

Posters

Strand organizers: **Ginevra Floridi & Vicky Donnalaja (London School of Economics)**

Posters are listed in alphabetical order of first author

Differentials of Low Birth Weight in Sri Lanka: Analysis of the 2016 Demographic and Health Survey in Sri Lanka

Gayathri Abeywickrama, University of Southampton

Despite achieving a satisfactory level in maternal and child health indicators, low birth weight (LBW) is a public health concern in Sri Lanka, as it has remained constant over two decades. This study aims to identify the differentials in LBW in Sri Lanka. Data was obtained from the 2016 Demographic and Health Survey in Sri Lanka. Live births in the 5 years before the survey that have a reported birth weight, either from a written record or mothers' reports were included in the study. Children whose birth weight is less than 2.5 kilograms were considered as the outcome variable. LBW was examined in association with all independent predictors including maternal age, education, ethnicity, religion, region, residential sector, wealth status, maternal BMI, gestational time and child characteristics such as sex, and birth interval. Results found almost 16% of the infants were born with LBW. Mother's low education level, poor wealth, residential sector, ethnic minority, BMI, sex of the child, number of ANC visits, gestational age and birth interval were significant factors of LBW while maternal age, employments and supply of 'Thripasha' had no significant impact. Differentials in maternal education, wealth status, disparities in health by residence, gestational time are key determinants that need to be addressed to reduce the prevalence of LBW in Sri Lanka. This study affirms the importance of promoting effective interventions to reduce differentials of LBW in coming generations. The next step of the study is a multilevel analysis to investigate inequalities in LBW in Sri Lanka.

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Interviewer effects on patterns of non-response: Evaluating the impact on the reasons for contraceptive non-use in Indonesia and the Philippines

Mark Amos, University of Portsmouth

Much social science research is reliant on generating data by questionnaires and interview. Understanding the processes by which these data are generated is therefore vital for ensuring validity of scientific results. Interviewers, as a primary means of collecting responses, are one mode through which the generation of data can be affected. This paper uses the reason for contraceptive non-use module of the Indonesian and Filipino DHS to examine the effect of differential effects of interviewers on response patterns. We find that the probability of providing a response declines across the module, an effect which is robust to the introduction of controls. Using a cross classified multilevel model, we are able to partition the effect of this decline into respondent and interviewer effects. We find that although significant, the substantive effect of interviewers on the response profile is small and the majority of variation is accounted for by interviewee level variation. Therefore, while data collection via interviewers seems to be a reliable mechanism within the DHS, care should be taken to minimise respondent burden to ensure valid responses

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Do young mothers get the care they need? Mapping age disparities across the maternal continuum of care using an holistic clustering technique

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Motherhood during adolescence is a major risk factor for poor outcomes, such as complications during pregnancy, giving birth and during the postnatal period. In part, this results from disproportionately poor access to care provision right across

the maternal continuum of care to young mothers. This paper analyses whether the Bangladeshi Maternal Health Voucher Scheme helps to reduce this age based inequality. The analysis uses the novel approach of finding clusters of women based on their utilisation patterns across the maternal continuum of care. Cluster analysis is used to identify distinct groupings and allocate women to these groups. Clusters are then related to adolescent status and voucher receipts via multinomial logistic regression controlling for background characteristics. Four clusters of care utilisation are identified. The High Utilisation cluster is characterised by high use of ANC, delivering in a facility, having an SBA at delivery and receiving Postnatal Care within 2 days of the birth. Other clusters are High utilisation except for ANC, Recommended ANC tailing off and Lowest overall utilisation. Adolescent women are least likely to be members of the high overall utilisation cluster and most likely to be members of the Lowest Overall Utilisation. This effect is not eliminated by voucher receipt. Adolescent women have lower levels of care utilisation than both young mothers and older mothers, despite higher levels of risk during pregnancy. Voucher receipt, although it increases the overall level of care utilisation, is not sufficient to raise utilisation among adolescent women to parity with older women.

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The effects of sewerage diffusion on infant and under-five mortality in Peru
Antonella Bancalari, London School of Economics

Although it is well known that sewerage infrastructure played an important role in the decrease of early-life mortality rates in high-income countries during the past centuries, little is known about the effectiveness of a sewerage diffusion initiative in a low capacity, middle-income country government. This paper studies the effect of a nation-wide sewerage diffusion government campaign that took place in Peru between 2005 and 2015 on infant and under five mortality rates. I use original administrative data sources and rely on an instrumental variable approach exploiting the fact that gradient affects a district's technical suitability for sewerage. I find that in districts that experienced greater sewerage diffusion, infant and under-five mortality rates increased, though the impact on IMR is larger in magnitude. These unintended mortality consequences seem to be linked to the construction works required to install sewerage lines. Preliminary results suggest that these findings are driven by deaths from infectious and environmental diseases. Any survival gains from sewerage diffusion are apparently netted-out by these deaths. Infant mortality rates started declining only three years after public sewers were available, perhaps because environmental quality improved and sewerage adoption increased over time. The results further suggest that access to piped-water may alleviate these adverse mortality impacts of sewerage diffusion. Taken together, my results suggest a failure of the government's urban infrastructure planning and highlight the need for better environmental assessments of sanitation infrastructure projects.

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Administrative data at the core of international migration statistics: The story so far
Tanita Barnett, Office for National Statistics

The Migration Statistics Division, in close collaboration with the Integrated Data Development team at the Office for National Statistics (ONS), have been focused on interpreting and understanding the use of administrative data to inform international migration related policy using migration statistics. Migration statistics have featured heavily in political discussions over recent years, and ONS have a responsibility to ensure these are fit for purpose. By introducing administrative data into migration statistics, ONS can start to understand the gaps, similarities and differences with the traditional survey and estimation methodology currently used. Figures from the 2016 Annual Population Survey on migrants in the labour market has been updated to reflect the trends in 2017. Where possible, direct comparisons have been made to administrative sources ONS have access to, which compares the two methods of data collection at a national level. There is now a motivation to truly understand how administrative data can make an impact on migration statistics, which is outlined in the impact of international migrants on the UK economy work that ONS are presenting on and driving

forward. Lastly, a brief overview is provided which encapsulates ONS' journey into putting administrative data at the core of migration statistics and proposed plans for the future.

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Understanding the trends in age at first marriage and its associated factors in Malawi: Evidence from Malawi Demographic and Health Survey data, 1992-2016

Ololade Baruwa, University of Witwatersrand

Objectives; the aim of the present study is to examine the trend of age at first marriage and effect of selected socio-demographic factors on changes in the age at first marriage in Malawi. Method; the data for this study was from Malawi Demographic and Health Survey data of 1992, 2000, 2004-05, 2010, and 2015 survey. Women who were never married were right censored as of the date of survey. Kaplan Meier survival function was used to estimate the probabilities of first marriage not occurring until certain ages of women while Cox proportional hazard regression was used to model the timing of first birth at 95% confidence interval. Results; the results showed that the median age at first marriage remained at 17yrs between the periods of 1992-2015. The trends in age at first marriage followed the same general pattern across age groups, place of education, education, and region and employment status. The hazard of early marriage is statistically significantly lower among women living in rural areas, higher among women with primary, secondary and higher education, and lower among women who are working. Conclusion; this study showed that there are little or no differences in median age at first marriage across the selected socio-demographic characteristics of women in Malawi and also, age at first marriage is affected by place of residence, education and working status. Socio-cultural norms of child marriage should be aborted, while education on the consequences of child marriage and early child bearing should be promoted.

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What about the men? Men and women accessing services due to domestic violence needs

Janet Bowstead, Royal Holloway, University of London

Local service provision on domestic violence in the UK was originally developed by local groups, responding to the needs of women and children. Services have more recently received some mainstream funding and political and policy support, but are still not a statutory requirement in a local area. They are therefore particularly vulnerable to local budget cuts. From 2003-11 there was a national (England) Supporting People funding programme for housing related support services, addressing a wide range of needs, including for those at risk of domestic violence. The programme data, which have been de-identified and archived, provide demographic and location data for individuals accessing services either primarily because of domestic violence, or where domestic violence is amongst their support needs. Analysis of two years' data (over 60,000 cases), including both men and women at risk of domestic violence, provides evidence of the different needs and patterns of help-seeking for men and women. Findings include that men make up 3.2% of those at risk of domestic violence, and are more likely to have that as a secondary need to mental health problems or homelessness. Men are more likely to access services without relocating or in their local authority, whereas women are more likely to relocate and travel longer distances; and to be accompanied by children. Such differences can be used to inform local policy decisions and service planning; as well as make the case for the need to re-establish national service planning and monitoring to enable more informed and effective service decisions.

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EU QUERO (I want): Strengthening the maternal and child healthcare system over the first 1000 days in Brazil

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The overarching aim of EU QUERO ('I want' in Portuguese) is to increase the quality of and access to maternal, newborn, and child health (MNCH) services available in the first 1000 days of life from conception in two contrasting states in Brazil, Maranhão and Goiás, through community engagement and social accountability. The project will deliver its objective by developing and conducting a feasibility of a complex social accountability intervention to monitor the quality of delivery of health programmes throughout four phases of the 1000 days: (i) pre-natal, (ii) birth, (iii) postpartum and newborn, and (iv) child healthcare up to two years of age. EU QUERO addresses the following research question: What is the feasibility of a full trial of a complex community-based accountability and rights-based education intervention to strengthen the quality of MNCH services and improve health outcomes in Maranhão and Goiás states? The aim of this paper is to present the preliminary results of the first stage of the project, to develop scorecards for each basic health unit within the two states on a range of dimensions. These scorecards form the baseline for the implementation of the feasibility intervention of rights based education. Maps of the results of these preliminary scorecards will be shown in order to highlight areas with good or poor care. The next steps of the project will be highlighted alongside policy recommendations that will be developed from the scorecards.

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Love and conflicts at distance: Non-coresidential unions and household formation

Alexandra-Andreea Cirtel, A. Berrington, , B. Perelli-Harris; University of Southampton

This paper investigates the transition to cohabitation by taking into consideration a range of socio-psychological and sexuality variables. Using data from the Panel Analysis of Intimate Relationships and Family Dynamics (pairfam), the authors investigate the role of conflicts and conflict behaviour in union stability. Aspects rarely studied by demographers, such as sexual competence and sexual intimacy are taken into consideration as well. Event history analysis is going to be applied to answer to the research questions.

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An introduction to the Scottish Longitudinal Study (SLS)

Tom Clemens, L. Williamson, C. Dibben; National Records of Scotland

This poster will introduce the SLS and the datasets, the application process for researchers interested in using the SLS and outline research examples. The Longitudinal Studies Centre – Scotland (LSCS) was established in 2001 and hosts the Scottish Longitudinal Study (SLS). This study links together routinely collected administrative data for a 5.3% representative sample of the Scottish population (about 270,000 people). It currently includes a wealth of information from the censuses starting in 1991, vital events registrations (births, deaths and marriages), Scottish education data, and with appropriate permissions can be linked to NHS health data including cancer registry and hospital admission data. The size and scope of the SLS make it an unparalleled resource in Scotland for analysing a range of socio-economic, demographic and health questions. Additionally, the longitudinal nature of the SLS is particularly valuable, allowing an exploration of causality in a way that cross-sectional data collected at a single point in time does not. In this way, the SLS can provide insights into the health and social status of the Scottish population and, crucially, how it changes over time. The SLS is constantly evolving and in the next few years we have plans for a number of important enhancements including linkages to justice data, Scottish school leavers' destination survey, historical birth cohort linkages and beyond 2019 we will be investigating the possibility of linking to further and higher education data, information on educational attainment in private schools, social security data, the Scottish Diabetes Register data and care home data. We welcome the opportunity to discuss new project ideas and would encourage interested users to come and find us at our poster or email us.

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Hard to Count index for the 2021 Census
Ercilia Dini, Office for National Statistics

The 2021 Census, unlike previous censuses, will undertake the collection using an online questionnaire as the primary response mode. This change in the basic collection mode means that non-response patterns observed in certain population groups in the 2001 and 2011 censuses may be different in the 2021 Census. In addition to the population groups that we know do not respond to a census there will be groups of people who are digitally excluded as these people will require digital assistance or a way to respond to the census that may not be via the primary mode. The ONS is carrying out research to develop a Hard-to-Count (HtC) index to identify sub-populations/geographical areas at risk of census non-response. This will be used as a tool in the 2021 Census to support pre-planning of field follow-up and in the design of the Census Coverage Survey and will be key to achieving high quality census estimates. The HtC index is composed of two domains: the digital domain and the willingness to self-respond domain. The digital domain is built as an indicator to measure infra-structures available which enable households to respond to an online census. The willingness domain is constructed using an area level (Lower Super Output) model that predicts non-response by day 10 after census day. The covariates used to build the model parameters are from previous census and administrative data sources. The presentation will include the methodology used to develop the HtC index domains, preliminary results obtained and recommendations for further research.

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The association between education and prevalence of type two diabetes: A Saudi population-based study using the National Health Interview Survey
Abrar Hasan Fallatah, University of Southampton

Background: In recent years, Saudi Arabia has faced rapid socioeconomic development that has resulted in a high prevalence of type two diabetes (T2DM). According to the WHO, Saudi Arabia has the 7th highest prevalence of diabetes in the world and 2nd in the Middle East. This study aims, to investigate the association between education and the prevalence of T2DM; and further, to examine whether any factors mediate this relationship. Finally, the study will identify whether this relationship varies by gender. Methods: Saudi national participants (N= 4,390) from the Saudi Health Interview Survey (SHIS, 2013) were included. Logistic regression analysis used to investigate the association between education and T2DM: doctor-diagnosed and/ or (HbA1c \geq 6.5 %). This outcome classified based on glycated-Haemoglobin (HbA1c) test and self-reported diagnosed. Six models used for investigate this associations: Model-1: univariate; Model-2: demographic factors; Model-3: administrative region; Model-4: socioeconomic factors; Model-5: lifestyle factors. The final model adds an education-gender interaction. Results: The weighted-prevalence was 14.9%. In the univariate model, the association between education and T2DM was significant. In comparison to those who had a university-degree or above, the odds of an individual who could not read or write having diabetes was 4.05 higher (95% CI: 2.92 to 5.62). The corresponding odds ratio for those with no formal-education was 2.37 (95% CI: 1.61, 3.49). However, this relationship was insignificant after adjustment for demographic factors and region. In models 4 and 5, this association was significant in different education groups. In the final model, the interactions between education levels with gender were insignificant. Conclusion: There is no significant association between education and the prevalence of T2DM after controlling for other factors. These results can be highlighted that public health intervention strategies need to improve lifestyle for all socio-economic groups

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Geographical hotspots of ethnic and immigrant labour market outcomes

Sarah Garlick, University of Liverpool

This poster will present initial findings from 'Geographical hotspots of ethnic and immigrant labour market outcomes', a theme of my ESRC North West Doctoral Training Centre-funded PhD research ('Geographic inequalities in ethnic minority and immigrant labour market experiences in England and Wales'). The theme aims to explore, using Census data for England and Wales, whether the main labour market outcomes (employee, self-employed and unemployed) vary for different socio-demographic groups (for example for people from different ethnic groups and people born in or outside of the UK). The inclusion of area-level information in Census microdata offers an opportunity to explore whether where someone lives contributes to an explanation of their labour market outcome and therefore whether multilevel modelling would be appropriate. In addition to research into labour market outcomes for individuals, spatial autocorrelation will be applied to aggregate Census data for small areas, including the Middle Super Output Area statistical geography. The aim will be to assess whether there are distinct geographic differences in labour market outcomes and whether local areas share similar labour market characteristics. Spatial analysis of this kind provides an opportunity for quantitative demographic analysis to be presented in a visual format, which could enable it to reach a wider audience.

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The effect of temperature shocks on health at birth: evidence from Hungary

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We analyze the effect of temperature during the pregnancy on the outcomes of live births in Hungary. Our main research question is whether temperature shocks (defined as the occurrence of extremely hot/cold days) in utero influence health at birth. In addition, we try to answer the question: how do the estimated effects differ between high- and low-status families? Birth registry data of more than 1 million newborns between 2000 and 2014 are matched with daily temperature data. Matching is based on the place of residence of the mother at the time of the delivery. Birth registry data that covers the entire population come from the Hungarian Central Statistical Office, whereas city-level weather data come from the European Climate Assessment & Dataset project. Our dependent variables are indicators of health at birth (e.g. low birth weight, pre-term birth). These indicators are regressed on the weather conditions during the pregnancy. Although variation in weather over time supposed to be exogenous, we are able to control for important socio-demographic factors that might influence newborns' health. The effects of temperature are identified from interannual variation in weather conditions after adjustment for time-invariant seasonal and regional effects, common shocks and time trend (by seasonal, time and location fixed effects). Our first results suggest that extremely hot days during pregnancy increase the probability of low birth weight and the probability of pre-term birth. In addition, exposure to extremely hot weather during the pregnancy seems to have a stronger effect on newborns of low educated women.

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Son Preference UK: Mapping stakeholders

James Hasset, S. Dubuc, B. Kuang; University of Reading

Demographic evidence of son preference and/or prenatal sex-selection against females are of much relevance to a variety of policy makers and stakeholders. The proposed poster presents a summary of the findings from a stakeholder mapping activity as part of a larger multi-disciplinary ESRC project on son preference and prenatal sex-selection in the UK. The poster presents the variety of stakeholders, identifying and analysing stakeholders' perspectives and their relationships to other stakeholders. How demographic evidence is linked to their specific objectives will be analysed. The work is in progress and will be completed by end of July 2018.

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Examining spatial effects in UK elections using Bayesian Models

J. Hilton, University of Southampton

The result of the 2017 election produced somewhat different results than had been predicted by polling companies, with the notable exception of the work done by Ben Lauderdale and Yougov (Lauderdale et al. 2017). Patterns of voting across age and space shifted somewhat from previous elections, with Labour performing strongly in metropolitan areas, but less well in more traditional working-class areas in the north. This paper looks to examine spatial patterns in the results of the recent British election using Bayesian conditional auto-regressive modelling. Integrated Nested Laplace Approximations are used to fit Besag-type models to predict counts of votes for the main parties, considering the registered electorate as the relevant exposure to risk (Blangiardo and Cameletti 2015).

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Field interviewer effects on the quality of malaria diagnosis in Sub-Saharan Africa

Ngiana Kandala, M. Amos, S. Pallikadavath; University of Portsmouth

Malaria is a life threatening disease affecting 216 million people in 91 countries and remains endemic in 106 countries. Sub-Saharan Africa has a disproportionate high share of the global malaria burden. Yet though parasite-based diagnosis is increasing, most suspected cases of malaria are still not properly diagnosed. Of particular concern is variability in the quality of diagnosis associated with the team performing diagnosis. This analysis examines variability in the quality of malaria diagnoses using Demographic and Health survey data from the sub Saharan Africa region. We perform sensitivity/specificity analysis and examine the incidence of false positive/negative results. We then use multilevel random intercept logistic regression models to evaluate variability in the accuracy in test administration by clustering individual respondents within the interviewing team. Variation partition coefficients are then calculated to examine the proportion of variation in the rate of false diagnoses to examine the proportion of variation attributable to interviewer teams. Initial results indicate that around 47.2% of variation in the false positive rate is attributable to interviewer level effects, and this is robust to the introduction of controls (39.8%). A similarly high proportion of variation for false negatives is attributable to interviewer level effects: 52.9% which attenuates to 44.2% in the presence of controls. Such large variation in the consistency of the diagnostic test procedure attributable to interviewing teams is concerning and should be addressed during training for field test procedures.

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Gender gap, intra-household bargaining and sex-selective abortion in Albania

Keiti Kondi, Universite Catholique de Louvain

Among European countries Albania has by far the highest sex ratio at birth with 1.12 boys per girls, compared to the European average of 1.058. Considering this imbalance, the aim of this poster is to analyze a mechanism that measures the sensitivity between sex ratios, potential gender gap measures and investment in children. We focus on the reasons behind parent's choice for the sex of their children by considering different preferences for each of them. We try to solve the problematic of sex selective abortion by developing a minimalistic model which incorporates different utilities for boys and girls, the bargaining between family members and the decision about abortion dependant on its cost. This cost affects decisions on the composition of the family. We calibrate the model using data of the Demographic and Health Survey dataset on Albania for the year 2008. Furthermore we find for what values of the gender gap and investment in children we can get normal values of the sex ratio. To conclude we propose different policies that can be associated to the decline of the sex ratio disparity.

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Evaluation of population development in Czechia at the municipal level in the period 1992-2015 using the Webb diagram

Jana Krestanova, Charles University

The Webb diagram is a graphic method that can be used to compare the contribution of natural change and net migration to overall population growth or decline. Webb's typology, based on the links between increases and decreases, includes eight types of population change. The aim of the poster is to introduce the Webb diagram method and to evaluate the dynamics of population development in Czechia, both at the level of whole and small regional units (regions, municipalities) in the period 1992-2015 (divided into four five-year periods for the elimination of random fluctuations in demographically less numerous units). In the first period of the level of Czechia as a whole, the total population was decreasing, which was mainly determined by natural decrease. In the following three periods the total population was increasing. While in the period 2001-2005 the increase was caused by a positive level of a migration rate which exceeded natural decrease, in the periods 2006-2010 and 2011-2015 population growth was resulted by a positive natural change. However, at the level of lower regional units the development of natural and mechanical change is more varied.

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Fighting the practice of Female Genital Mutilation in the UK

Dominika Kumor, Office for National Statistics

The issue of Female Genital Mutilation (FGM), and the efforts undertaken to eradicate the harmful and dangerous procedure, have never been more present on the international agenda. Not only the African and Asian countries with history of FGM prevalence, but also Western countries hosting large diasporas from FGM practicing countries such as the United Kingdom, face a distinctive set of challenges to successfully tackle the complex problem. The project presents an analysis of data from UK Census 2011 on female Somali diaspora in the UK, enhanced by the inclusion of available administrative data on Somali female asylum seekers in 2011-2015. Moreover, mortality analysis was applied to the combined groups to obtain a more accurate population estimate and FGM risk differentiation. While the results indicate a small increase in overall population size, it also reveals, for the first time, the number of most vulnerable Somali women and girls remaining unaccounted for by official statistics and the support system for the discontinuation of FGM. Using Mackie's social convention theory (1996), and parameters outlining how migration influences the FGM practice as proposed by Johnsdotter (2004), the context of the Somali diaspora in the UK is discussed. The analysis suggests that the dynamic nature of FGM practice outside the country of origin, and its socio-cultural logic, should be at the heart of successful efforts to eliminate FGM in the UK and, despite the progress made, there may be significant, often structural barriers experienced by the Somali diaspora that should be urgently addressed.

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Charting the course of demographic change in England & Wales: The ONS Longitudinal Study

Edward Morgan, R. Jathoonia; Office for National Statistics

The ONS Longitudinal Study (LS) contains linked census and life event data for 1% of the population of England and Wales. Information is linked from five successive censuses (1971 to 2011) and life events data, including birth, death and cancer registrations. The LS contains information on households, economic activity, qualifications and living arrangements at each Census supporting studies on the life course. Questions asked for the first time in 2011 included: intention to stay, passports held, visitors, second address, main language and civil partnerships. At BSPS 2018, we highlight the great research potential of the ONS LS to chart the course of demographic change in England and Wales. The number of possible research topics is large and members of the ONS LS Team will be on hand at the conference to discuss possible projects. Numerous study designs are available to suit the interests and objectives of research teams. Furthermore, we highlight two examples of recent research carried out using LS data. One of which examines how the employment status of women aged 16-49 in 2001 and 26-59 in 2011 changed over the period, according to whether they had children or not

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Impact of migration on UK industries

Matthew Morrison, C. Hayter; Office for National Statistics

The Office for National Statistics' (ONS) Analytical Impact Team are exploring the impact that migration has on UK industries. The effect migration has on the labour market in the UK is uneven. Some industries, such as construction and agriculture, are more reliant on overseas workers. In addition, some regions, such as London and the South East, have higher migrant populations so would be more sensitive to changes in the composition of the labour market. Migrants tend to be younger than UK workers and more likely to be overqualified for their jobs. However, between different nationalities there are differences in the type of work they undertake and other factors such as self-employment. At BPS 2018, we will be presenting the recent research carried out by our team exploring the impact of migration on both the Agricultural and Construction industry. This will include presenting what the available data can tell us about migrants in the industry and highlights the difficulties in capturing seasonal workers

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They know everything' : Exploring lay- and mid- level health workers' attitudes to and roles in abortion-related information and care-provision in Karnataka, India

Rishita Nandagiri, London School of Economics

Safe abortion access is impeded by multiple barriers, including legal status of abortion, availability of trained providers, and degree of abortion knowledge. Even where abortion is legally available, it may remain inaccessible due to lack of accurate abortion information and knowledge, lack of trained providers, especially in rural areas, and limiting provision of services to physicians or specialists. The paucity of trained/available providers may lead to delays in access to care or abortions taking place under unsafe conditions. Task-sharing/task-shifting enables lay and mid-level healthcare professionals such as nurses, midwives, pharmacists, and community health workers (CHWs) in healthcare service provision. In India, female CHWs and pharmacists act as the key interface between public health systems and rural communities. Equipped with pregnancy testing kits, they are present for women's first acknowledgement or confirmation of pregnancy. As trusted confidants and sources of information, women turn to CHWs for advice and support in their abortion decision-making. Yet, their attitudes to abortion, and current and potential roles in abortion access remain underexplored. A nested mixed-methods (questionnaires=112, in-depth interviews=21) study design was utilised to collect data over eight months in rural villages in two districts in Karnataka, India. Preliminary findings suggest that CHWs display some stigmatising attitudes and lack knowledge of current laws; and influence abortion trajectories by providing advice or withholding information. Their roles and attitudes are shaped by and function within social, political, and cultural contexts. Task-sharing efforts must account for social, political, and cultural relations that inform CHWs negotiations, subversions, & service provision.

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Meeting Census 2021 user needs: the development of an online flexible dissemination system

Su Oinn, Office for National Statistics

The Office for National Statistics is putting user needs at the heart of preparations for the dissemination of the 2021 Census. After a review of user feedback regarding their 2011 Census outputs experience, we have identified our strategic aims to improve the timeliness, accessibility and flexibility of the data delivery for the 2021 Census. An integrated ONS team from Census and Methodology are working in collaboration on an innovative and agile solution to develop an online flexible dissemination system for 2021 Census outputs. This system will use dynamic Statistical Disclosure Control methods to enable users to query and define their own 2021 Census outputs. Preliminary results include the development of a prototype system based on a 60 million record artificial database that contains personal and household variables at 7 different levels of geography. This poster will outline how we aim to improve on the dissemination of 2011 Census outputs and successfully meet user needs for 2021, the dynamic Statistical Disclosure Control methodology used, its benefits and trade-offs and how we are involving users on the development of the flexible dissemination system.

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Spatial variations in mortality due to heat waves in Andalusia, Southern Spain

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The increase in mean annual temperatures remains a robust trend globally. This study provides a comprehensive analytical insight on the effects of extreme summer temperatures on human health and survival on mid- and short-term time scales. Individual demographic and socioeconomic data were derived from the Longitudinal Statistics on Survival and Longevity of Andalusia and aggregated to cells with resolution of 20 sq. km. We also gathered relevant meteorological measurements for 2000-2016 and performed time-space data mining to capture local patterns of heat wave phenomenon across Andalusia. Specific attention was paid to temperature fluctuations with particular focus on large urban areas. We explored causal relationship between the cumulative exposures and mortality by age, sex and educational attainment level across various locations at a daily time-scale. The results of non-spatial modelling revealed a clear excess mortality time-lag with the duration of up to 14 days after the stress event, with an over 2-fold increase in mortality in the lower educated elderly group, with respect to days without risk alert. To model the dependences across grid cells we applied a Conditional Autoregression (convolution) model within a wider Integrated Nested Laplace Approximation approach which showed that spatial confounding between the spatially structured (random) effects and fixed-effect covariates is affecting the fixed effects estimates, however these differences are minimal. The application of scenarios varying in risk magnitude to the areas identified as “hot spots” for long-term heat stress suggests a potential change of mortality pattern in the area.

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Does healthcare voucher provision improve utilization in the continuum of maternal and newborn care for poor pregnant women?: Experience from a quasi-experimental study

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Background: Since 2007, Bangladesh has implemented a voucher scheme to reducing access barriers to maternal care, particularly for poorer pregnant women. However, the effect of the scheme on the continuum of maternal care is yet to be explored. With the growing attention of development organizations around the world on ensuring continuum of care to improve maternal, newborn and child health, the current paper analyses the effect of vouchers on the entirety of maternal continuum of care. Methods: 3,593 women with children aged 0-23 months in Chittagong and Sylhet divisions of Bangladesh were interviewed. Cluster analysis was used based on utilisation across the continuum of care. Clusters were regressed on voucher receipt to identify underlying relationship between voucher receipt and care utilization after controlling for other variables. Results: We identified 4 clusters of women based on utilisation pattern. 20.3% women belonged to the highest-utilisation cluster maintaining the complete continuum of care, whereas 39.3% belonged to the lowest-utilisation cluster with intermittent care. For poor women, the probability of voucher recipients belonging to the highest-utilization group was much higher compared to that of the non-voucher poor women (36.1% vs. 7.1%). Conclusion: Programmatic investments in many developing countries have been historically directed towards financing individual service components. In recent years it has been realized that access to quality healthcare services in pregnancy, childbirth and postnatal period may yield multiple returns on investment. A coherent continuum based approach to understanding maternal care seeking behaviour can be anticipated to have substantial policy implications for programme design

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Male experiences of sexual assault: Social, emotional and sexual consequences

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Sexual assault of men is a recent field of research in the medical, psychological and sociological literature. Much research have focused on documenting the prevalence of male sexual assault, while trying to understand how men make sense of such experiences has received significantly less attention. In fact, myths suggest that men who have experienced sexual assault are relatively unharmed or unaffected by the violation. This phenomenological study aims to understand the lived experiences of men sexually assaulted in childhood or in adulthood and focuses on what life is like for them in intimate relationships. The main research question addressed in the study concerns how a history of sexual assault affect the psychosocial well-being and sexual and reproductive health of male victims, placing emphasis on the long-term emotional, sexual and interpersonal consequences of the sexual assault. The analysis is based on multiple in-depth interviews with 10 sexually assaulted male adults. Other forms of data include diaries, notes and letters written by the participants, reports from authorities and photos, articles, books, poetry, music and other forms of art created by the participants in response to their experiences of sexual assault. Findings suggest that the impact of sexual assault on men's perceived well-being may differ, but are strongly related to lasting emotional, sexual and/or social consequences, which affect their ability to form and maintain intimate relationships in various ways. The social responses and emotional support from partners, family and friends, are particularly important for the victims psychosocial well-being.

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Ethnic diversity in mortality: case of Latvia at the beginning of 21 century

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Background: Latvia has one of the most ethnically and culturally diverse population in Europe. The latest data from the Central Statistical Bureau of Latvia (2017) shows that 62% (~1,2 millions) of the total population is made up by Latvians, whereas the rest population are ethnic minorities, with the statistically largest groups being Russians, Belarusians, Ukrainian, Poles and others. Ethnic background as a variable has always played an important role in population statistics in sociological and demographic studies in Latvia, which have been primarily analysed with such variables as citizenship, place of birth and language use. Aim and data: Aim of the study is to analyse the ethnic differences in mortality in Latvia at the beginning of the 21st century. Based on the data from the Central Statistical Bureau of Latvia linked to the last Population and Housing Censuses in 2000 and 2011, life expectancy and mortality rates by ethnicity, gender and death causes are calculated. The two numerically largest ethnic groups, Latvians and Russians, are analysed. Also a brief overview about the ethnic composition of the population, geographical distribution of ethnic groups (place of residence), ethnically mixed marriages and other demographic variables is presented. Preliminary results: Ethnic differentiation in mortality is affected mostly by heterogeneity within ethnic groups. Ethnic differences in mortality still exist, but they have diminished in a long term perspective.

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'Counting us will reduce us'; Implications of Gambian cultural elements for data collection

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Introduction: Knowledge of the cultural elements in a community can aid in improving data collection and quality. This study describes the implications of Gambian cultural beliefs, attitudes and discourse on pregnancy, births and child mortality data collection. Methods: 20 in-depth interviews, 3 key informant interviews, observation and a focus group discussion were conducted in two rural health and demographic surveillance systems covering 15% of the population in The Gambia. Key findings: We found as expected that sensitive questions related to pregnancy and its outcomes were best asked by women. The Fula in particular, did not like to be counted as counting was linked to death, but this could be circumvented by referring to inanimate objects, for example asking 'how many sticks' to represent people and by enumerating singly as opposed to summarizing totals which had a threatening connotation. Asking about siblings proved

difficult among the Fula and Serahule communities and women were hesitant to talk about menstruation. Probing using two sets of questions, enhancing rapport through empathy, adherence to the dress code and cultural norms, shared experience of menstruation and pregnancy and ensuring confidentiality yielded more information even on adverse pregnancy outcomes. Potential applications: For better data accuracy, the following can be considered. Formative research when planning projects; employing trained and skilled women who are adherent to social norms to ask reproductive-related questions; use of symbolic language for enumeration purposes; full birth/pregnancy histories. As sibling histories are a modality for maternal mortality estimation, further sensitive nuanced qualitative inquiry are needed.

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Designing and testing a marital status question for the 2021 Census ***James Robards, E. Sharland, A. Sharfman; Office for National Statistics***

As part of the 2021 Census topic consultation in 2015, the Office for National Statistics (ONS) made a commitment to review the marital status question in light of the Marriages (Same Sex couples) Act 2013. A user need for separate population estimates by marital status for same-sex couples was identified. As a starting point, the 2011 Census question on marital status was reviewed and redesigned to meet user need. To test the acceptability of the question, testing took place in autumn 2017 with an aim to assess overall acceptability and acceptability by different socio-demographic groups. This testing indicated that the redesigned question was acceptable and could be included in further testing. Following the acceptability testing, additional stakeholder feedback on the question design was received and minor changes to the next iteration were completed. The second phase of testing has been a series of cognitive interviews with an aim to assess understanding of the question. Cognitive interviews were conducted between January and March 2018 across different participant characteristics. Results of the cognitive testing are due in spring 2018 and this phase of the testing will be followed by further quantitative testing to assess the redesigned question. This poster will outline research and development work informing a question design for 2021 and outline some of the key considerations in this process.

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Why have improvements in life expectancy in the UK slowed? ***Sophie Sanders, Office for National Statistics***

After decades of steadily improving life expectancy in the UK, increases in how long we can expect to live in recent years have noticeably slowed. As this stalling in mortality improvements has prolonged, there is growing evidence this may be due to medium or long term influences rather than a short term blip in the trend. Life expectancy is a powerful health indicator which drives important policies that impact everyone in everyday life such as setting the State Pension age. It is therefore becoming increasingly important to understand what might be driving this change in trend. We know there have been longstanding differences in life expectancy in different parts of the UK. England, Wales, Scotland and Northern Ireland have all seen recent slowdowns in life expectancy improvements but has this been occurring to the same extent and for the same ages? Through detailed analysis of age standardised and age specific mortality rates and period life expectancies we are investigating how the slowing in mortality improvements varies for different ages and countries of the UK. Due to interactions between many health, environmental, lifestyle and economic factors all affecting someone's life expectancy, we cannot say for sure what is directly causing these changes. However, our research will examine a broad range of data to uncover what other recent or emerging changes in trends have occurred that might be contributing. This presentation will discuss our findings and summarise ONS, position on why improvements in life expectancy in the UK have slowed.

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Child morbidity and health in historic London: Evidence from the Foundling Hospital, 1892-1919

Eric Schneider, London School of Economics

This paper employs a recently constructed cohort study, based on the records of the London Foundling Hospital 1892-1919 (Arthi and Schneider 2017), to study historical child morbidity from infancy to age 15. The London Foundling Hospital was an orphanage that admitted the first-born sons and daughters of unmarried mothers trying to escape the stigma of illegitimacy. The hospital cared for the children it admitted from infancy until the age of 15 or 16. The Foundling Hospital records are particularly rich because they kept careful medical records for several stages in the children's lives including information about anthropometric outcomes, nutrition and morbidity. They recorded morbidity for three periods of each child's life: the diseases present on admission to the hospital; the diseases the children were treated for while they were fostered in the countryside between infancy and age five; and the diseases the children were treated for while on the main Foundling Hospital site in central London between the ages of five and 15 or 16. For the final period, we have also linked the children's medical records to the weekly infirmary reports which contain the dates each child entered and left the infirmary and the diseases they were treated for in the infirmary. Thus, we are able to calculate sickness duration and prevalence. The paper seeks to answer two questions: 1) what were the patterns of child morbidity across age for Foundling children? and 2) how is morbidity associated with other proxies of health at different stages of development?

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Surviving the 19th century – a sample of ONS Longitudinal Study members who were born before 1901

Nicola Shelton, University College London

The ONS Longitudinal Study includes individual and household level microdata for approximately 1% sample of the population of England and Wales. There has been longitudinal follow-up since 1971 linking all census data. 43,610 individuals born prior to 1901 were alive and enumerated in at least one decennial England and Wales census between 1971 and 2001 and included in the LS, equating to over 4 million people in England and Wales. The causes of death of the LS members are recorded and linked to their census data. For adults born in the 19th century who survived to 1971 the main underlying cause of death was IHD with 24% of deaths from this cause. Among this group age adjusted survival to 1981 using logistic regression those currently or formerly employed in skilled manual (OR=0.55) partly skilled (OR=0.67) and unskilled (OR=0.55) had lower odds compared with professional occupations. For more information on the Longitudinal Study see ww.ucl.ac.uk/Celsius

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Complex networks of population density

Roko Mišetić, Toni Ćosić, Hrvoje Štefančić; Catholic University of Croatia

In the last two decades complex networks have been shown to provide a very useful framework for understanding and analysis of systems in various fields of society, science and technology. We present a novel approach based on complex network theory aimed at understanding and description of spatial patterns of population density. For a given country with a chosen level of territorial division a series of complex networks is produced depending on the lower threshold of population density. Topological properties of the obtained networks are analyzed and their temporal evolution is studied. Two examples are presented in a more detail: Great Britain at the NUTS3 territorial level (using the data from Eurostat databases) and Croatia at the municipal level (using the data from the Croatian Bureau of Statistics). Practical applications

of the obtained networks in spatial planning are discussed. Ongoing work on the application of the developed network formalism at the European level is outlined.

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Global trends in lifespan differential

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Average lifespan in virtually all countries nowadays is an indicator with a growing tendency. Although such a tendency can be easily interpreted in terms of causes such as global advances in standard of living, availability of healthcare and improved prevention of unhealthy lifestyles, an interesting question is if male and female populations in a particular country follow the same trends. A convenient quantity for the analysis of differences in average lifespan trends is a difference of average lifespan between females and males, called the lifespan differential. Using the data on mortality patterns from The Human Mortality Database (www.mortality.org), we present trends in lifespan differential over several decades for a number of countries worldwide (UK and Netherlands included) and analyze them for common patterns. Examples of interplay between integrative and disintegrative political processes and trends in lifespan differential are presented. A formula connecting lifespan differential of a population with lifespan differentials of its subpopulations is introduced. This formula is applied to understanding of considerable growth of lifespan differential in Israel in period from 1990 to 2000 in terms of lifespan differential of immigrant population and lifespan differential in Israel prior this period.

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The power of context: An analysis of the data process in measuring women's empowerment in Ghana

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How is women's empowerment represented by GDHS data? How are questions on women's empowerment perceived by female respondents? Are questions on women's empowerment relevant to women in Ghana? Methods: A multi-method strategy to generate qualitative evidence that was analysed using a thematic, theoretical approach. 1) A critical review of the indicators used in GDHS to measure women's empowerment; 2) an analysis of the chain of GDHS funding and reporting; 3) 27 in-depth interviews with data collectors from the Ghana Statistical Service, with the inclusion criteria that they must have worked on at least the most recent DHS survey (2014), and data users from women-focused organisations, including the government Department of Gender. Results: Data on women's empowerment are used iteratively by the same agencies who fund the data, resulting in a closed chain of evidence production and consumption. Data collectors can provide insights into the quality of data collected and respondents' experiences in surveys. Data collectors can be involved in negotiating answers and defining women's empowerment with survey respondents. Data are inadequate to represent the heterogeneity and context of women's experiences in Ghana, in particular, the different lineage systems, socio-cultural norms and ethno-linguistic groups. Data users perceive data on women weak and certain measures, for example freedom of movement, to inaccurately reflect the problems limiting Ghanaian women's empowerment. These results can be applied not only at the level of data collection and survey design, but also in broader policy prioritisation amongst large funding bodies.

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Marriage in conflict: A quasi-experimental study of the effect of armed conflict on union formation

Orsola Torrisi, London School of Economics

As compared to the mortality and migration arenas, the effects of conflict on marriage have not been researched extensively. The few studies investigating conflict impacts on marital decisions widely overlook armed conflicts occurred in the ex-Soviet territories and rarely adopt a causal inference approach. This ongoing work seeks to combine unique georeferenced data on conflict events and deaths with individual and household data to examine the impact of armed conflict on entry into marriage in Azerbaijan and Tajikistan. Specifically, retrospective longitudinal data on women's marital histories and information on age at marriage are obtained from the pooled 1999, 2003 and 2007 Tajikistan Living Standard

Surveys and the 2006 Azerbaijan Demographic and Health Survey. Information on conflict intensity are obtained from the Uppsala Peace and Conflict Database Georeferenced Event Dataset (UCDP-GED) (Version 17.2 2016). Such data are used to compare, in a difference-in-difference framework, entry into marriage of conflict-affected women who were of core marriageable ages during key conflict years to women who were reasonably safe during conflict and women who are expected to have made marital decisions before or long after conflict onset and end. Conflict-affected women are identified by linking georeferenced conflict information to survey data using techniques of spatial analysis as well as using self-reported information on IDP/refugee status in Azerbaijan and data on household dwelling damage in Tajikistan to reduce measurement error. Analyses are also stratified by migration status during conflict years

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Labour market outcomes of workless young people in England and Wales Longitudinal Study
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Worklessness at early stages in the life-course may have long-term effects on health status in later life, through the accumulation of socio-economic disadvantage. This study follows a 1% sample of the England and Wales census population aged 16-24, drawn at 1971 from the ONS Longitudinal Study, and explores their economic trajectories in a 40-year follow-up period by worklessness status at baseline. Gender-specific multinomial regression was used to explore the time-lag effects of previous economic activity states in determining “current” activities, adjusted using economic activity at 16-24 years, most recent economic activity status, age, education, marital status, health status, spouse working status, presence of household member with long-term illness, parental social class at baseline, and ward-level deprivation. The results show that in a large, representative, historical sample from E&W, worklessness at the age of 16-24 was found to inform economic activity status into mid- to late-life, after adjusting for the more recent states.

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