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Taking the Long View 2014-2015

Institute for Social and Economic Research

ISER
INSTITUTE FOR SOCIAL & ECONOMIC RESEARCH

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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).

The research centre: MiSoC
The Research Centre on Micro-Social Change (MiSoC) is dedicated to research on the process of social change, with a programme covering 2014-2019 entitled "Understanding individual and family behaviours in a new era of uncertainty and change". MiSoC researchers examine how behaviours, outcomes and attitudes for individuals, households and families are influenced by, and themselves influence, the wider processes of macro-social change. The research is both substantive, addressing important social issues, and methodological, contributing to the development of research methods and the building of research capacity.

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. The ULSC manages the UK Household Longitudinal Survey, Understanding Society, including the British Household Panel Survey (BHPS). The ULSC also runs a methodological research programme to improve longitudinal survey and analysis methods.

EUROMOD
EUROMOD is a tax-benefit microsimulation model for the European Union (EU) based at ISER. EUROMOD enables researchers and policy analysts to calculate, in a comparable manner, the effects of taxes and benefits on household incomes and work incentives for the population of each country and for the EU as a whole. As well as calculating the effects of actual policies, it is also used to evaluate the effects of tax-benefit policy reforms and other changes on poverty, inequality, incentives and government budgets.

EUROMOD is a unique resource for cross-national research, designed to produce results that are comparable across countries and meaningful when aggregated to the EU level.

EUROMOD is managed, maintained, developed and updated by the Microsimulation Unit, a team of researchers in ISER. This is done in collaboration with national experts.

International links
The Institute has a strongly international atmosphere, with the majority of its researchers originating from outside the UK. It frequently collaborates with research teams in other countries in comparative analytical programmes, 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, offering analytical advice as well as access to data resources.

ISER plays a key role in delivering high quality policy-relevant research

NICK BUCK
DIRECTOR

From the Director

This is my first year as ISER Director, and I would like to take this opportunity to acknowledge the huge debt of gratitude that ISER owes to Heather Laurie who stepped down as Director after a term of five years. Heather steered us through a period when we have seen very substantial growth and diversification of ISER activities. She has extraordinary abilities as a senior manager and leader of a research institute. These abilities have been recognised by the University who have appointed her as the next Pro Vice-Chancellor Research, starting in July next year. She will be a very hard act to follow. I would also like to thank David Voas who was an extremely effective Acting Director from November 2014 to March 2015.

This is a very exciting time to be taking over the leadership of ISER. Last year we celebrated our 25th anniversary and we are moving on now to build on our worldwide reputation as a multidisciplinary centre of quantitative social science research and as a producer of longitudinal data of the highest quality.

High quality research is at the core of our activities and we have been very pleased by ISER's contribution to the University's successful outcome for the 2014 Research Excellence Framework exercise in economics and in sociology.

We just have embarked on a new five-year cycle for our ESRC Research Centre on Micro-Social Change. The new programme includes research on how families are affected by and respond to changes in their life circumstances, on how new members of society – children, young people and new migrants – develop and are integrated into it and thirdly on how values, attitudes, expectations, tastes or preferences and identity are formed, and how they are linked to our education, employment and family set-up.

EUROMOD, our microsimulation model for understanding tax and benefit systems, covering 28 countries of the European Union, is becoming a critical resource for policy makers around Europe and is increasingly used as a tool for fiscal and economic surveillance and for forecasting budgetary costs of large tax measures and the distributional effects of tax reforms.

Last September MiSoC and EUROMOD jointly organised an international workshop at ISER on 'Understanding Changes in Income Inequality in the Austerity Period', involving researchers from Europe and the USA to understand how welfare states have been responding to recent economic changes. ISER's work, closely examining the changes to households and individuals during recent times, continues to be of huge significance for policy makers, the third and public sectors, as evidence to inform their policy and practice. A small selection of this work is included in this annual review.

This year Michaela Benzeval has taken over as Director of Understanding Society, the UK Household Longitudinal Study, which has been funded by ESRC since 2007. I am very pleased that this study, which is so important for the future of UK social science, is in such good hands. Understanding Society, which built on the success of the British Household Panel Survey, is now itself becoming a mature study with fieldwork for Wave Seven starting this year and Wave Five data soon to be available to researchers. We have also just started collecting data from a new boost sample of ethnic minorities and immigrants to the UK. Understanding Society has been recently granted recognition as a British Academy Research Project.

We are well aware of the importance of ensuring that our research achieves impact in public policy and in other areas. Our successes in this area have been recognised in the numbers of strong case studies which we submitted to REF 2014. The effort to achieve impact is ongoing and spans all our activities.

We look forward in the next year to working with the University of Essex, the Economic and Social Research Council and other funders to build on the success of ISER.

NEW WAYS OF LOOKING AT POVERTY

Measuring poverty to understand how policies could best combat inequality will remain a priority for policy makers and poverty campaigners. **Professor Mike Brewer** describes ISER's innovative approaches to analysing poverty data.

Over the past 25 years, substantive and methodological research at ISER, as well as advances in survey design, have made major contributions to the study of how best to measure household living standards, of why the distribution of income in the UK is changing and how this compares to other European countries, and of income and poverty dynamics. Such work continues, forming an important part of the new research programme for the ESRC-funded Research Centre on Micro-Social Change. Here we highlight three contributions: on how to measure persistent poverty when there is attrition or missing data, on cross-country comparisons of labour market volatility, and on whether we can rely on very low values of income reported to household surveys.

Measuring persistent poverty with incomplete data

Poverty has more adverse effects when experienced for a long period, rather than as a transient phase. For this reason, policy makers in developed and developing countries try to monitor levels of persistent poverty, with the EU adopting a measure of persistent poverty as part of its programme of monitoring progress on social inclusion, and the Child Poverty Act committing UK governments to track the fraction of children in persistently poor households.

Typically, poverty persistence is measured with data from household panels in which a large group of randomly-selected households are interviewed repeatedly to assess whether they fall below a poverty line in each year. The simplest estimate of poverty persistence is then the proportion of sampled households found to be in poverty for more than a certain number of years during some period of time. But missing data can make it very hard to measure persistent poverty reliably: if we are unable to observe a household in every year, it is not possible to say whether it has been in persistent poverty.

The usual way to deal with missing data is to use only the subset of households observed in every period and correct any non-representativeness by giving greater weight to types of household that appear to be under-represented in the reduced sample. Professor Stephen Pudney and ISER PhD student Yadira Diaz Cuervo develop an alternative approach that constructs a lower and upper bound for persistent poverty by considering all possible outcomes that the missing poverty observations could have taken. These bounds are very wide, demonstrating that missing data introduces a very large element of uncertainty into the estimation of persistent poverty measures. But they then show that introducing some very mild assumptions allows much more refined estimates. The researchers apply these methods to a panel survey carried out by the Peruvian National Institute of Statistics and show that the standard re-weighting method is badly biased, tending to result in an over-estimate of the rate of persistent poverty in the population.

Volatility in earnings in the UK and US

The chief value of longitudinal data is in tracking how outcomes change over time for individuals, and MiSoC Research Associate Professor Stephen Jenkins (together with Professor Lorenzo Cappellari) has recently used data from the BHPS to assess whether the well-documented rise in earnings inequality in the UK is mirrored by a rise in earnings volatility. The researchers measure volatility in the following way: for each working-age individual, they calculate how much earnings change between one year and the next, and then the measure of volatility given by how spread out the distribution of individual earnings changes is. The researchers also show how one can measure labour market volatility, defined as the volatility that exists when one takes account of earnings changes for all individuals, including those who move in and out of work.

The key findings are that earnings volatility in Britain remained constant between 1992 and 2008 for both men and women, but that there was a marked decline in labour market volatility. This latter finding is different from the US experience, and is caused mainly by a decline in the proportions of workers moving into and out of work or not having a job at all, reflecting the steady growth in the British economy after the early-1990s recession and before the impact of the 2007/8 financial crash was felt.

Should we believe low values of income reported to household surveys?

Researchers commonly measure poverty by comparing household income to a poverty line, because a household's total income is seen as a good proxy for its standard of living. An alternative, long-favoured by economists on conceptual grounds, is to use a household's consumption as a proxy for its standard of living. A measure of consumption starts from what a household spends, but then adds the benefits that a household derives from durable goods like housing or car ownership. Additionally, some have argued that households with low resources often under-report their income to household surveys but seem to report their level of spending with greater accuracy, and this provides a practical reason to use consumption rather than income to assess who is truly the poorest in society.

In ongoing work, Professor Mike Brewer, with co-authors from elsewhere at the University of Essex and the Institute for Fiscal Studies, have been looking closely at these issues for the UK. They show that households who report to have an income in the bottom 1% of the UK population also report levels of spending that are close to that of the median household, strongly suggesting that many of these households are not truly poor. This mismatch is found in data that spans many years, and can be seen for many different types of household. The researchers go on to show that the size of the mismatch between income and spending is considerably greater than would occur just through temporarily poor households smoothing their consumption by running down their savings or taking on debt. Thus they conclude that some of these households must be under-reporting their income.

In related work, ISER research has looked at how our impression of who is poor changes if we use consumption, rather than income, to assess living standards. A key finding is that the age profile of poverty changes markedly when moving from income to consumption, with the elderly appearing a lot less poor under a measure of consumption, reflecting the far greater rates of home ownership amongst the old compared with the young.

References:

Yadira Diaz Cuervo and Stephen Pudney. **"Measuring poverty persistence with missing data with an application to Peruvian panel data"**, *ISER WP 2013-22, https://www.iser.essex.ac.uk/research/publications/working-papers/iser/2013-22*

Lorenzo Cappellari and Stephen P. Jenkins (2014), **"Earnings and labour market volatility in Britain, with a transatlantic comparison"**, *Labour Economics 30, pp201-211, http://dx.doi.org/10.1016/j.labeco.2014.03.012.*

Mike Brewer, Ben Etheridge and Cormac O'Dea, **"Why are households that report the lowest incomes so well-off?"**, *forthcoming in Economic Journal (Features)*

Mike Brewer and Cormac O'Dea, **"Measuring living standards with income and consumption: evidence from the UK"**, *ISER WP 2012-05, https://www.iser.essex.ac.uk/research/publications/working-papers/iser/2012-05.*

UNDERSTANDING HEALTH AND SOCIETY: THE ROLE OF BIOMARKERS

PROFESSOR MICHAELA BENZEVAL AND PROFESSOR **MEENA KUMARI** ARE LEADING A GROUNDBREAKING £1.5 MILLION STUDY INTO HOW BIOMARKER DATA COMBINED WITH THE RICH SOCIAL AND ECONOMIC LONGITUDINAL DATA FROM UNDERSTANDING SOCIETY WILL PROVIDE NEW INSIGHTS FOR SOCIOLOGISTS, ECONOMISTS, HEALTH SCIENTISTS AND POLICY MAKERS.

It is no surprise that our health is affected by the world around us – where we live, how much money we have, how stressful our lives are. Similarly, how we develop as children both physically and at school will have lasting consequences for our health and lives as we age. What is less clear is how these external factors 'get under the skin' and change our biology in ways that affect our health. The relationships also happen the other way round, our health affects our ability to engage in all other aspects of our lives – family, school, work and play. At a more fundamental biological level our genes may also influence our health and lives, in the future, and in turn our environments may influence the way in which our genes operate. To understand the two-way interaction between our social and economic circumstances and our health, we need to have a better understanding of the social and biological pathways that link them over people's lives.

To do this, Understanding Society included a nurse interview with all adults in the study to measure 'biomarkers' i.e. objective indicators of our biological processes. These ranged from simple measures such as height and weight, to measures of how well different aspects of the body such as lungs or blood pressure function, to measures taken from blood samples and DNA. These data enable us to investigate the causes of health problems much more effectively so that we can better design policies to address them in a number of ways.

First, biomarkers can tell us about people having an illness or being at high risk of one before they experience any symptoms. For example, a biomarker called HbA1c tells us how people process sugars effectively and is used to diagnose diabetes. If we also ask people whether they have diabetes and are being treated for it, we can use the biomarker to identify those at risk but not yet aware of the condition, those who report having diabetes but are effectively managing it and those for whom it is not being managed well. We can then look at the circumstances of such people to predict to whom, when and why these things happen. Secondly, lots of studies tell us that people experiencing different kinds of disadvantage have poorer health than others, but why is this?

Measuring biomarkers can help us understand the pathways from disadvantage to physical and psychological stress to biological changes in the body to ill health. Such an understanding of the biological pathways may help to strengthen arguments about improving different social and working environments, or may help identify ways of preventing health damage.

Finally, we are increasingly understanding that the way the environment affects us may be influenced by our genes – for example, the extent to which air pollution causes us to have breathing problems is affected by our genes. We are also beginning to see that our environment can affect the way our genes work in the body. Gaining a better understanding of the two-way relationship between our genes and our environment in real-life situations may help us identify those at particular risk from different hazards.

At ISER, we have recently been funded by the ESRC to lead a wide range of collaborative projects based on Understanding Society to investigate how our social environment and biology interact; the findings from this research will help inform policy to improve the population's health and prevent the negative consequences of poor health. As part of our work, we will also be developing a wide range of resources and events that demonstrate the value of and build capacity for using biomarkers and genetics data in social science research.

For more information at **www.understandingsociety.ac.uk**

Biomarkers can tell us about people having an illness or being at high risk of one before they experience any symptoms. They also help us understand how people's social circumstances change their biology in ways that affect their health.

THE HOLLOWING OUT OF THE UK LABOUR MARKET: IS IT REALLY ALL ABOUT TECHNOLOGY?

What has driven the hollowing out of the US and the UK labour markets of the past 30 years?
The (mostly US-based) literature points to technology as the main culprit: automation has reduced the demand for middle-skill workers in production lines as well as offices, increasing that for high-skilled managers, professionals and technicians, with little or no impact on the demand for low-skill service occupations. Dr Andrea Salvatori describes his research as part of an ESRC Future Leaders award, which looks at the role of changes in the composition of the workforce in the UK. It concludes that the increase in educational attainment is likely to have played a significant role, particularly in the 2000s when relative employment growth in top occupations continued in the UK despite coming to a halt in the US.

Between 1979 and 2012, the share of middling jobs declined by 19% – 16 of which were gained by top occupations and 3 by bottom ones. The entire decline in the share of middling jobs is accounted for by non-graduates, both because their relative numbers have declined and because they have increasingly moved towards bottom jobs. Graduates, on the other hand, have made positive contributions throughout the occupational distribution, primarily because of the sheer increase in their numbers.

Overall, the increase in educational attainment accounts for a third of the decline in middling occupations and for the whole increase in top occupations. The relative performance of wages in top occupations has deteriorated over time relative to middling occupations and it is worst in the 2000s – at a time when the evidence from the US indicates that technology-fuelled demand for high-skills slowed down. These facts suggest that the supply of workers for top occupations might have outpaced demand in the UK and contributed to the continuing shift of employment from the middle to the top in the 2000s.

The sustained educational upgrading of the workforce between 1979 and 2012 would also have led to a decline in the share of employment in bottom occupations, but this has been counteracted by other changes.

By far the most important factor has been the reallocation of non-graduates from middling to bottom jobs. Graduates and immigrants have also contributed to the growth of bottom occupations, but their influx alone would have not compensated the decline induced by improvements in education over the past 30 years. However, the picture is different for the most recent decade.

In the 2000s, the share of UK-born workers employed in low-pay occupations has declined for the first time and bottom occupations have only grown due to the contribution of immigrants.

However, even in the most recent decade, growth at the bottom is not explained by compositional changes alone. The net contribution of improvements in education and increase in immigration is a negative 3.0%. This is more than offset by the positive 3.3% change stemming from the fact that all groups have increasingly been drawn to the bottom. What distinguishes the 2000s from the two earlier decades is that this reallocation of workers from the middle to the bottom is not entirely dominated by UK-born non-graduates, but has affected graduates and immigrants as well.

Overall, this evidence indicates that changes in the composition of the workforce are likely to have played a significant role in the reallocation of employment from middling to top occupations over the past 30 years. This of course does not rule out an important role for computers, but does substantiate that predictions on the impact of technology on the distribution of employment should carefully consider the interactions with change in the skill composition of the workforce.

Reference:
Andrea Salvatori, July 2015. *"The Anatomy of Job Polarisation in the UK"* http://ftp.iza.org/dp9193.pdf

A PICTURE OF POVERTY NOW

REAL-TIME SIMULATION OF THE EFFECT OF NEW TAX POLICIES AND MACRO-ECONOMIC CONDITIONS – A VALUABLE TOOL FOR POLICY MAKERS IN ASSESSING POVERTY RISK

Using the ISER-based microsimulation model EUROMOD to nowcast poverty risk in the European Union is proving to be a very valuable tool for policy makers dealing with a problematic time lag in accurate data. Three indicators are used for monitoring progress towards the Europe 2020 poverty and social exclusion reduction target: at-risk-of-poverty, very low work intensity and severe material deprivation. The timeliness of these indicators is crucial for evaluating the effectiveness of policies and the impact of macroeconomic conditions on poverty and income distribution. However, partly due to the complexity of the data collection process of the European Union Statistics on Income and Living Conditions (EU-SILC), estimates of the number of people at risk of poverty and social exclusion are released by Eurostat with a substantial time lag, ranging from a period of 2 to 3 years.

The aim of this research is to develop a microsimulation-based methodology for nowcasting changes in the distribution of income over a period for which EU-SILC statistics are not yet available, and assess the implications of these changes for the proportion of the population at risk of poverty. The term 'nowcasting' refers to the estimation of current indicators using data on a past income distribution together with various other sources of information, such as macroeconomic statistics.

The analysis makes use of EUROMOD, the microsimulation model based on EU-SILC data which estimates in a comparable way the effects of taxes and benefits on the income distribution in each of the EU Member States. For the purposes of the nowcasting exercise, standard EUROMOD routines, such as simulating policies and updating market incomes, are enhanced with additional adjustments to the input data in order to capture changes in the employment characteristics of the population.

As a demonstration of this method, Table 1 shows the nowcasted changes in median household disposable income and at-risk-of-poverty rates between 2012 and 2013/14 for a selection of EU countries. At the time of writing, the latest available Eurostat indicators for these countries correspond to 2012 incomes, thus the predictions get us either 1 or 2 years ahead.

The country where relative poverty is estimated to increase the most is Cyprus, by almost 1 percentage point. This seems to be the result of the significant rise in unemployment, insufficient income protection for unemployed (the maximum duration of unemployment benefit is six months) and cuts in child and student benefit programmes. Smaller increases in relative poverty are nowcasted for Latvia. This development is mostly driven by a substantial increase in relative poverty among the elderly. Significant increase in elderly poverty is also predicted for Romania. On the other hand, considerable reductions in child poverty are expected for Greece, Latvia and Romania.

Table 1. Nowcasted change in median income and at-risk-of-poverty rates in 2012-2013/14

	household income (change in percentage)	at-risk-of-poverty (change in percentage points)		
	median	**all**	**children**	**elderly**
Bulgaria (in BGN)				
2012-2014	10.9***	-0.5†	-0.1	-1.4***
Germany				
2012-2014	2.5***	-0.2†	0.2	0.2*
Greece				
2012-2014	-10.2***	-0.3	-1.8*	0.2
Spain				
2012-2013	0.0	-0.1	-0.1	-1.2***
France				
2012-2013	-0.9***	-0.4*	-0.4	-1.6***
Cyprus				
2012-2013	-2.6***	1.0*	1.5*	-1.4**
Latvia (in LVL)				
2012-2014	13.9***	0.7†	-1.7**	8.8***
Romania (in RON)				
2012-2014	9.6***	-0.4	-1.6**	1.8***

Notes: Estimated changes between 2012-2014 statistically significant at: † 90% level, * 95% level, ** 99% level, *** 99.9% level. Household incomes are equivalised using the modified OECD scale. Persons at-risk-of-poverty are those living in a household with equivalised disposable income below 60% of the national median equivalised disposable income. The changes shown are the difference in the EUROMOD estimates for 2013/2014 compared with those for 2012.
Source: EUROMOD Version G2.30.

The comparison of the nowcasted results with the actual EU-SILC indicators for years for which the latter are available has shown that in the majority of cases the two estimates follow the same trends and fall within the boundaries of the nowcasted confidence intervals. Despite certain limitations, nowcasting the main income-related poverty indicators has the potential to facilitate monitoring of the effects of the most recent changes in tax-benefit policies and macro-economic conditions on poverty risk. Given the relevance of these issues to evidence-based policy making, which has been strongly emphasised both by the European Commission and by Eurostat, we believe that this approach constitutes a sound alternative to waiting until official statistics are made available and can provide valuable ex-ante information on potential distributional effects of contemporary economic and policy-related developments.

Reference: Olga Rastrigina, Chrysa Leventi and Holly Sutherland. **"Nowcasting: estimating developments in the risk of poverty and income distribution in 2013 and 2014".** *Social Situation Monitor Research Note 1/2014, European Commission*

Saturday jobs and the damage to grades

The UK Commission for Employment and Skills report Death of the Saturday Job picks up on a growing trend away from part-time work as school children compete for the few part-time jobs and many decide to concentrate on school work. A new study by Dr Angus Holford has found that part-time employment is having an impact on some children – but not all.

Millions of teenagers across the country combine the hard graft of GCSE revision with shifts in shops, cafes and paper rounds. Even young Brooklyn Beckham holds down a Saturday job at a West London coffee shop (reportedly at £2.68 per hour) while his parents are worth (reportedly) £165 million.

The rules governing the employment of children in England are set by the Department for Education. Children aged at least 13 but less than the school leaving age may undertake `light' work, deemed as not being harmful to their health, safety or development.

There are age-specific restrictions on the types and hours of work children may do. Those under 16 cannot work 'mainly or solely' for the sale of alcohol, for example. Those in compulsory education may work only 12 hours per week in term time, including a maximum of two hours on a weekday or Sunday; eight hours on a Saturday (five hours if under 15 years); one hour before school on a weekday; and none during school hours or after 7pm on a school night.

But the benefits of holding down a part-time job – gaining work skills and pocket money for those teenage essentials – whilst studying for GCSEs, might not be worth the potential damage to your grades. The effect is especially noticeable in girls.

This was revealed through an analysis of the Longitudinal Study of Young People in England (LSYPE), which followed a cohort of teenagers aged 13-14 in 2004, examining the hours school children spent working and the impact this had on the time they spent doing other things – including risky behaviour and sport – as well as their study time and subsequent exam grades at GCSE.

Around a quarter of all 13-16 year-olds in England take some formal paid employment during school term time. This can be a good thing – they earn their own money and can pick up useful skills which might help them find full-time work in the future. However, they may spend that hard-earned money on less than useful things, or fall in with a different group of people. The study found that school children who worked became more likely to drink alcohol regularly, smoke, or consume cannabis.

The main impact of part-time work however, was on the school grades for girls. For girls, an additional hour of paid employment per week in school year 10 reduced final GCSE performance a year later by approximately 1 grade in one subject. About a quarter of this effect was due to these girls spending less time studying outside of lessons. A similar amount could be explained by girls in employment becoming less motivated or interested in the work they did in lessons.

Girls with a job at age 15 work an average of six hours per week, meaning their part-time work is likely to reduce their results considerably – a grade lower in six subjects. The long-term effect of this would be particularly severe for borderline students at risk of not achieving the target for progression in education, of five A*-C grades (including English and Maths). Given that academic results at 16 have such a significant influence over our future life outcomes, these findings could worry policy makers and parents who want young people to achieve their potential at this crucial point.

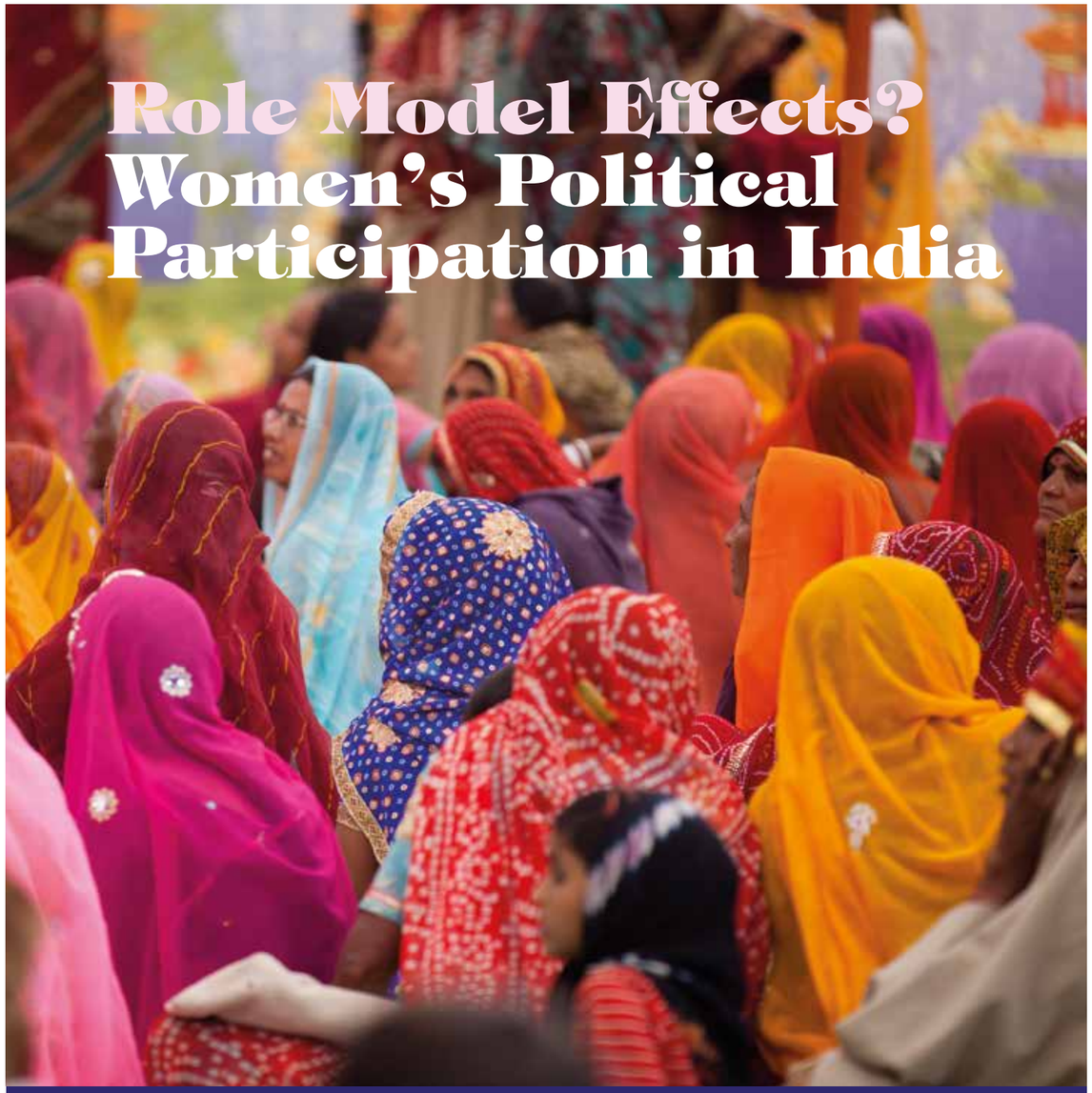
It is inevitable that having a job gives teenagers less time to study. That alone might be a small price to pay given the potential benefits of having a part-time job for all-round development. The concern however may be how this could cause teenagers to lose sight of the importance of their education for their longer-term opportunities.

Further information:
Angus Holford. **"Youth employment and academic performance: Production function and policy effects"**.

https://www.iser.essex.ac.uk/research/publications/working-papers/iser/2015-06.pdf

Girls with a job at age 15 work an average of six hours per week, meaning their part-time work is likely to reduce their results considerably – a grade lower in six subjects.

Role Model Effects? Women's Political Participation in India



Raising the share of women in government has been shown to result in policy choices that more effectively represent the interests of women and children. Yet women account for only 22% of the membership of national parliaments globally. In 2014, they comprised 11% of India's national legislators, 18% of the United States Congress and 22% of the United Kingdom's House of Commons. A deficiency of female role models has often been proposed as a reason for the persistence of gender gaps in leadership positions in the corporate or university sectors, although there is limited rigorous evidence of how much they matter. Professors Sonia Bhalotra from ISER, Irma Clots-Figueras of Carlos III Madrid and Lakshmi Iyer of Harvard Business School have analysed role model effects in Indian politics, focusing on competitive elections to state legislative assemblies.

India is the world's largest democracy and the most rapidly growing economy after China, but close to half of its population – women – continue to have limited voice. It is estimated that there are about 500,000 purposive abortions of the girl fetus in India every year, which is more than the number of girls born in the UK annually. More than a third of women report domestic violence. Instances of rape, dowry deaths and women's suicides persist at an incredibly high level.

The researchers assembled data to track women's representation in India's state assemblies over time. Averaging across the period 1980-2007, women comprised only 4.4% of all candidates for state assemblies, and 5.5% of state legislators. So, conditional upon contesting, women have been competitive, exhibiting somewhat stronger chances of winning than men. However candidacy rates are very low. Our research investigated the presence of role model effects by asking whether the event of a woman winning led to increases in women's candidacy in the same or in neighbouring constituencies, and in the same or in other parties.

In general, if we observe a higher probability that women contest or win in a constituency previously won by a woman, this may reflect the persistence of voter preferences. So as to identify causal effects of women's electoral victory independently of voter preferences, we analysed mixed-gender races, effectively comparing areas in which women narrowly won to those in which women candidates narrowly lost to men. We found that a woman winning leads to an increase in the share of women candidates in the next election, but that this is driven by an increased propensity of the incumbent woman to re-contest.

This is of substantive significance since 34% of female incumbents and 28% of male incumbents in India do not run for re-election despite there being no term limits.

Importantly, we find no evidence that new women are encouraged to contest. We find stark differences in the impact of a woman's electoral victory in places with a greater or lesser degree of gender bias. In the North-Western half of the country, where gender bias is known to be deeply entrenched, a woman's electoral victory is followed by a significant decline in the share of new women candidates in the next election.

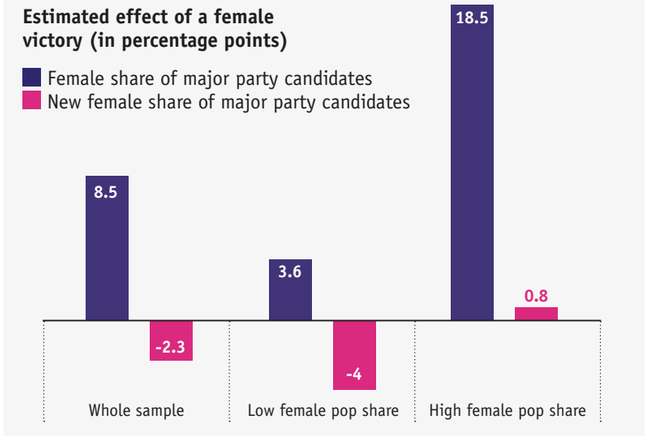
Consistent with backlash or an intensification of bias against women following women's electoral victory, we find this decline in new women candidates is larger among parties headed by men, and there is also a decline in the chances of a woman winning. This coheres with some previous evidence of male backlash against women performing non-traditional roles or earning more. In sharp contrast, in the "better half" of India in constituencies in which a woman won before, a woman is more likely to win the next election, albeit the incumbent woman.

We attempted to investigate whether the weak response we see overall might be explained by a shortage of suitable women or by gender-specific constraints (such as family commitments or women's lesser willingness to compete) but found limited evidence for these "supply side" constraints.

Overall, our results suggest that women's competitive success in politics does not generate spontaneous increases in women's candidacy in politics. Policy initiatives may be needed to stimulate entry of new women into the political arena, especially initiatives targeted at changing the attitudes of voters and parties in gender-biased areas. The most common initiative is the use of gender quotas.

More than 100 countries now have some kind of quota for women, either in candidate lists or in seats. In India, one-third of local council seats are mandated to be filled by women. A similar bill proposing reservation of a third of all seats in state and national legislatures was passed by the Upper House of Parliament in 2010, but has not yet been passed by the Lower House. There is some limited evidence that such gender quotas can reduce voters' gender bias over long periods of time (Beaman et al, 2009).

How relevant are these findings to countries where bias against women leaders, if it exists, is not as obvious as in India? A recent study for the United States finds, like us, no evidence that women winning spurs the increased participation of women in subsequent elections (Broockman 2013). The share of women in government has increased to an unprecedented level in the 2015 UK election and it is pertinent to ask if this will spur further candidacy and success among women in the UK, a question on which there is as yet no (causal) evidence.



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COUNTING THE WAGES OF SIN: ILLICIT DRUG MARKETS AND THE NATIONAL ACCOUNTS

National statistical agencies within the EU are now required to include illicit economic activity in the National Accounts. But is this a good idea? Professor Stephen Pudney summarises the conclusions of an ISER review of the methodology used by the UK Office for National Statistics for measuring the contribution of illegal drugs markets to GDP.

In 2012 a new requirement was issued for national statistical agencies in the EU to include certain categories of illicit economic activity within the definition of national income for the National Accounts. The extension was implemented in the UK with the publication of initial estimates in the National Accounts by the Office for National Statistics (ONS) in September 2014[1]. The inclusion of drugs and prostitution added £10bn (0.7%) to measured UK GDP, and attracted a great deal of attention, in part because it coincided with revisions of past National Accounts data that triggered a controversial rise in the UK contribution to the EU budget[2]. But is it a good idea to include illegal markets in the GDP estimates? Can it be done with sufficient accuracy to make it worthwhile? And what do the calculations tell us about the changing nature of the illegal drugs market in the UK?

GDP is typically described as "the value of all final goods and services produced in a country in a year". In principle, it should clearly include products (like illicit drugs) which are produced and traded illegally. But there are many other products and services currently excluded from GDP (such as the informal services supplied by many people to their disabled friends and relatives). Where to draw the boundary for inclusion in measured GDP is largely a practical decision, depending partly on what can and cannot be measured with reasonable accuracy.

The ONS estimates for illegal drugs were based on a demand-side view of the market, using an existing benchmark estimate of the size of the market in 2003-4, updated to 2010 by reference to survey data on trends in drug use. Both parts of that procedure are subject to considerable uncertainty. The benchmark estimate, produced originally by an ISER team[3], used methods designed to overcome the under-reporting of drug use and under-representation of regular drug users in conventional surveys, and gave 2003/4 market size as £5.6bn per year – a figure which has often been quoted in the media. Sadly, the researchers' indication of a wide margin of error for that estimate (±£1.5bn) is almost never quoted.

Following government cutbacks in data collection over the last decade, it is now impossible to repeat the benchmark estimation procedure, and uprating the benchmark estimate to more recent years introduces considerable further statistical error, since there is uncertainty in survey estimates of recent consumption trends. Our work for the ONS shows the margin of error increasing greatly as we extrapolate from the 2003/4 benchmark estimate to 2009/10. For example, in the case of cannabis, the error margin triples from ±13% to ±39% and the situation is far worse for more uncommon drugs like cocaine, where the error margin rises from ±16% to ±44%. Given this uncertainty in measuring the size of the market in one year, estimates of year-to-year change are so uncertain as to be virtually meaningless.

Where does this leave us? It is hard to escape the conclusion that the new illicit activity element of the national accounts is of little practical value, and that its inclusion will only succeed in increasing slightly the statistical "noise" in official GDP growth figures. These new official estimates for the illegal drugs market feed into the official gross national income estimates which, in turn, are used to calculate Britain's contribution to the EU budget. This aspect of the new national accounting standard looks like a mistake – it seems unwise to have such contentious financial rules being based on concepts that cannot be measured with acceptable accuracy.

Our review has revealed big changes happening in the UK cannabis market. The proportion of cannabis seized in the form of growing plants rose from less than 5% before 2005 to around 50% in recent years; and the share of cannabis seized by the Border Force rather than the domestic police forces roughly halved over 2000-13 (from around 65% at the start of the period). Our analysis of the evidence on cannabis seizures suggests that the share of UK-produced cannabis on the market has risen from no more than 5% in 2000-02 to around 50% by 2013. If import substitution had occurred on anything like this scale in the legal economy, the government would have been very pleased indeed.

This article is based on an (as yet unpublished) review commissioned by the ONS and carried out by Stephen Pudney, Emilia Del Bono and Mark Bryan.

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2. *Huffington Post UK*, 23 October 2014, "European Union to demand extra £1.7 billion from Britain, payable days after Rochester by-election".

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LEADING SURVEY INNOVATION

The *Understanding Society* survey includes what is known as an 'Innovation Panel' sample (IP) – a testing bed for survey methods. **Dr Tarek Al Baghal** describes the experiments conducted in 2014 and how these could help design and improve survey methods in the future.

The Innovation Panel study is used to test different methods for conducting longitudinal surveys in order to produce the highest quality data. In the summer and autumn of 2014 the seventh wave of the Innovation Panel (IP7) was carried out, containing a mixed-mode design and methodological experiments. The study has used included three samples: original sample at IP1; a refreshment sample at IP4; and a refreshment sample at IP7.

The adults in the mixed-mode design at IP7 were first approached by letter and email where possible and asked to complete their interview on-line. Those who did not respond on-line were then followed up by face-to-face interviewers.
The remaining households were issued directly to face-to-face interviewers.

The mixed-mode design achieved a significantly higher response rate overall at IP7 (79.4%) than the face-to-face only design (72.9%). This finding differs from previous waves, and may in part be due to differences in the incentive structure for mixed-mode and face-to-face only designs.

At IP7 most sample members were sent an unconditional incentive. The level of incentive made a sizeable difference to response rate in the mixed-mode sample, with individual response rates ranging from 59.3% with a £10 incentive to 66.2% with a £30 incentive amongst the IP4 refreshment sample and 57.1% with a £10 incentive and 67.3% with a £30 incentive in the original (IP1) sample.

An experiment on making the incentives conditional on responding was also conducted using a smaller number of sample members. Results suggest that offering only conditional incentives to previous-wave non-responders has no significant effect on response rate, but the cost per respondent is just over one-third of the cost of sending unconditional incentives to this group.

One such experiment was designed to study and replicate the findings from a famous study published in 1981. While many of the findings of the classic experiments were replicated, the results also showed some remarkable differences in comparison with the classic results.

An additional experiment trying to raise response rates gauges the effect of multiple contacts on (i) locating, (ii) contacting and (iii) responding at IP7. Surprisingly, it appears that using multiple mailings between waves did not significantly reduce the proportion of untraced movers, non-contacts or refusals, compared with those who only received a single mailing.

In addition to experiments in the procedure of conducting survey, several experiments relating to the questionnaire were also conducted. One such experiment was designed to study and replicate the findings from a famous study published in 1981. While many of the findings of the classic experiments were replicated, the results also showed some remarkable differences in comparison with the classic results.

Another questionnaire experiment used reactive dependent interviewing, reminding respondents of their past answers when a change across waves was noted. This experiment found that only a few of the respondents who no longer reported having a long term health condition or disability confirmed that it had indeed ended (5 of 49 respondents in wave 7). There was another experiment examining the wording of dependent interviewing. The results suggest that the effects of the question wording on the reporting of change are mediated by the interaction between interviewers and respondents.

Two experiments manipulated the ordering of response scales, seeing if a change in direction of the scale affected results. One experiment demonstrates that scale direction affects survey answers by pushing answers to the start of the scale. However, the other experiment later in the survey found little differences in health reporting on scales.

A final wording experiment used ten different versions of a commonly used survey question about people's support for environmental protection in the form of taxation. A number of interesting findings were identified, including that political distrust appears to reduce the positive effects of framing new environmental taxes as cost-neutral to taxpayers.

HOW DO FAMILIES FARE LONG TERM AFTER COUPLES SPLIT UP

Longitudinal survey data provides an excellent resource for studying how families cope with and respond to potentially life-changing events, such as when couples split up and families separate. **Professor Mike Brewer** and **Dr Alita Nandi** have analysed data for the Nuffield Foundation to gain a clearer insight into the fortunes – and well-being – of families after the split.

Previous research using the British Household Panel Survey (BHPS) has shown that, when couples split up, women and children are more likely to see their incomes fall, on average, than men are. In new work funded by the Nuffield Foundation, ISER's Professor Mike Brewer and Dr Alita Nandi have extended that analysis to provide more detail on what happens not just to income, but also to work patterns, living arrangements, and the mental health and well-being of separating adults. This broad scope allowed the researchers to paint a rich picture: in reality, partnership status, incomes, employment and mental health or well-being are all changing simultaneously, and there are multiple causal pathways.

The key results, which are based on all waves of the BHPS from 1991 to 2008, confirm that children and their mothers see living standards fall by more, on average, after separation than fathers do. As a result, around 15 to 20% of children and their mothers experiencing a separation fall into relative poverty. This rise in poverty is even larger, and lasts for longer, if we measure what disposable income remains having deducted housing costs: this could reflect that some women see housing costs rise when they move out of the former family home, or it could just reflect that, even for those who do not move house, housing costs after the separation make up a larger fraction of what is almost certainly a lower level of disposable income.

What is perhaps surprising is that the fall in living standards is far more acute (in proportionate terms) for those individuals who, as a couple, had above-median income than it was for those who were living in below-median-income couples. Although there are always a wide range of individual circumstances, on average individuals in low-income couples see little change in living standards around the time of separation, but women and children in high-income couples see large falls. For women from these high-income couples, a typical pattern is that the loss of the man's earnings is in no way compensated for by alimony and child maintenance, increases in benefits and tax credits, and having one fewer mouth to feed.

An even more striking finding, although one affecting fewer individuals, is the difference in how living standards change upon separation for men and women from couples whose children are now grown up. Women in these families, who are mostly aged over 50 when separating, and tend to have been married, see living standards fall by far more, on average, than their former partners, with 30% of them falling into relative poverty upon separation.

The researchers learned more through a careful examination of how different sources of income changed upon separation, and by tracking changes in housing tenure and living arrangements. For example, some individuals (mostly men, and mostly from previously low-income couples) see little change in their household income around separation because they immediately move in with other adults who are not their partners, such as parents, siblings or friends. On the other hand, one reason why separating women whose children are grown-up see such large falls in income around separation is that when these women move out of the family home, they lose not only the earnings of their former partner, but also of their children.

Separation can be a very stressful or distressing experience, and this is evident amongst those individuals in the BHPS. On average, levels of well-being (as measured by a score which captures instances of poor mental health) and life satisfaction decline around the time of separation. Although women report lower levels of well-being than men, on average, men see mental distress rise by more than women around the time of separation, with fathers seeing the largest rise. But well-being and life satisfaction return, relatively quickly, to their pre-split levels, and this pattern seems unrelated to what happens to income after separation: indeed, women from couples with grown-up children see some of the largest falls in income, on average, but also see the greatest improvement in well-being and life satisfaction after separation.

Analysing how individuals' circumstances change around the time of a separation requires longitudinal data, but using longitudinal survey data has some limitations because of survey attrition. In particular, adults who move house as part of a partnership dissolution are more likely than others to stop participating in the household survey, meaning that those separated adults who remain in the survey may not be a random sample of those who have experienced partnership dissolution. For this reason, Dr Nandi and ISER researchers involved in the design of Understanding Society are contributing to a review of the data resources available to study the lives of separating families (http://www.nuffieldfoundation.org/data-understand-lives-separated-families).

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NEW RESEARCH FOR THE JOSEPH ROWNTREE FOUNDATION

Ethnicity and poverty

ISER researchers completed two significant studies for the Joseph Rowntree Foundation which were published in 2015 as part of a programme of work looking at ethnicity and poverty.

The impact of the recession

The UK's ethnic groups' economic conditions deteriorated more than the white majority's during the recession. Ethnic minority groups fared worse during the 2008 recession and subsequent period of austerity than the white majority, with higher unemployment, lower earnings, lower self-employment rates and higher housing costs.

This study by Dr Paul Fisher and Dr Alita Nandi, commissioned by the Joseph Rowntree Foundation, examined the impact of the recession which started in 2008 and subsequent austerity measures on different UK ethnic groups' economic well-being. The researchers analysed large datasets to document changes between the period before and during the recession and austerity, and to explore patterns in the duration of spells in poverty across the groups. Poverty and ethnicity are strongly related, with poverty higher among all ethnic minority groups than among white British people in the UK. Economic conditions vary widely across these ethnic groups according to many factors, including age, gender, disability and geography.

They found that:

- Average incomes fell across all of the groups, with the exception of Pakistanis
- Employment rates fell in the Black Caribbean, Black African and Other White Groups
- For the rest, employment rates fell for men but rose for women, notably among Bangladeshis
- Unemployment rates increased, mostly for younger people
- Housing costs increased most for the Chinese and Other White groups
- The Pakistani and Bangladeshi groups were most likely to be in persistent poverty, followed by Black African and Black Caribbean groups
- There was an association between poor English skills and persistent poverty across all the ethnic minority groups

Ethnicity and low pay

ISER research found that ethnic minority workers are most likely to be the lowest paid in the lowest paid jobs.

Ethnic minority workers are more likely than White employees to receive less than the living wage due to an over-representation in the lowest-paying sectors, rather than a wage gap within professions or a lack of qualifications.

Dr Malcolm Brynin and Dr Simonetta Longhi analysed data on over 80 occupations to pinpoint different situations that ethnic minority groups typically face in employment compared to White ethnic groups, focusing on their work choices. Does it affect ethnic minority workers' well-being if they tend to enter certain employment sectors rather than others? Do they enter low-paid jobs, or is the problem that they receive relatively low pay whatever jobs they enter? Which sectors offer the best wages and are ethnic minority groups well represented in these? Finally, what factors are associated with these occupational choices?

Their analysis showed that:

- Ethnic minority workers are more likely than White employees to receive less than the living wage, though less so for ethnic minority women than men
- Although the wage gap relative to White employees is limited within occupations, ethnic minority employees tend to be concentrated in low-paying ones
- Ethnic minority employees are over-represented in some low-paying sectors such as catering, and under-represented in more reasonably paid ones like metal-working and printing
- Movement in and out of low pay is frequent, but moves towards low pay are more common among all ethnic minority groups than for the White British majority
- Ethnic minority employees tend to have slightly higher educational qualifications than the white majority, but are more likely to be over-qualified for the work they are doing.

More information: *http://www.jrf.org.uk/topic/poverty-and-ethnicity*

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