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When gold prices go up, baby girl survival rates in India fall

When world gold prices go up, fewer girl babies in India survive the first month of life, according to new research for the ESRC Research Centre on Micro-Social Change at ISER, led by Professor Sonia Bhalotra

The research suggests that this is linked to gold often being part of bridal dowries in India – a transfer at marriage from parents to daughters, despite prohibition since 1961 – so when gold prices go up, the cost of raising girls rises and families tend to neglect or abort them.

Professor Sonia Bhalotra said: “Between 1972 and 1985, our analysis showed a 6.3% increase in the monthly price of gold was accompanied by an increase in girl neonatal mortality of 6.4%. During the same period, there was no significant corresponding change in male neonatal mortality.

“We also found that those women who were born in months when the gold price was increasing were shorter in adulthood. This is consistent with previous research which has established that nutritional deprivation in early life leads to lower stature in adulthood, and that some parents in India deprive girls of nutritional inputs. In this case, it could be

that lower levels of breastfeeding led to girls born in months of gold inflation being shorter as adults. We found that those girls that survived carried a marker of relative neglect into adulthood, compared to boys born in months of gold price inflation.

“We separated out the results for children born between 1986 and 2005, as ultrasound technology became widely available across India after the mid 1980s. My previous research showed that in this period parents shifted away from neglecting girls after birth to aborting unwanted girls before birth. For potential births after 1986, we found that a 2.6% increase in the price of gold during pregnancy was accompanied by a statistically significant 0.3 percentage point decline in the probability that a girl rather than a boy would be born.”

Bhalotra, Sonia & Chakravarty, Abhishek & Gulesci, Selim, 2018. *The Price of Gold: Dowry and Death in India*, CEPR Discussion Papers 12712, CEPR Discussion Papers.



New MiSoC study on reducing child poverty through Child Tax Credits

Reducing the number of children in poverty in the UK by 1 million would be possible with an increase in the Child Tax Credit (CTC) rate per child to £5,200 per year (from £2,780, or 87%).

This would cost £13.4bn per year, according to new calculations by Professor Holly Sutherland and Iva Tasseva for the ESRC Research Centre on Micro-Social Change.

In Scotland only, reducing the number of children in poverty by 100,000 would require an increase of CTC per child to £6,810 (or 145%) and would cost £1.8bn per year. The increase in Scotland is higher mainly because the target number of children taken out of poverty in Scotland is a larger proportion of Scottish children than is the UK target number of UK children. The larger the CTC increase the more non-poor children who benefit.

These calculations were carried out using the UK component of EUROMOD, the tax-benefit microsimulation model of the European Union, maintained and managed by the University of Essex. They are based on micro-data from the Family Resources Survey 2015/16 updated to 2018 and the starting point is the 2018/19 tax-benefit system.

The poverty threshold is set at 60% of the 2018 median equivalised household net income in the UK. This is also used for the calculation of child poverty in Scotland. Budgetary costs are estimated net of reductions in entitlements to Housing Benefit and Council Tax Support.

New study finds final year students do not understand the high rates of interest on loans for fees and living costs

Dr Angus Holford has presented new research from the ESRC Research Centre on Micro-Social Change on students' understanding and preferences for funding higher education

This was part of a panel discussion organised by the New Statesman with the National Education Opportunities Network (NEON).

The research, conducted amongst a cohort of final year students, found that most students do not understand the high rates of interest they are charged on their loans for fees and living costs.

Dr Holford said: "The greatest problem is that students don't understand what they've signed up to. They underestimate the interest rate they're charged during their studies. And they want more money to live on during their studies, but find it very difficult to translate any change in upfront support into the price they pay down the line.

"But students are clear in what matters most to them. Students are strongly resistant to the idea of different fees for different subjects, even if they'd expect personally to benefit. Irrespective of their own family background, students are strongly in favour

of those from lower-income households receiving more financial support during their studies. And their biggest anxieties for their post-graduation finances are about making payments when their earnings are low.

"With the current Department for Education-led 'Review of Post-18 Education and Funding' there's an opportunity to move the system in line with what matters most to students, and to make it more transparent.

"One way to achieve this could be to have students sign a contract to pay a constant fraction of their earnings above some threshold for a fixed period of time after they have left university. This would retain and strengthen the principle that those who benefit from Higher Education contribute to its cost. Perhaps more importantly, it would allow us to do away with the unhelpful and threatening language of 'fees', 'loans' and 'debt' altogether."





More than 15m people in Europe experience high degree of housing precariousness

A new study defines a new way to measure housing precariousness in Europe and finds housing precariousness on a massive scale

The study, ‘Constructing a housing precariousness measure for Europe’ has been published in the *Journal of European Social Policy*.

It was co-authored by Dr Amy Clair from the ESRC Research Centre on Micro-Social Change (MiSoC) with Aaron Reeves from the London School of Economics and Political Science and the University of Oxford, Martin McKee from the European Observatory on Health Systems and Policies and London School of Hygiene & Tropical Medicine and David Stuckler from Bocconi University.

Using this new housing precariousness measure, the researchers found that precarious housing affects over half of the population of Europe in some way – almost 260 million people. Financial burden is the most common problem experienced, often coexisting with quality issues: nearly 10 per cent of the European population (or around 52 million people) are struggling to afford to live in homes of inadequate quality. There are considerable differences in levels of precariousness across countries. Relatively low levels of housing precariousness are found in Northern European countries such as Norway, Sweden and Denmark, while considerably higher levels are found in Southern European countries. Bulgaria

is found to perform worst by this measure, with nearly three-quarters of the population reporting at least one dimension of housing precariousness.

The researchers state that this analysis may actually be an underestimate of the problem. “The housing precariousness measure represents a step forward, allowing, for the first time, cross-European investigation into the extent of housing precariousness and who experiences it. Our findings also indicate that precarious housing is clustered among more disadvantaged groups, such as those with lower levels of education and those with limiting health conditions.

“For policy, our results demonstrate, first, the massive scale of precariousness in Europe. Over 15 million people experience a high degree of housing precariousness reporting three or more elements in the scale. Second, it is clear that renters fare worse than do owners, although the extent varies considerably across nations. There are marked international variations to be explained, which cannot solely be accounted for by gross domestic product (GDP). This creates an important opportunity to learn how European nations have sought to secure stable housing.”

Understanding Society Conference: Combining Biological and Social Data

This conference in London on 6 December will be sharing novel findings into the links between our social environment and our biology.

What are the links between childhood circumstances and allostatic load? How does shift working impact on associations with DNA methylation and sleep patterns? Can machine learning help us understand the links between social, health and biomarker data when looking at predictors for future health? How does neighbourhood air pollution and green space affect inflammatory markers?

Drawing together researchers from many different specialisms, the conference is aimed at researchers from a wide range of disciplines, including health economists, social epidemiologists, medical sociologists, health geographers and survey methodologists, as well as researchers who want to learn more about the use of biomarkers in social research.

As well as hearing about the wide variety of research that has used *Understanding Society* biomarker, genetics and epigenetics data, the conference will also include time for discussion. The biomarker team from *Understanding Society* will also be available to answer any additional questions about the data.

As part of the ESRC Festival of Social Science, MiSoC will host a discussion and debate on the links between housing, health and wellbeing in Westminster on 6 November. There has been a huge increase in the number of people living in rented accommodation, so could the associated insecurities and stresses have a detrimental effect on their health and wellbeing? Researchers, including Dr Amy Clair, will present three new studies looking into the impact of housing situations on the lives of Generation Rent. A panel of leading experts and thinkers will discuss the findings and the implications for policy and practice.

Testing the idea of basic income

The idea of a basic income is becoming increasingly popular both within and outside the UK. It is a policy with many variants which includes components that are relevant for both moderate and radical reforms.

The ESRC Research Centre on Micro-Social Change will present new research on Monday 5 November in Westminster, part of the ESRC Festival of Social Science, aiming to illustrate ways to turn the basic income concept into a practical scheme, with emphasis on a revenue-neutral implementation.

The presentations by Iva Tasseva from the Institute for Social and Economic Research, University of Essex and Luke Martinelli, Institute for Policy Research, University of Bath, will be followed by a roundtable discussion on the strengths and weaknesses of a revenue-neutral basic income introduction.

Roundtable participants will include Alison Garnham, Chief Executive of the Child Poverty Action Group, Professor John Hills, Chair of the Centre for Analysis of Social Exclusion (CASE) at LSE, Dr Chrysa Leventi, Research Fellow at the Institute for Social and Economic Research and Dr Malcolm Torry, Director of the Citizen's Income Trust.



Women quotas in parliaments led to a sharp decline in deaths at childbirth for all women

A new study by MiSoC's Co-Director Professor Sonia Bhalotra and co-authors found that raising women's political participation has a dramatic and surprising effect on their empowerment – fewer die within 42 days of childbirth

The study found that the introduction of quotas for women in parliaments results in a 9–12 per cent decline in maternal mortality. Countries with a quota for parliamentary participations also saw 8–11 per cent increase in skilled birth attendance and a 6–11 per cent increase in women attending prenatal checks.

Maternal mortality, defined as the death of women within 42 days of childbirth, remains a looming global health problem well into the twenty-first century. It is estimated to account for 830 deaths per day, and more than 216 deaths per 100,000 live births globally. In sub-Saharan Africa, the maternal mortality ratio exceeds the rate in developed countries a century ago.

The new study looks at the hypothesis that political will plays a significant role, and that women have greater political will for maternal mortality reduction. Since 1990, not only has the maternal mortality rate fallen by 44 per cent, but the share of women in parliament has risen from under 10 per cent to more than 20 per cent. The researchers find these trends are causally related.

Professor Bhalotra said: “The new evidence we provide, documenting that women's involvement in policy-making can effect

more rapid maternal mortality decline, has implications for the recently launched *Global Health 2035* report, and the United Nations' ambitious Sustainable Development Goals. The target is more ambitious than ever, so we clearly need some policy innovation. In fact this paper shows that the goal for reducing maternal mortality is complementary to the goal for raising the share of women in parliament.

“Given recent evidence from analysis of close elections in India which shows that replacing men legislators with women legislators would incur no cost in terms of compromised economic growth, gender quotas may be both a powerful and low-cost means to modifying public health priorities and improving maternal health. Despite significant progress, especially since 2000, preventable maternal mortality remains high.

“The lifetime risk of maternal mortality is 1 in 41 women in low-income countries. Despite a wave of gender quota implementation, 130 countries in the world have none.”

Bhalotra, Sonia & Clarke, Damian & Gomes, Joseph & Venkataramani, Atheendar, 2018. *Maternal mortality and women's political participation*, IZA Discussion Papers 11590.

How difficult childhoods could lead to premature ageing

A new study led by Professor Meena Kumari, published in the *American Journal of Epidemiology*, suggests that the ageing process may be affected by circumstances in our youth

Professor Meena Kumari from ISER and Dr Amanda Hughes from the University of Bristol used new biomarker data from *Understanding Society*, the UK Household Panel Study.

"We know that comparatively disadvantaged people, even in rich countries, have worse health and shorter life expectancy than others. But what is it exactly about socioeconomic disadvantage and other environmental difficulties that affects our biology? And at what age are we most vulnerable to these effects?"

"We used data from 1,099 UK adults to look at whether different dimensions of socioeconomic disadvantage were linked to elevated DNA methylation age, calculated in two ways. When blood samples were collected, the survey had already collected annual information on the same people's socioeconomic circumstances for 12 years. This meant we were able to consider current and longer term measures of things like income, employment status and educational qualifications. Crucially, this data also included information about the occupational social class of an individual's parents when they were 14.

"We discovered that only the last measure showed a clear link with DNA methylation age. Individuals whose parents worked in semi-routine or routine occupations were about one year 'older' than individuals whose parents worked in managerial or professional roles. Individuals who did not have working parents, or had parents who

had died, fared still worse: they were 2.4 or 1.85 years older depending on the algorithm used. The calculations did take account of other relevant factors including smoking, body mass index and the actual age of the study participants.

"These results suggest DNA methylation age is an aspect of a person's biology which is vulnerable to influences early in life, but surprisingly robust when it comes to difficulties experienced in adulthood. The next question is which aspects of the childhood socioeconomic environment are most relevant. Is it financial strain, housing quality or diet? Equally important will be to figure out which factors could provide resilience to these effects, potentially buffering children from a lasting impact of disadvantage on DNA methylation age.

Of course, the results will need to be replicated, and since DNA methylation age was only measured once we could not definitively prove cause and effect. But our results add to extensive evidence that early life circumstances can cast a long shadow on adult health. Perhaps most importantly, this strengthens the case for making sure all children are fully supported."

Hughes, Amanda & Kumari, Meena & Smart, Melissa & Gorrie-Stone, Tyler et al. Journal article: 'Socioeconomic position and DNA methylation age acceleration across the lifecourse', *American Journal of Epidemiology*, 27 July 2018.

Tackling the gender pay gap and 'motherhood penalty'

***Understanding Society*, the UK Household Panel Study led by a team of experts at ISER, will host a debate to discuss new evidence using *Understanding Society* data on the impact of part-time working on pay, how parenthood shapes gender role attitudes and the effects of divorce on gender differences in housing futures.**

The event on Wednesday 7 November in Westminster, is part of the ESRC Festival of Social Science and marks the publication of our annual Insights report featuring new research using data from the UK's biggest household panel study.

The introduction of mandatory gender pay reporting for England, Scotland and Wales sparked debate about the performance of well-recognised employers and gendered selection into occupations and sectors. There has been less discussion about the interplay of factors driving the gender pay gap and how best to reduce it. Whilst it has narrowed from 19% in 2007 to 13.4% in 2015, nearly 8 in 10 organisations with more than 250 employees have a pay gap in favour of men.





ISER evidence used in new UK call for taxing cannabis

The international lobbying group, Health Poverty Action, has called for a re-think of UK policy on drugs, in line with changes in Canada and several states in the US.

Using evidence from MiSoC's 2013 study *Licensing and regulation of the cannabis market in England and Wales: Towards a cost-benefit analysis* they call for the UK political parties to back a change which could generate at least £1 billion in tax revenue.

The Health Poverty Action report states: "The so-called 'war on drugs' was always built on shaky foundations. Now countries and jurisdictions around the world are dismantling it piece by piece and building a new, 21st century approach to drugs that puts public health first. Nowhere are the foundations of this new approach to drugs more obvious than in the global movement towards regulated, legalised cannabis markets. And despite the US being the ostensible leader of the 'war on drugs', it has been US states at the forefront of this move. The results from the US so far are generally positive: confounding critics whilst bringing in additional tax income to fund public services. And this is just the start: in the summer of 2018 Canada will become the first G7 country to legalise cannabis. Regulating and legalising cannabis is an idea whose time has come."

ISER's 2013 report by Professor Emilia Del Bono, Professor Stephen Pudney and Dr Mark Bryan, was used as evidence in a Treasury report during the Coalition government, as Liberal Democrat policy was in favour of legalisation.

A new measure for UK poverty developed using data from *Understanding Society*

Data from *Understanding Society* has been used by the Social Metrics Commission to develop a new metric for measuring poverty in the UK

The aim of the Social Metrics Commission has been to develop a new approach to poverty measurement that can inform policy makers, enable action and improve the lives of people in poverty.

For the first time, as well as looking at incomes, the new metric considers a range of other of inescapable costs that reduce people's spending power, such as rent or mortgage payments, childcare and the extra costs of living with a disability. The metric also takes into account the positive impact of people's liquid assets on alleviating immediate poverty, which could include savings, stocks and shares. The new metric reflects more accurately the realities and experiences of living in poverty than previous measures:

- 14.2 million people in the UK population live in poverty: 8.4 million working-age adults; 4.5 million children; and 1.4 million pension age adults.
- Over half of those in poverty (58.2%) also live in persistent poverty. This means that more than one in ten (7.7 million) of the total UK population are in poverty now and have been in poverty for at least two of the previous three years. Persistent poverty is highest in families more than 10% below

the poverty line, in workless families and families where someone is disabled.

- People with a disability are much more likely to be living in poverty. Nearly half of the 14.2 million people in poverty live in families with a disabled person (6.9 million people equal to 48.3% of those in poverty).
- Far fewer pensioners are living in poverty than previously thought, with a significant fall in pensioner poverty over the last 15 years. Poverty rates amongst pension-age adults have nearly halved since 2001, and have fallen to one in ten, a drop from 17% of the total population in poverty in 2001 to 11% in 2017. There are, however some pensioner groups still experiencing high levels of poverty. For example, the poverty rate for pensioners who do not own their own home is 34.2%.

The Commission used data from *Understanding Society* to investigate 'poverty persistence' – how long families have been in poverty and what might be causing this. They used information on the level of debt families have and the lived experience of people experiencing poverty, including their reported health, family relationships, job opportunities and family finances. The longitudinal nature of the data allowed the Commission to measure changes in poverty over time.





New analysis from EUROMOD used in World Bank flagship report on Europe and Central Asia

The World Bank has published a new flagship report – *Toward a New Social Contract: Taking on Distributional Tensions in Europe and Central Asia* – which draws on analysis using EUROMOD, the tax-benefit microsimulation model developed at ISER at the University of Essex

Cyril Muller, World Bank vice president for Europe and Central Asia, said: “Social and economic tensions—between workers, between generations, and between regions— impact citizens’ day-to-day lives and their sense of wellbeing.

“While one might argue that countries in Europe and Central Asia are well-equipped to deal with such tensions, given their long experiences with social welfare institutions, we must remember that these institutions were designed during a very different economic environment.

“In many countries today, the bulk of social protection and pension benefits are available to those with long and stable employment histories – but younger generations, in particular, do not have such histories. Since the 1980s, tax systems have increasingly penalised younger cohorts. In the early 2010s, when flat tax regimes were introduced in some Eastern European countries, the average tax rate for 18 to 24-year-old taxpayers rose by about 10 percentage points, while it decreased for individuals aged 35 to 44 years.

“We know there is no quick fix. But passively compensating individuals, while trying to curb the trends – by preventing trade or rejecting new technologies – has not worked in the past and will not work in the future.

“Our new report proposes three overall policy principles to help address rising inequality and increased vulnerability in society. This approach would promote equal protection of all workers, regardless of their type of employment; encourage the universal provision of social assistance, social insurance, and basic quality services; and improve the fairness of the tax system by supporting progressivity of a broad tax base that complements labour income taxation with the taxation of capital. And, hopefully, this research and analysis will help countries level the playing field and unleash greater economic opportunity for all citizens – regardless of their occupation, age, gender or location.”

Research Impact Award

Dr Paola De Agostini won the Research Impact Award for Best UK Public Policy Impact for her work with the Scottish Parliament at the University of Essex’s Celebrating Research Impact Awards 2018.

Dr De Agostini leads ISER’s ongoing work with the Scottish Parliament, providing evidence for policy makers looking at the potential impact of changes to taxes and benefits.

Following devolution of powers over tax and welfare to the Scottish Parliament, ISER has negotiated a framework agreement to support the use of EUROMOD, ISER’s tax benefit microsimulation model, by the Scottish Parliament Information Centre (SPICe). SPICe provides confidential and impartial information to Members of the Scottish Parliament (MSPs) and their staff on a range of issues including analysis of the costs and effects of proposed policy reforms on household income distribution and poverty risk.

Professor Christine Raines, Pro-Vice-Chancellor (Research) said: “At Essex we want our research to help make the world a better place, and this event showcased the wide range of excellent projects we are involved in demonstrating we are having an impact across our three faculties in projects that span from improving public services to developing novel technologies.”





Income-based policies in Scotland: how would they affect health and health inequalities?

A new report published by NHS Scotland uses ISER's tax-benefit microsimulation model, EUROMOD, to predict the impact of possible policy changes on a range of health inequalities.

Income-based policies in Scotland: how would they affect health and health inequalities? explores how the tax and benefit rules may affect health and health inequalities in Scotland through one of their main determinants: net household income.

Using EUROMOD – the tax-benefit microsimulation model developed at ISER at the University of Essex – and the Scottish subsample of the Family Resource Survey (FRS), the report studies how household net income would react to the introduction of a range of potential changes in the tax-benefit rules. They then feed this information into the ‘Triple I – Informing Interventions to reduce Inequalities’ model – the Scottish Public Health Observatory’s (ScotPHO) health inequalities scenario modelling – to analyse the potential health impact of such policies.

Assuming a causal relationship between income and health, the research suggests that the most effective income-based policies for reducing health inequalities are likely to be those that disproportionately increase incomes for those with the lowest incomes. Income-based policies such as increasing (non-devolved) means-tested benefits, devolved benefits, introducing a Citizen’s Basic Income (CBI) scheme partly financed by higher income tax rates or introducing the ‘real’ Living Wage are shown to have the potential for improving health and narrow health inequalities in Scotland.

Whilst this is a first attempt at combining simulations of tax-benefit policies produced by EUROMOD with those of health indicators produced by the Triple I model, this research confirms the crucial role of tax-benefit models, such as EUROMOD, for informing the policy debate on potential effects of policy choices.



The Institute for Social and Economic Research (ISER) is based at the University of Essex and receives funding from the university and the Economic and Social Research Council (ESRC).

Established in 1989, the Institute incorporates the **ESRC Research Centre on Micro-Social Change (MiSoC)** and **The Microsimulation Unit**, which is responsible for the EUROMOD project. ISER is home to **Understanding Society**, the UK household longitudinal study which collects information annually, providing valuable new evidence about the people of the UK, their lives, experiences, behaviours and beliefs.

If you are interested in finding out more about the articles in this newsletter or about ISER’s work, please contact Louise Clarke Cullen at lcullen@essex.ac.uk

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