethnic minorities over time.

Platt's work examines variations in the patterns of intergenerational social mobility across five ethnic groups in England and Wales: Caribbeans, Indians, Pakistanis, white migrants and white non-migrants. Using the ONS Longitudinal Study, she tracks a cohort of children over 30 years, relating their parents' occupational position in 1971 and 1981, when they were school age, to their own social class outcomes in 2001, when they were grown up and living independently.

The study finds much variation in social mobility. Given that the working class has shrunk and the professional and managerial classes have expanded since 1971, there has been a considerable degree of upward mobility overall. Minority group parents were disproportionately concentrated in the working class in the 1970s and 1980s, but their children have achieved substantial upward mobility: Indians and white migrants the most, Pakistanis the least and Caribbeans in the middle.

For the cohort as a whole, people's social class is strongly determined by their parents' social class. This is even true after taking account of other characteristics, including their own educational qualifications. But the continuing importance of social class background is less significant for minority groups.

For most minority ethnic groups, education has been the route to upward mobility. Holding parents' education, housing and car ownership constant, Indians from a working class background have substantially higher upward mobility than their white counterparts – as do white migrants and Caribbeans.

But once the younger generation's own education is taken into account, these differences disappear. In other words, these minority groups were achieving their higher upward mobility through education – a result that corresponds with evidence on the high levels of qualifications among Indians.

These positive findings are tempered by the fact that Caribbeans have higher risks of unemployment than their white counterparts, even controlling for education and background. In addition, the results for Indians are not straightforward: breaking this ethnic group down by religion (a variable that captures not only beliefs and practices but also distinct migration histories and areas of origin), Hindus and Christians have substantially higher upward mobility than Muslims and Sikhs.

Pakistanis have a very different experience from the other groups. Those from a working class background are less upwardly mobile than their white peers. This relative disadvantage increases when taking account of the younger generation's education, which means that it cannot be explained by lower qualifications. Rather, the chance of Pakistanis ending up in a higher social class is much lower than is consistent with their educational level and background.

One reason for this finding may be the low levels of labour market participation among Pakistani women. If educated Pakistani women leave the labour market when they get married and their husbands are in working class jobs, their social class will not be congruent with their educational qualifications. At the same time, highly qualified married women from other groups who remain in work may 'boost' their husbands' class. There is some evidence that this contributes to the results for Pakistanis.

Local labour markets play an important role in the employment patterns of different minority ethnic groups

Britain's minority ethnic groups also have distinct patterns of geographical distribution. Roughly 45% reside in London and over 85% live in the largest five cities. With such concentrations, occupational outcomes are highly dependent on local labour market conditions and this may be an issue that particularly affects Pakistanis.

While Platt's research is unable to examine the importance of local labour markets in explaining diversity in ethnic groups' outcomes, work in progress by Noah Uhrig offers new insights into this issue. He uses data from the Sample

of Anonymised Records, the Workforce Skills Survey and the BHPS to analyse concentrations of men from four ethnic groups working in 475 different types of jobs in three English regions: black African, black Caribbean, Indian and Pakistani men in London/South East England, the Midlands and the Northern conurbations between Sheffield and Liverpool.

The study explores whether there is a direct relationship between the concentration of employees from a particular ethnic group and the qualitative characteristics of jobs, such as the degree of autonomy, physical risk or professional qualifications needed. It finds that job characteristics vary across ethnic groups according to where they live.

For example, more physical jobs tend to have relatively high concentrations of black African men in London and the South East. In contrast, jobs that require professional qualifications but which are supervisory and offer high autonomy tend to have relatively high concentrations of black Africans in the Midlands and the north. This implies that life chances for each ethnic group depend in part on geographical context.

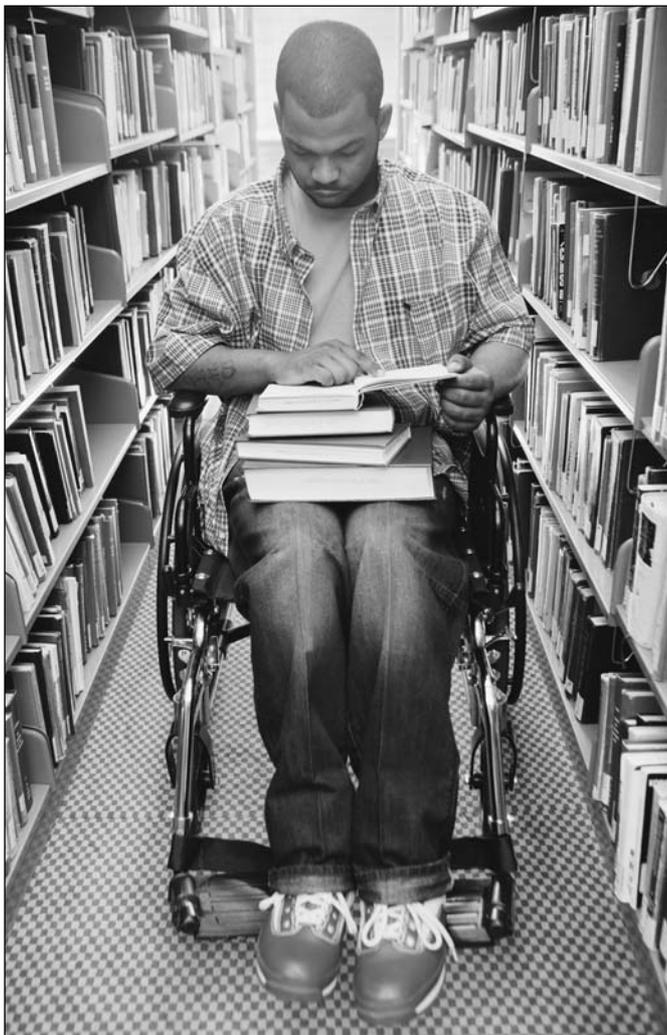
At the same time, these patterns are not determined solely by differences in regional job markets. There are also differences in job characteristics associated with different minority groups within regions.

For example, in the Midlands, Indian men concentrate in large firms and jobs with significant time pressures, whereas Pakistani men concentrate in jobs that are more physically risky and are less concentrated in jobs requiring long probationary periods. And black Caribbean men in the Midlands concentrate in subordinate positions that do not require professional qualifications while black African men are more concentrated in highly professional jobs with supervisory roles.

Migration histories, including background, skills, periods of migration and reasons for migration, clearly play a crucial part in determining both geographical distributions of minority groups and their chances of upward mobility. Moreover, the area of settlement itself can then act to shape life chances through the nature of regional labour markets, the characteristics of available jobs and the way different minority group members become distributed across them.

Disability and employment

Disabled people are much less disadvantaged by their impairments if they had a good education and live in a prosperous area



As many as 2.7 million disabled people in the UK are out of work and claiming incapacity benefits, three times as many as in the 1970s. Since the number of disabled people in the population has not increased anything like as fast, this must mean that many who are out of work now would have been working in the past. This is bad news for the government's ambitions to increase the labour supply and reduce its spending commitments. And it is bad news for disabled people themselves, whose disadvantage in the labour market puts them at high risk of poverty.

A series of policy initiatives since the mid-1990s has aimed to tighten up on benefit payments, enable disabled people to find jobs and protect them from discrimination. Now a new set of 'back-to-work' proposals is under discussion. But the intensity of policy interest in the economic position of disabled people conceals a lack of detailed understanding of the relationship between disability and employment. Everyone knows that disabled people are less likely to have a job than non-disabled people. But what is it that distinguishes between disabled people in and out of work?

ISER's Richard Berthoud is working on a sequence of studies of these issues. The first, undertaken while on secondment to the Department for Work and Pensions, exploited an underused dataset to estimate disabled people's probabilities of employment.

Less than a third of men and women with a significant impairment have a job. But estimates of the overall average employment rate of disabled people can be misleading, encouraging disability to be seen as a single condition with little variation in prospects between disabled people.

Such a monolithic view leads to assumptions about the position of 'most' disabled people. And it diverts attention away from disability itself towards other characteristics of disabled people such as their education and employment history, or the benefit regime they face. These are all important factors, but the single most important influence on their employment is the type and severity of their impairments.

The personal model of disability would interpret these findings to mean that people with certain impairments cannot work; the social model would interpret them to mean that employers will not offer them a job. Adherents of the latter view often distrust analysis that distinguishes between disabled people according to the nature of their impairments.

But it seems likely that employers' discrimination will vary by people's disability characteristics. Given that impairment is a necessary precondition for disablement, the social model lacks a framework to account for variations in outcomes between people with different types and severities of impairment.

The fact that disability characteristics affect employment rates does not mean that other characteristics are irrelevant. For example, the demographic (especially family) characteristics that so strongly affect everyone's employment prospects affect disabled people too.

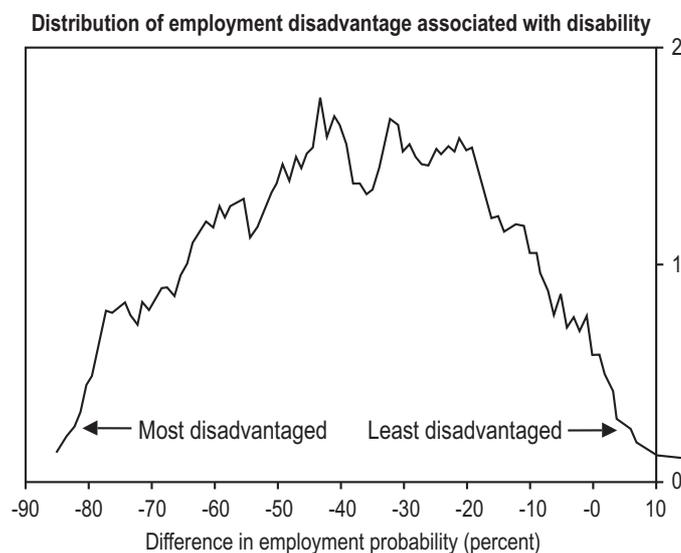
Economic characteristics, notably education, seem to be even more relevant to severely disabled people than to the rest of the population. They are much less disadvantaged by their impairments if they had a good education and live in a prosperous area, than if they had minimal education and live in a depressed area. This finding discourages the idea that many people are made literally 'incapable' of work by their impairments.

Berthoud's research defines *disability employment disadvantage* as the difference between each individual's probability of having a job and what that same person could have expected if they were not disabled – taking account of their education, family position, etc. The average reduction in employment rates is 40 percentage points. But it is very difficult to reach conclusions about the experience of 'most' claimants.

ISER research is analysing life chances in relation to gender, ethnicity and disability

The chart shows a wide range of employment disadvantages. There is no bulge in the distribution that could be used to argue that 'most' disabled people are at the less severe end of the spectrum. Nor is there a bulge at the opposite end that would suggest that 'most' of them are 'incapable of work'. Still less is there a pair of bulges that could conveniently be used to distinguish 'those who can work' from 'those who cannot'. All we can say is that 'most' disabled people face significant disadvantage and that there are some who are less disadvantaged and others who are even more disadvantaged.

These findings suggest that it will be very difficult for the government to find a fair and effective way of dividing



disabled claimants into two streams, with different benefit payments and different sets of conditions.

The Nuffield Foundation is supporting an extended programme of ISER research on this theme. So far, the analysis has considered simply whether disabled people have a job: the next step is to see how earnings of those in work differ from those of non-disabled people. It may also be possible to show whether disabled people's labour market activities are more sensitive to economic incentives than non-disabled people.

One element of the programme will build on Stephen Jenkins and John Rigg's analysis of the BHPS, which examined how far people in poor economic positions are at greater risk of becoming disabled in the first place. Another will seek to explain the historical pattern of disabled people's employment in relation to other major labour market trends such as the growth in women's activity rates. The research will also explore the substantial variations between countries of the European Union in the reported numbers of disabled people and their employment prospects.

This is a long-term research programme – but it is a long-term issue. As one of our studies shows, disabled people can expect to remain out of the labour market for many years if they do not return to work within a fairly short period. Another shows how strongly deprivation is associated with the duration of a spell in poverty.

A solution is unlikely without a clear understanding of the mutually interacting roles of claimants, doctors, potential employers, benefit rules and structural trends in the economy.

Residential mobility in Britain

For dual-earner couples who relocate, women tend to suffer immediately in terms of employment – but the negative effect vanishes within a year



About 10% of individuals in Britain move house each year. Two thirds of these people remain within the same local area, but it is the group of longer-distance migrants that are typically of most interest to economic and social researchers. This is because such relocations are often either the result or the cause of other major life events such as job loss, labour market entry, retirement or changes in household structure.

For single person households, the decision to migrate is based purely on the expected benefits to moving relative to the costs. But for couples, the migration decision is complicated by its potential impact on the employment and well-being of *both* members of the household. Studies of migration consistently show that single people are more likely to migrate than people who are married or cohabiting.

Migration and employment prospects

ISER currently has a number of research projects in progress on migration, residential mobility and their effects on people's lives. For example, Mark Taylor has been looking at the impact of migration on the employment prospects of husbands and wives. The BHPS has collected information on the reasons that recent migrants give for moving home, and Taylor uses this to identify 'lead' migrants – those members of households who migrated for reasons associated with their own job – and 'tied' migrants – those members of households who migrated for reasons associated with their partner's job.

The study finds that the majority of lead migrants are husbands while wives are more likely to be tied migrants. At the same time, the preliminary results indicate that being a tied migrant has similar effects on husbands and wives, significantly reducing the probability of subsequent employment. For wives, the reduction in their employment probability is caused by having higher exit rates from work after tied migration; for husbands, it is caused by having lower entry rates into work after tied migration.

On a related theme, research by ISER visitor Birgitta Rabe from Ruhr-University Bochum analyses the migration behaviour of dual-earner couples in the BHPS. Previous studies have suggested that couples mainly move in order to improve the husband's job prospects rather than the wife's, even if she has higher earnings potential. But this work has rarely looked explicitly at the gains that each spouse may make through migration.

Rabe's research models the expected difference in wages at the location of origin and the destination, and the results indicate that dual-earner couples actually weigh both spouses' wage gains about equally when making the migration choice. Nevertheless, women do suffer in terms of employment immediately after a move: their employment declines by approximately 8% compared with non-migrants. This negative effect vanishes in the course of the following year.

An individual with a sibling is likely to be more mobile and do better in the labour market than someone who was an only child

Individuals' decision to migrate is also at the heart of another project by Mark Taylor and Birgitta Rabe. Rather than asking solely which characteristics of the location of origin motivate mobility, they are investigating the role of regional differences in such factors as wages, house prices and unemployment rates in the migration decision. In other words, they are focusing not only on the 'push' factors for migration like most other studies, but on the combination of 'push' and 'pull' factors.

In a further project, these researchers are focusing on residential mobility in general rather than just longer-distance migration. Many housing moves are local and are driven by accommodation factors. Some households that move are able to relocate into 'better' neighbourhoods while others move into more deprived areas. Using the Index of Multiple Deprivation to classify the characteristics of local areas, Taylor and Rabe are exploring which employment and lifecycle factors are associated with moves into more or less deprived areas.

Siblings, parental care and mobility

ISER research by Helmut Rainer and Thomas Siedler takes a different perspective on residential mobility by investigating how parental care responsibilities and family structure interact in affecting adult children's patterns of geographical mobility. Today, more people than ever before are caring for elderly parents and the geographical proximity between the caregiver and the care recipient is a key factor in how well the caregiver can cope with such responsibilities.

Rainer and Siedler analyse data from the German Socio-Economic Panel Study and the American National Survey of Families and Households. Their findings indicate that family-related factors influence the mobility pattern of young adults through three different channels. First, parental characteristics such as age affect mobility: the older the parent and hence the more likely it is that they will need care in the near future, the lower the probability that a young adult will move away from the home region.

Second, people who have at least one sibling exhibit higher rates of geographical mobility than people with no siblings. For example, adult siblings are 6% more likely to live more than an hour's travel time away from their parents' residence than only children. Higher levels of geographical mobility are especially prevalent for adult siblings who come from regions with low employment prospects.

Third, there is strong support for the hypothesis that because of their higher mobility, children with a sibling end up with better labour market outcomes. For example, adult siblings who grow up in economically deprived regions have labour market earnings that are around 10% higher than those of only children from economically comparable regions. Similarly, these adult siblings have a higher chance of being in full-time employment and are less likely to be unemployed and economically inactive.

ISER headlines

The institute is organising and hosting an international conference on **The Methodology of Longitudinal Surveys** in July. More than 100 papers have been submitted, from survey specialists in 20 countries.

<http://www.iser.essex.ac.uk/ulsc/mols2006>

The **European Centre for Analysis in the Social Sciences (ECASS)** has renewed funds for its successful programme enabling European researchers to visit ISER for between three weeks and three months.

<http://www.iser.essex.ac.uk/ecass/>

More opportunities for postgraduate study: ISER has been allocated 17 ESRC 'quota award' studentships, which are available at either Masters or PhD level.

<http://www.iser.essex.ac.uk/opportunities/pg/>

Illicit behaviour

The Drug Harm Index suggests at least a levelling-off, and possibly a reversal, since 2001, of the upward trend in drug-related harms



Illicit activities such as anti-social behaviour, crime, truancy and drug abuse play a significant part in many people's lives, a sizeable number as perpetrators and many more as victims. Widely seen as symptoms of a dysfunctional society, they are also the focus of a constant stream of public policy initiatives. And given the strong association between illicit behaviour and various indicators of deprivation and social structure, it is natural for them to be at the core of ISER's research interests.

Collecting data on crime

Much recent research in this area relies on surveys that ask people to report their own illicit behaviour and their experience as victims. ISER researchers have been involved in the development of two major new government surveys. Peter Lynn's preparatory design work contributed to the longitudinal Offending, Crime and Justice Survey, which became available to researchers for the first time in 2005. And Steve Pudney worked on the design of the Arrestee Survey, which involves interviews with people in police custody and direct evidence on their drug use through the analysis of saliva samples.

These surveys provide remarkable insights into activities that are normally hard to observe in a systematic, quantitative manner. In its first year (October 2003 to September 2004), the Arrestee Survey indicated that a substantial minority of arrests on suspicion of a criminal offence involved someone who had used one or more of three 'hard' drugs – heroin, crack or cocaine – within the previous year. In turn, a substantial minority of these drug users claimed that they had committed crimes within the last month to pay for drugs. So there are striking associations between different forms of illicit behaviour, in this case, crime and drug abuse.

Of course, caution is needed in the use of these surveys. ISER research for a recent Home Office report identifies some significant differences in self-reported drug prevalence in otherwise comparable UK surveys – particularly for the important school-age group. Further exploratory work comparing self-reported drug use with biological testing of saliva samples for Arrestee Survey respondents suggests a moderate degree of under-reporting that is particularly significant for hard drugs.

Measuring drug use and drug harm

Attempts to measure the size of the market for illicit drugs are plagued by many uncertainties. There are potential problems of non-response and under-reporting in surveys of drug use; there are difficulties in reaching some parts of the population such as the homeless and those resident in institutions; and there are difficulties in measuring quantities and prices in an informal market where there is no standardisation of the ‘product’ in terms of quantity or purity.

ISER has completed a study for the Home Office (due to be published shortly), estimating the size of the UK illegal drugs market (for cannabis, ecstasy, amphetamines, heroin, crack and cocaine) in 2003/4. This research involved careful integration of data from the Offending, Crime and Justice Survey (covering the adult population resident in households), the Schools Survey (covering juveniles) and the Arrestee Survey, together with official population estimates, police arrest statistics, estimates of street prices produced by the National Criminal Intelligence Service and purity figures compiled by the Forensic Science Service.

One of the distinctive features of this work has been an attempt to give a realistic indication of the uncertainties involved, by means of an indicative margin of error. This has proved to be very wide at around plus or minus 25% of the estimate itself.

ISER’s work is closely involved in the development and monitoring of public policy. For example, Steve Pudney was a member of the team that developed a Drug Harm Index for the Home Office. This has been designed to monitor the trends over time in the harms associated with illicit drug use, including drug-related crimes, deaths, health consequences and impacts on communities. The index suggests at least a levelling-off, and possibly a reversal, since 2001, of the upward trend in drug-related harms.

Young people and illicit activities

For many young people, illicit activities like truancy, illegal substance use and criminal offending are a significant part of their personal development and, for a few, it turns into a long-term pattern of behaviour. One aim of research on illicit behaviour is to understand how these activities arise

as an expression of underlying economic, social and psychological processes. Another is to understand what factors influence the evolution of this behaviour through time. A third aim is to identify the effects that potential policy innovations might have.

Past work by Steve Pudney on illicit drugs has looked at cannabis consumption and emphasised the age of first use as a critical influence on the subsequent evolution of cannabis consumption – thus suggesting the need to focus on policies that will prevent or postpone drug use by the very young. At the same time, his work has cast some doubt on the ‘gateway’ hypothesis, which holds that experience with soft drugs necessarily increases the risk of subsequent hard drug use.

Young people’s perceptions of the risk of arrest has a significant impact on their propensity to commit property crime but not violent crime

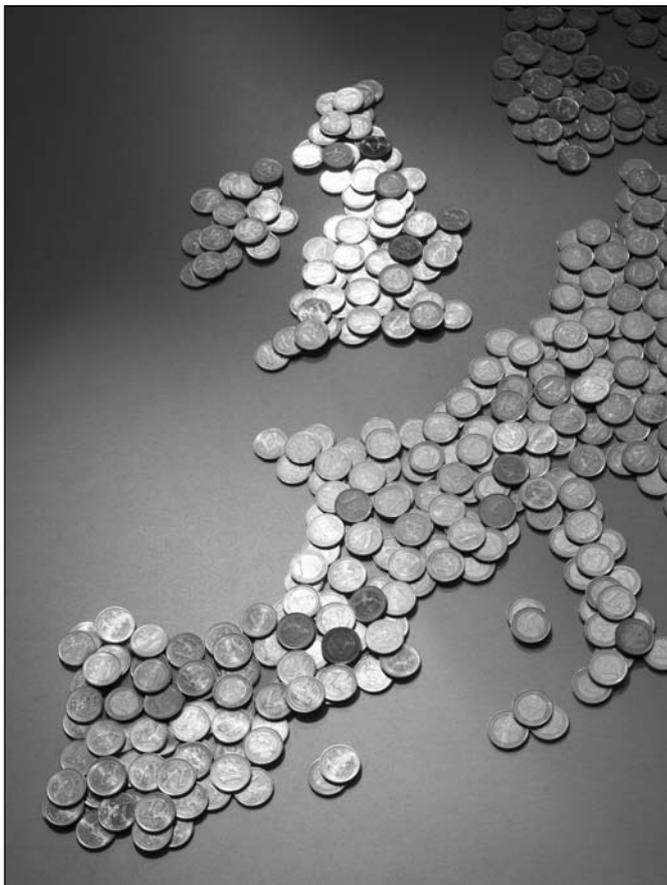
ISER research in progress is looking further at the gateway hypothesis and finding no evidence for a UK ‘supply side’ gateway, by which involvement with cannabis brings the user into contact with supply sources that may facilitate access to hard drugs. But there is some evidence of such a gateway for the US drug market, the structure of which is rather different from the UK.

Other current research by George Saridakis and Steve Pudney is exploring the deterrence effects of the criminal justice system as an influence on criminal behaviour by young people. They find a significant impact on the propensity to commit property crime (specifically shoplifting) of the perceived risk of arrest, while there is no such evidence for violent crime (assault). They also find that the perceptions of risk of arrest reported by survey respondents correspond quite accurately to official clear-up rates.

The sharp differences between property crime and violent crime suggest that these are the result of quite different developmental processes and that the ‘rational choice’ economic model of illicit behaviour is not an appropriate framework for thinking about violent behaviour.

Taking the broad view: modelling taxes and benefits across Europe

Tax-benefit models can be used to explore the trade-offs between the distributional impact of tax-benefit systems and their effects on incentives to work



Taxes are needed to raise government revenues. Social security benefits are needed to support people (including children and pensioners) who are not in the workforce. But the designers of tax-benefit systems aim to achieve many other objectives, including a fairer distribution of income, the reduction of poverty, support for families, incentives to work and disincentives to smoke and drink. Most European countries pursue such aims but their priorities vary, as do the mechanisms they use to influence outcomes.

The impact of a country's tax-benefit policies can be analysed in terms of the stated intentions of its government or by counting the flows of money in and out of the state coffers. A simple empirical approach is to ask survey respondents about their earnings, the benefits they receive and how much they have to spend after tax. Such information (if it were accurately and fully reported) could be used to assess the overall effect of the state on the distribution of income between families.

But every system is a complex web of taxes and benefits, and many of the objectives are in potential conflict. Survey data do not contain all the relevant information and are available only after some delay. So the most effective way to understand the current system as a whole is to calculate the effect of each specific provision on each member of a sample of families, and then work out the overall impact. This simulation of income is known as 'tax-benefit modelling' and is a particular form of microsimulation modelling.

The approach has two big advantages. First, it can calculate the effects of specific policy provisions on several key outcomes simultaneously: the overall budget; the distribution of income; the rate of poverty; and incentives to work. Second, it can show in advance the likely impact of a new policy proposal, and how one solution compares with another.

Tax-benefit modelling now has an established role in the UK and most OECD countries in the analysis of actual policy reforms. National tax-benefit models are widely used to explore the trade-offs between the distributional impact of tax-benefit systems and their effects on incentives to work. But since they were built for national purposes, they cannot provide output comparable with other countries. Each is based on a different set of priorities, with 'hardwired' assumptions about the tax-benefit structure and how to define target families.

EUROMOD

ISER's Holly Sutherland has been a leading exponent of microsimulation since its infancy in the 1980s. Since 1995, she has led the development of EUROMOD, a multi-country tax-benefit model for the whole European Union (EU). This huge enterprise, mainly supported by successive grants from the European Commission, involves around 50 researchers from 18 institutions in the EU-15 collaborating at a number of levels. They have contributed their modelling expertise and national knowledge of tax-benefit systems and datasets, working towards improved comparability across countries and using the model for analysis. These activities are co-ordinated at ISER, where the model is maintained and developed by Sutherland with Horacio Levy.

Some countries deliver social support through their tax systems and others concentrate more on benefits alone. A first application of the model is to make consistent and accurate cross-national comparisons of broad indicators of the overall impact of countries' fiscal systems – reductions in inequality, levels of poverty and transfers of resources between families with and without children. EUROMOD has enormous potential as a tool for unravelling the varied effects of different countries' policy regimes, within a common and consistent framework.

The second is to make more detailed comparisons between policy regimes, often by showing what would happen if (say) Austria's child support provisions were transferred to Spain, and vice versa. Can countries improve the performance of their policies if they 'borrow' from other places?

Third, EUROMOD can be used to explore the distributional implications of potential changes in tax-benefit policies. These could be comparable changes in each country, with the analysis demonstrating the extent to which the effects differ by population characteristics and existing tax-benefit systems. Or the model can experiment with a range of policy options with a common objective, such as poverty reduction within a budgetary constraint.

Although the principle of subsidiarity means that each country is responsible for its own fiscal policies, there is increased emphasis at EU level on monitoring the impact of social policy on social inclusion. EUROMOD can be used to establish the contribution of policy reforms to achieving common objectives. Other factors – such as changing

demographic profiles or employment rates – also play a role, but in designing the most effective policies and establishing 'best practice', it is important to distinguish the impact of government initiatives from other trends and influences as well as to understand the interactions between them.

Model results are increasingly used by international organisations as well as in academic research. For example, EUROMOD analysis has recently contributed to the work of the European Commission's Economics/Finance and Employment/Social Affairs directorates. It also informed UNICEF's enquiry into child poverty in rich countries and is the basis of an OECD study on the incidence of benefits and taxes across the lifecycle. A detailed set of output statistics summarising the effects of taxes and benefits across the income distribution is available on the programme's website.

EUROMOD has enormous potential as a tool for unravelling the varied effects of different countries' policy regimes, within a common and consistent framework.

EUROMOD work in progress includes an exploration of the feasibility of incorporating the 10 new EU members into the model. This involves rethinking and redesigning the model to allow for 25 (and more) systems to be simulated within a common framework. It also means finding new ways to consider issues of comparability and strategy when there are 25 starting points, as well as different types of institutions with a range of interests and expectations, to take into account. There are interesting parallels with the actual process of EU enlargement.

A second new project is exploring ways in which to extend the scope of EUROMOD, again with the aim of improving comparability of results as well as the range of questions that can be addressed. These are the inclusion of indirect taxes in the policy simulations; the modelling of non-take-up of means-tested benefits and the evasion of income taxes; and the valuation and incidence of non-cash benefits. Each of these is more important in some countries than others. Accounting for them will increase the degree of cross-national equivalence of measures of the impact of 'policy' on 'income' in ways that would be impossible without the use of microsimulation.

Dependent interviewing in panel surveys

Panel surveys like the BHPS, which interview people at different points in time, provide rich information on their individual histories



Panel surveys like the BHPS interview people at different points in time, repeating a core set of questions at regular intervals – monthly, quarterly or annually. Over time, these interviews provide rich information on respondents' individual histories.

Compared with cross-sectional surveys, where respondents are only interviewed once, panel surveys offer distinct analytical advantages. One is that following individuals over time makes it possible to disentangle 'gross' and 'net' changes. For example, the unemployment rate may remain constant at 10%, but only repeated observations of a sample of people can reveal whether it is the same individuals who were unemployed the whole time or whether there were flows into and out of unemployment.

While one-off questionnaires can ask people about their histories, it is not always possible for them to collect accurate information about the past. For example, if you are asked about attitudes you had several years ago, your memory is tainted by later experiences. Memory also decays over time, so the longer ago an event took place, the more difficult it is to report it accurately. The quality of survey data on individual histories is far better if respondents are regularly asked about their current situation, and possibly about changes in a relatively short period since the previous interview.

Of course, there are some difficulties with panel surveys. First, respondents can get annoyed at being asked the same questions if their situation has not changed, especially if the intervals between interviews are short. They may lose motivation and no longer make the effort required to answer survey questions well. Worse, they may be unwilling to participate in future interviews.

Second, when personal histories are reconstructed, there are often discrepancies between the two versions of events at the 'seam', where information from different interviews overlaps. For example, if respondents are asked about their employment during the past 12 months, this information often does not fit together in a seamless manner; many respondents will appear to have moved into or out of work in the month after an interview. Many of these changes are spurious but some changes may simply be misplaced in time. All measures of change derived from repeated panel surveys suffer from this problem.

With the development of computer-assisted technologies for telephone and face-to-face interviews, it has become possible to 'pre-load' information from previous interviews and to make the current interview 'dependent' on previous answers. Previous information can be used to reduce the redundancy of questions if no changes have occurred and to improve data quality. Either respondents can be reminded of previous answers to jog their memory, or follow-up prompts can be programmed to query apparent changes since the previous interview.

So what impact does dependent interviewing have on survey outcomes? ISER's Improving Survey Measurement of Income and Employment (ISMIE) study has evaluated its potential for reducing measurement error. The study revisited respondents from the UK European Community Household Panel (ECHP) survey who had been interviewed annually since 1994. When funding for the ECHP expired in 2001, it was decided that respondents should be interviewed once more for purely methodological purposes.

In the final survey, which took place in the spring of 2003, the 1,033 respondents were randomly allocated to one of three treatment groups:

- *independent interviewing*, where respondents were administered the standard BHPS questions without reference to answers given in previous interviews;
- *reactive dependent interviewing*, where respondents were asked the independent questions, answers were compared with those from the previous interview and, in cases of inconsistency, follow-up questions were prompted to check whether changes were real;
- and *proactive dependent interviewing*, where respondents were reminded of their previous answers as part of the question wording.

This experiment shows that when respondents are asked to report on their employment without reference to previous information, the answers imply an implausible amount of change. Among respondents in the ISMIE study who had not changed their job, 24% appeared to be in a different occupation, 15% in a different industry and 16% reported having managerial duties they did not report in the previous year, or vice versa.

These spurious changes were significantly reduced when respondents were reminded of their previous answers.

Dependent interviewing worked especially well for occupation and industry information, where the descriptions given by respondents are coded to complex classifications and spurious changes can occur either because the respondent used different words to describe the same occupation or industry, because the description was ambiguous or because of coding error. If the previous information is available, the respondent can be asked to verify the fact that they were still in the same type of job and the previous codes can be brought forward, eliminating spurious changes.

Dependent interviewing also reduced spurious changes in labour market activity. Respondents were asked about their current activities in the 2001 and 2003 interviews, and about any changes that had occurred in the meantime. Of those respondents who had been without a job and looking for work in 2001, 22% said in 2003 that they had not been looking for work at the time of the first interview and 19% said they had had a job at that time. When respondents were reminded of the activities they had reported in the first interview, the number of apparent changes in status attributed to the month after the interview was reduced significantly, though not eliminated.

When respondents were asked which of 33 different income sources they had received during the previous year, dependent interviewing significantly reduced under-reporting, especially of relatively common and easily forgotten sources, such as council tax benefit, housing benefit and child benefit. For example, 25% of respondents who received child benefits according to Department for Work and Pensions records forgot to report it; with the reminder or edit check, only 5% forgot to report this source. But under-reporting was not totally eliminated since respondents who had failed to report a source in the previous interview could not be reminded of this by the dependent interviewing.

The ISER study concludes that dependent interviewing is a good tool for reducing measurement error in panel surveys. It also confirms its potential for reducing redundant questions (thereby avoiding respondent frustration), interview durations and coding costs. But dependent interviewing can be quite costly, mainly because of the complex programming of questionnaires and editing of pre-loaded information from previous interviews. Dependent interviewing also works best for items that are clearly defined in the respondent's perception and which are relatively stable over time.

Further information

Details of the research discussed in this report may be found in the following publications, many of which are available free of charge on the ISER website (www.iser.essex.ac.uk) or from ISER's Communications Adviser Romesh Vaitilingam (iserpress@essex.ac.uk):

Research on women and work

Is there a Glass Ceiling over Europe? An exploration of asymmetries in the gender pay gap across the wages distribution by Wiji Arulampalam, Alison Booth and Mark Bryan, ISER Working Paper 2005-25, November 2005

Employment Decisions of European Women after Childbirth by Chiara Pronzato, paper presented at the 2005 conference of the EuroPanel Users Network (<http://www.iser.essex.ac.uk/epunet/2005/docs/pdf/papers/pronzato.pdf>)

Research on ethnicity and life chances

Migration and Social Mobility: The life chances of Britain's minority ethnic communities by Lucinda Platt, The Policy Press, 2005

Research on disability and employment

The Employment Rates of Disabled People by Richard Berthoud, Department for Work and Pensions Research Report

Disability and Disadvantage: Selection, onset and duration effects

by Stephen Jenkins and John Rigg, *Journal of Social Policy*, 2004

Research on residential mobility

Migration and Employment Outcomes: Evidence from couples in Britain by Mark Taylor, ISER Working Paper, 2006-05, March 2006

Dual-earner Migration in Britain: Earnings gains, employment and self-selection

by Birgitta Rabe, ISER Working Paper 2006-01, January 2006

O Brother, Where art Thou? The effects of having a sibling on geographic mobility and labour market outcomes

by Helmut Rainer and Thomas Siedler, ISER Working Paper 2005-18, October 2005

Research on illicit behaviour

The Arrestee Survey: Annual report October 2003-September 2004 by Richard Boreham, Elizabeth Fuller, Amy Hills and Steve Pudney, Home Office (forthcoming)

Estimating the Size of the UK Illicit Drugs Market by Celia Badillo, Mark Bryan, Jon Burton, Gabriella Conti, Maria Iacovou and Steve Pudney, Home Office research study (forthcoming)

Measuring the Harm from Illegal Drugs using the Drug Harm Index by Ziggy MacDonald, Louise Tinsley, James Collingwood, Pip Jamieson and Steve Pudney, Home Office Online Report 24/05

The Road to Ruin? Sequences of initiation to drugs and crime in Britain by Steve Pudney, *Economic Journal*, 2003

Keeping off the Grass? An econometric model of cannabis consumption in Britain

by Steve Pudney, *Journal of Applied Econometrics*, 2004

Research on tax-benefit modelling

Micro-level Analysis of the European Social Agenda: Combating poverty and social exclusion through changes in social and fiscal policy edited by Holly Sutherland, EUROMOD Working Paper 8/05, March 2005

Alternative Tax-benefit Strategies to Support Children in the European Union: Recent reforms in Austria, Spain and the UK by Horacio Levy, Christine Lietz and Holly Sutherland, EUROMOD Working Paper 10/05, July 2005

The EUROMOD website: <http://www.iser.essex.ac.uk/msu/emod/>

Research on dependent interviewing

Does Dependent Interviewing Really Increase Efficiency and Reduce Respondent Burden? by Annette Jäckle, ISER Working Paper 2005-11, June 2005

A Review of Methodological Research Pertinent to Longitudinal Survey Design and Data Collection by Peter Lynn, Nick Buck, Jonathan Burton, Annette Jäckle and Heather Laurie, ISER Working Paper 2005-29, December 2005

The ISMIE website: <http://www.iser.essex.ac.uk/ulsc/methods/research/ismie>

Further information on the web

BHPS data: <http://www.data-archive.ac.uk/>

BHPS documentation: <http://www.iser.essex.ac.uk/ulsc/bhps/doc/>

Keeping Track: A guide to longitudinal resources: <http://www.iser.essex.ac.uk/ulsc/keeptrack/index.php>

UK birth cohort surveys: <http://www.cls.ioe.ac.uk/>

Training in the use of longitudinal data: <http://www.iser.essex.ac.uk/ulsc/training/>

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