

## ABSTRACTS

### 1-1. LIFE EXPECTANCY DURING THE GREAT DEPRESSION IN ELEVEN EUROPEAN COUNTRIES

*Tim-Allen Bruckner, Andrew Noymer and Ralph Catalano*

*EMail: tim.bruckner@uci.edu*

The global economic recession has renewed interest in knowing whether a declining economy affects population health. Understanding the extreme case of the Great Depression, the worst economic downturn in the 20th century, may inform the current debate as well as theory regarding biological and behavioral adaptations to unwanted economic change. We test the hypothesis, recently suggested in the literature, that period life expectancy at birth improved during the Great Depression. We applied time-series methods to annual period life expectancy data of the civilian population from eleven European countries: Denmark, England and Wales, Finland, France, Iceland, Italy, the Netherlands, Norway, Scotland, Sweden, and Switzerland. Our methods control for trends and other forms of autocorrelation in life expectancy that could induce spurious associations. We find that period life expectancy at birth during the Great Depression generally remains within the interval forecasted from historical values. Additional analyses using an automated, rule-based methodology also indicate no perturbation in life expectancy. During the most crippling phase of the Great Depression, period life expectancy in eleven European countries generally did not rise above expected levels.

### 1-2. LIFE EXPECTANCY AND MORTALITY IN THE THREE BALTIC COUNTRIES DURING 1990-2010: COMMONALITIES AND DIFFERENCES

*Juris Krumins and Natalja Dubkova*

*EMail: Juris.Krumins@lu.lv*

Analysis aims to give a summary of commonalities and differences in life expectancy trends, and factors behind the mortality change in the three Baltic countries – Estonia, Latvia and Lithuania, compared with Poland, Finland, Sweden, Belarus and Russia. Period of analysis include time of the fast transition to market economy during the first half of the 1990s, time of the recovery and integration into the EU (from the mid-1990s till May 2004), and period of short upswing, followed by recent recession (from 2008). Study involves analysis of mortality by sex, age, the main categories of causes of death, morbidity from tuberculosis and HIV, conventional and healthy life expectancy. Geographical differences in mortality and life expectancy, and inequalities in the face of death are analysed between population sub-groups – urban and rural, educational, ethnic. The change in life expectancy in the three Baltic countries during the last twenty years aligns to a middle trajectory between the most successful Eastern and Central European countries and those countries lagging behind. Estonia became a leader among the Baltic countries in terms of life expectancy in recent years and Lithuania is lagging behind Estonia and Latvia. Cardiovascular diseases and violent deaths are still playing considerable role in excess mortality, especially for men. Population censuses from March 2011 (Latvia and Lithuania) and December 2011 (Estonia) will clarify unaccounted population emigration stock, which will allow to specify total population numbers and its age distribution. Preliminary estimates declare smaller population numbers, and consequently higher mortality rates. New estimates of recent age-specific mortality changes will be presented.

### 1-3. THE RELATIVE IMPORTANCE OF FREQUENCY OF CONTACTS AND TIME OF EXPOSURE FOR THE SPREAD OF DIRECTLY TRANSMITTED INFECTIONS

*Alessia Melegaro, Elisabetta De Cao, Emilio Zagheni and Piero Manfredi*  
E-Mail: [alessia.melegaro@unibocconi.it](mailto:alessia.melegaro@unibocconi.it)

The impact of public health interventions against infectious diseases critically depends on how individuals mix and the social context in which this mixing occurs. The increasing availability of time use data and survey data on social contacts has improved our understanding of the relationship between social interaction and close-contact childhood infection processes. In the literature, the two data sources have been analyzed independently of each other. We propose a novel model that integrates the two independent data sources (time use data and contact surveys). We estimate age-specific mixing matrices that describe more precisely the relevant social structure that explains the spread of infections, by assuming that potentially infectious contacts are proportional to both self-reported number of social contacts and time of exposure in social activities. The mixing matrix and transmission parameters are jointly estimated using the Bayesian melding approach, to take into account the overall uncertainty. We apply our methods to Italian data on social contacts, time use, and age-specific seroprevalence of varicella and parvovirus B19. We estimate that about 23% of the time of exposure per social contact is suitable for varicella transmission, whereas only around 1% is suitable for Parvovirus B19. The Reproductive number for varicella is around 6 (95% CI: 5.8-6.7), while for B19 is around 3 (95% CI: 2.8-3.1). Social contacts involving physical touch appear to be the most relevant ones to explain the spread of respiratory infections.

### 1-4. MORTALITY DIVERGENCE ACROSS INDUSTRIALIZED COUNTRIES

*Magdalena Muszynska*  
E-Mail: [mmuszyns@sggw.uaw.pl](mailto:mmuszyns@sggw.uaw.pl)

We propose a new approach to quantify cross-country disparities in health and their convergence/divergence over calendar time. Four basic indexes of relative disproportionality are applied to single-age and -year death rates in selected countries/regions. Those are: Gini coefficient, Theil index, mean logarithmic deviation and squared coefficient of variation. The same four indicators have been used by Goesling and Firebaugh (2004) to measure differences in life-expectancy. These measures can be decomposed to indicate contribution of selected countries, age-groups, and causes of death to total disparity. In the empirical application, based on data for 30 industrialized countries of HMD for the years 1960-2007, we demonstrate that only the 1960s was characterized by divergence in health conditions as result of decreasing mortality disparities at the very young ages. In the next decades, we observe constant divergence in health conditions, with growing contribution to the total disparity of the older adult ages.

### 1-5. THE ECONOMIC BENEFITS OF REDUCING HEALTH INEQUALITIES IN ELEVEN EUROPEAN POPULATIONS

*Marc Suhrcke, Silvia Meggiolaro and Stefano Mazzucco*  
E-Mail: [M.Suhrcke@uea.ac.uk](mailto:M.Suhrcke@uea.ac.uk)

In recent years there has been growing interest in studying the socio-economic inequalities in health and the economic benefits of reducing these inequalities. In this paper we use longitudinal data from SHARE survey to estimate the age and sex specific mortality rates by socioeconomic status (SES) for 11 European countries with the aim of studying the benefits of reducing mortality in the most disadvantaged classes. We start with the accurate

description of existing inequalities by estimating the influence of the household total net worth (used as a proxy of SES) on mortality between waves using Cox survival regression models. In a second step, we construct life tables for each combination of country, sex and SES, and we estimated the number of real deaths in the population. Then, some “inequality reduction” scenarios are depicted by reducing the SES gradient for each country and providing an estimate of the hypothetical saved life-years. The same has been done using education as a proxy of SES.

## **2-1. HOUSEHOLD HEADSHIP AS A DIMENSION OF TRANSITIONS TO ADULTHOOD**

*Elwood Carlson*

*EMail: ecarlson@fsu.edu*

The third decade of life from ages 20 through 29 is the heart of the normative age range for the transition to adulthood. Trajectories related to school, jobs, marriage and household headship observed in this age range give good indications of the overall shape and speed of the entire transition process. Evidence related to this third decade of life comes from international integrated public use microdata samples (IPUMS-I) from the United States, France, Austria and Italy. In Austria and Italy the links between household headship and marriage remain strong. In France and the United States, the role of paid worker in the labor force increasingly supplants family roles as a basis for headship. But in all four studied countries, young adults also are taking up the householder role without either of these traditional institutionalized supports as prerequisites, and sometimes while still engaged in the formerly non-adult role of enrolled student. Living as head of a separate household is becoming a marker in its own right for adult status.

## **2-2. SOCIOECONOMIC STATUS AND NET FERTILITY DURING THE FERTILITY DECLINE: A MULTILEVEL-COMPARATIVE STUDY ON HISTORICAL POPULATIONS**

*Martin Dribe, J. David Hacker and Francesco Scalone*

*EMail: martin.dribe@ekh.lu.se*

Recently there has been a renewed interest in the socioeconomic aspects of reproduction during the first demographic transition. While most previous work on historical fertility decline has been macro-oriented, using aggregate data to examine economic correlates of demographic behavior at regional or national levels, much less has been done using micro data, and specifically looking at behavioral differentials among social groups. In this paper we look at the impact of socioeconomic status on net fertility (surviving children) during the fertility transition in five Northern American and European Countries (Canada, Iceland, Norway, Sweden and the USA). Micro-level census data covering the entire population in 1900 will be used. The data contain information on number of children by age, occupation of the mother and father, place of residence and household context. Coding occupations in HISCO and classifying them into a social class scheme (HISCLASS) enables us to study the impact of socioeconomic status on number of children under 5, controlling for spatial variations in social stratification.

### 2-3. ARE ALL JOINT FAMILIES THE SAME? A TOUR AROUND THE GLOBE WITH HISTORICAL AND IPUMS INTERNATIONAL DATA

*Siegfried Gruber and Mikolaj Szoltysek*

*E-Mail: Gruber@demogr.mpg.de*

Among the many issues discussed in association with the increased use of scientific samples of census microdata, the questions of who lives with whom, and for what reasons, remain central. Diversity in people's living arrangements reflects a variety of preferable or achievable residential patterns, and likely indicates differential notions regarding the way obligations to kin from outside the immediate family are structured. In the scholarly literature, nuclear-, stem-, and joint-family systems were often juxtaposed as leading to different demographic outcomes, performing welfare functions towards their members on a different basis, and coping with economic hardships in a different manner. In the history of humankind the laterally extended families have made their appearance in such diverse places as central and northern Italy, France, Finland, and Russia, and have been a common form of household organization in many areas of the Balkans, historical Belarus, as well as among Asian societies, most notably in China and India. But are joint-family societies all the same? This paper re-addresses the nature of joint-family systems in a global perspective. It combines IPUMS International data with a newly available collection of census listings from Eastern, Central, and Southeastern Europe from between the late 18th and early 20th centuries to identify several "hot-spot areas" of family complexity around the globe. To this material new measures of 'jointness' of family coresidence are applied in order to reveal various attributes of household organization and living arrangements in a comparative perspective. Preliminary results point to a non-negligible morphological variegation within societies adhering to 'joint-family rules', suggesting a necessary modification to an all-encompassing concept of the joint-family system.

### 2-4. CHANGES IN HOUSEHOLD COMPOSITION AND ITS DEMOGRAPHIC DRIVING FORCES

*Leiwen Jiang*

*E-Mail: ljiang@ucar.edu*

Projections of changes in household composition are crucial for understanding how demographic dynamics affect future social, economic and environmental development pathways given that household is often the unit of consumption of goods and services, and even a unit of production in many traditional societies. However, consistent population and household projections are underdeveloped, mainly due to the complexity of household formation/dissolution processes and data limitations. This study is designed to explore the patterns of household compositional changes, through analyzing the evolution of age-, sex- and size-specific headship rates among populations of different regions of the world, and over time. Using data from Integrated Public Use Microdata Series (IPUMS International), we compare the headship rates of 55 countries across several decades to over a century, and investigate how headship rates of a country evolve over time, and how headship rates vary across countries. This paper pays particular attention to the relationships between changes in major demographic variables and changes in headship rates. We also study the headship rates of population by different characteristics, such as rural/urban residence, education attainments. Our study reveals a general pattern of evolution of headship rates by age, sex, and size over time and across countries at different socioeconomic development levels and different stages of demographic transition. A multivariate regression model is constructed to project the changes in headship rates as the consequences of socio-demographic factors,

which will be used to inform the development of an improved and extended headship rate household model that project future household numbers and compositions by considering the impacts of demographic dynamics on household formation.

## **2-5. SINGLE PARENTHOOD AND INTERGENERATIONAL CORESIDENCE IN DEVELOPING COUNTRIES**

*Sheela Kennedy and Steven Ruggles*

*EMail: kenne503@umn.edu*

Despite widespread predictions of a decline in intergenerational co-residence in developing countries, the existing literature provides only mixed evidence for this trend. In this paper, we will examine one possible explanation for these slow and inconsistent trends in living arrangements: rising rates of single parenthood. We use data from the IPUMS-International, the world's largest archive of publicly available international census microdata archive. Our analysis will include roughly 25-30 low and middle-income countries for which at least two census years are available for analysis.

## **3-1. GENDERING OCCUPATION AND FERTILITY: A COMPARISON BETWEEN WOMEN'S AND MEN'S CHILDBEARING BEHAVIOR BY OCCUPATIONAL BRANCHES**

*Gunnar Andersson and Gerda R. Neyer*

*EMail: gunnar.andersson@sociology.su.se*

Recent research has shown remarkable differences in childbearing outcomes by women's educational field. This raises three questions: Are the results for educational fields produced by the occupations which women have over their life course? Do we find similar patterns among men, and if so, how are these patterns related to the sex segregation in occupations? Finally, how does the development of occupational branches affect childbearing behavior of women and men? Our study provides the first empirical insight into the links between occupational branches and childbearing behavior from a gender perspective; it offers the opportunity to contribute to a better theoretical understanding of the relationship between gender, employment, and fertility. We access Danish register data on childbearing histories of all women and men born since 1945 and residing in Denmark during 1981-2001. These data were linked to corresponding data on employment and occupational histories. We grouped the occupational branches into 49 occupations. All results are based on event-history analyses of the first, second and third-birth intensities of these women and men. Our study reveals that women in female dominated and highly male dominated occupations have higher childbearing risks than others. Men in female dominated branches have low fertility. The highest childbearing risks among men are found in the metal industry. Similar to previous research on the impact of educational fields on fertility, we find low fertility among women and men in libraries, the beauty-business and personal services, restaurants and media. This supports the assumption that job requirements in these occupations are not conducive to childbearing, neither for women nor for men. Childbearing risks were also lower for women occupied in expanding occupational branches, but there is no clear link between men's fertility and the development of their branch. Expanding branches comprised occupations regarded as little conducive to family life.

### **3-2. THE EFFECT OF OCCUPATIONAL GENDER COMPOSITION AND EDUCATIONAL AND OCCUPATIONAL STATUS ON FERTILITY: A COUPLE ANALYSIS**

*Katia Begall and Melinda Mills*

*EMail: k.h.begall@rug.nl*

This study connects to the emerging body of literature that relates educational and occupational characteristics to fertility. We examine the relationship of occupational characteristics such as the extent to which the work involves unpleasant conditions, requires empathy or interpersonal contact and occupational gender segregation of both partners on fertility. We also include measures of both partners' educational attainment and occupational status in our models to explore the relative influence of male and female characteristics. The data we use come from multiple waves of a repeated cross-sectional survey of the Dutch population (Family Survey of the Dutch Population 1998, 2000, 2003) that contains information about the life course of respondents and their partner with respect to relationship, fertility, educational and occupational history. We use monthly information on transitions in these domains to construct a person-period file and apply discrete event history techniques to model the transition to first and higher order births.

### **3-3. FAMILY-FRIENDLY WORKING CONDITIONS AND CHILDBEARING: A CAPABILITY APPROACH TO FERTILITY BEHAVIOUR AMONG YOUNG ADULT WOMEN IN SWEDEN**

*Susanne Fahlén*

*EMail: susanne.fahlen@sociology.su.se*

Work schedule and flexibility has become an important factor regarding work-family reconciliation and previous studies have established that workplace practices in terms of unsocial work hours, overtime and flexibility influence workers' work-family compatibility in terms of role conflict. To what extent working conditions may influence childbearing behaviour, and the timing of birth, is less studied. This study addresses the impact of family-friendly working conditions and individual resources, on young adult women's capabilities to have children in Sweden, and whether these factors have different impact on childless women's and mothers' childbearing behaviour. The conceptual framework is inspired by the Capability Approach, which can deepen our understanding of how institutional context, work-place practices, and individual life situation shape people's capabilities to be both earners and carers. Analysing data extracted from the Swedish panel survey on Family and Working Life among Young Adults in the 21st century (YAPS), the study finds that especially the transition to the second child is associated with family-friendly working condition, while the partner's family-friendly working condition is associated with the transition to the first and the second births. The analyses also reveal that family-friendly working condition is most salient for the less educated and low income childless women's transition to motherhood, and for the lowly educated mother's second birth.

### 3-4. WORK-FAMILY BALANCE POLICY AND FERTILITY IN JAPAN: THE ROLE OF FIRMS

*Masaaki Mizuochi*

*EMail: mizuochi@human.mie-u.ac.jp*

This study examines the effect of the work-family legislation of 2005, the Act on Advancement of Measures to Support Raising Next-Generation Children, on fertility in Japan. This Act forces firms to support their employees in bearing and rearing children. Therefore, in particular, it helps working women with children to continue their career, then it can reduce the cost of having children and boost childbirth. While the Act compels large firms to support their employees, it only recommends small and medium firms to do so. In consequence, it has greater impact on employees of large firms than on those of small and medium firms. Using this quasi-experimental condition, the effect of the Act on childbirth is confirmed by comparing the data before and after the policy implementation for employees in firms of various sizes. The difference-in-differences (DID) estimation results demonstrate that the Act has a significant positive effect on the probability of childbirth.

### 4-1. PARITY-DECOMPOSITION OF THE CHANGE IN THE MEAN AGE AT CHILDBEARING. LESSONS FOR THE TIMING OF THE SECOND DEMOGRAPHIC TRANSITION

*Adrien Remund*

*EMail: adrien.remund@unige.ch*

In the theory of the second demographic transition the mid-1960s were identified as a turning point in terms of family and demographic behaviors that encompass ever-decreasing fertility levels and rapid postponement. However, evidence shows that the Mean Age at Childbearing (MAC) only started increasing in the mid-1970s in Western Europe and North America. The question is then to determine whether the statement of timing per se or the measure of the MAC should be revised. In this paper I show how the change in the MAC is influenced by the parity-unbalanced decrease in fertility, and propose a decomposition of this change between the effects of pure postponement and the parity-composition of the TFR, using Kitagawa's technique. Although it has often been identified by demographers, this compositional effect has never been precisely measured. After having isolated the share of the change in the MAC directly attributable to postponement, I show that the timing of the turning point in the postponement of childbearing must be relocated to the mid-1960s for USA and Canada, just as predicted by the theory of the second demographic transition. I also show that this parity weights-adjusted measure avoids the traditional pitfalls of using the yearly change in the MAC as a measure of postponement. I finally propose an alternative to Bongaarts and Feeney's tempo-adjusted TFR' that makes use of this parity-purged measure of MAC rather than the usual MAC.

### 4-2. RECENT PATTERNS IN GROUP-SPECIFIC TOTAL FERTILITY IN FINLAND

*Jan M Hoem, Marika Jalovaara and Cornelia Muresan*

*EMail: jan.hoem@sociology.su.se*

Applying a procedure that has recently been rediscovered and extended, we have studied recent patterns in duration-based group-specific Total Fertility Rates in register data for some 110 000 Finnish women (net after extraction of 11% of the register total and elimination of ineligible records). We are able to study women in cohabitational and in marital unions, separately, and we can subdivide the latter according to the length of any pre-marital cohabitation. Total marital fertility turns out to be highest among the directly married and

it declines monotonically as the length of pre-marital cohabitation increases, though the total-fertility component of pre-marital periods partly compensates for the “loss” in total fertility computed for marital periods alone. Married women have much the higher total fertility in most groups. (The TFR is about 1.9 for the directly married and 1.1 for cohabitants.) We can also study patterns in the TFR by completed educational attainment (a time-varying covariate), and have found a watershed as women have a tertiary education, with considerably lower fertility among the highly educated, particularly for women in consensual unions. Among women under education (also time-varying), we find a relatively high fertility in both marital and non-marital unions. [We have finished a first draft of the complete paper.] [Authors: All authors have contributed equally to this paper.]

#### **4-3. FERTILITY RATES BY EDUCATIONAL ATTAINMENT IN THE EU: FIRST STEPS TOWARDS COMPARABLE DATA**

*Veronica Corsini*

*EMail: veronica.corsini@ec.europa.eu*

The aim of this paper is to present an on-going project in Eurostat to develop comparable information about fertility by educational attainment on a regular basis for all EU Member States. Eurostat can calculate the indicators using data already available and collected in the yearly demographic questionnaire. Since reference year 2007, Eurostat requests countries to annually transmit a breakdown of population and of number of live births by (mother's) single year of age and by ISCED97 broad education classes (ISCED0, 1 and 2; ISCED3 and 4; ISCED5 and 6; unknown; not applicable). The calculations of such fertility rates can be done directly for the countries providing both births and population series by the requested breakdown. For the countries not providing the needed breakdown for the female population, alternative data sources have been evaluated: the most appropriate source is currently the European Union Labour Force Survey (EU LFS), which is at the moment also used to calculate life expectancy by educational attainment. From the EU LFS relevant information on educational attainment can be indirectly used in order to estimate the needed breakdown for the population. This cross-sectional approach is currently feasible for 15 EU Member States.

#### **4-4. COHORT FERTILITY PATTERNS IN POLAND BASED ON THE STAGING PROCESSES**

*Wioletta Grzenda and Ewa Fraczak*

*EMail: wgrzend@sgh.waw.pl*

A staging process is defined as a chain of elementary processes. This process is frequently used in life course analysis, because many episodes of individual life can be described using it. Examples of staging process in life course might be: a migration process or a fertility process, which analysis is the aim of this presentation. We will consider the time from the age of 15 to first child birth, from first child birth to second and so on. So, the elementary process repeats itself after each occurrence of event, which is child birth. The events occur in specified order and multiple occurrences are impossible. We consider Poisson process with times between two successive events, called waiting times, being independent variables with exponential distribution with different parameters. The analysis of changing the fertility patterns in Poland by generations 1931-1986 is based on stochastic life tables estimate for five age groups. The empirical data comes from the sample survey “Female Fertility” conducted by the Central Statistical Office in Poland in 2002. The sample size is ca. 276 thousands females aged 16 and over. The main point of this work is presentation of the vales of stage probabilities of the subsequent births for these five age groups: 15-19,



20-24,..., 45-49. The results show the changes in fertility patterns in Poland during the period under studies.

### **5-1. COHABITATION, LEGAL POLICIES, AND CULTURAL SYSTEMS: DIVERGENCE ACROSS POST-SOVIET SPACE**

*Olga G. Isupova and Brienna Perelli-Harris*

*EMail: bolkab@yandex.ru*

This paper compares the legal policies and cultural systems related to cohabitation and marriage in 11 Post-Soviet countries. The former Soviet Union is an interesting case study, because before the break up of the Soviet Union, all countries had nearly the same Family Code and very low nonmarital childbearing, while afterwards, both policies and family formation behavior diverged radically. The goal of the study is to understand differences between the legal treatment of marriage and cohabitation in each country. We systematically examine 19 policies clustered in five general areas: guarantees to partners in the case of divorce (separation) or death; needs of special groups (such as adoption rights and rights to reproductive technologies); parent-child relations; and taxation/social benefits. These policy areas are then summarized so that each country can be placed along a spectrum, with countries that harmonize cohabitation and marriage at one end, and countries that treat cohabiting and married couples differently at the other end. Policy differences and similarities across countries are then compared with actual levels of nonmarital childbearing. Preliminary finding show that in spite of a shared history of legal and cultural systems, differences between countries are substantial, even when the percent of nonmarital childbearing is almost equal. To better understand these differences, we explore the examples of Georgia and Estonia, with high incidence of childbearing within cohabitation, and Armenia and Ukraine, which have lower levels. More detailed analysis of how the underlying factors of policies and practices interplay will be developed in the full paper.

### **5-2. POLICY AND DISCONTINUITY IN ROMANIAN PROCREATIVE BEHAVIOUR**

*Constanta V. Mihaescu and Raluca Dana Caplescu*

*EMail: cmihaesc@yahoo.com*

Romania is a famous example of the forced baby-boom caused in 1967 by the pronatalist policy. The entering into force of this legislation led to the doubling of natality, compared to the previous year. The impact of these cohorts was and still is complex, since the consequences are felt in the health care system, education, labour market, social insurance and in the economic and demographic evolutions of the country. This being the demographic context, we aim at analysing the fertile behaviour of 20th century Romanian women, as well as the way in which they transmit this behaviour, taking into account the tumultuous political, economic and social conditions before the fall of the former regime. The analysis is based on a recent survey on the topic of intergenerational transmission of fertility behaviour developed by a team of researchers from the Polls and Surveys Centre of the Bucharest Academy of Economic Studies. The target population consisted of women aged 50 years and more and the sample was build using quota sampling by two criteria: age and residence area. Based on this survey data we will study the procreative behaviour of the respondents in order to show whether there are major discontinuities in the evolution of the reproductive behaviour throughout the 20th century. The main conclusion is that the alternation of the periods when abortion was legal with those when it was illegal caused discontinuities in the fertile behaviour of the respondents. The restrictive policy had only a temporary impact on the downward trend of fertility in Romania.

### 5-3. THE EVOLUTION OF POPULATION POLICY IN VIETNAM 1961-2011

*Bang Nguyen Pham, Peter S. Hill, Wayne Hall and Chalapati Rao*

*EMail: pnbang2001@yahoo.com*

This paper documents the evolution of population policy in Viet Nam over the last fifty years. The paper develops a framework for stakeholder analysis to analyse the interactions between leading state agencies in policy development and their influence on the organizational structure of the population programme. The population policy has played a role in reducing the fertility of Viet Nam from an average of six children per women of reproductive health in the 1960s to only two in the 2000s. However, there is still a gap between international treaties endorsed by the state and local practices that constrain the full enjoyment of reproductive health and rights by the Vietnamese people. The paper highlights the current tensions in the population policy response to new challenges arising from the socio-economic and demographic transition of the country. The paper calls for a new population policy to address broader population and development issues.

### 5-4. FAMILY POLICIES IN RUSSIA AND UKRAINE IN COMPARATIVE PERSPECTIVE

*Katharina Wesolowski and Tommy Ferrarini*

*EMail: katharina.wesolowski@sh.se*

This study analyzes the institutional settings of family policies in Russia and Ukraine, the two most populous countries of the former Soviet Union, and places their family policies in the wider context of the longstanding welfare states. Against the background of low birth rates and the identification of such demographic processes as detrimental by politicians and policy makers alike in Russia and Ukraine and as research has demonstrated that family policies are very likely to influence childbearing decisions it is important to study the institutional make-up of family policy legislation in Russia and Ukraine. We will base our analysis on a social rights approach that captures the content of policies instead of focusing only on social expenditures. Thus we will use the multidimensional perspective originally developed by Walter Korpi, and advanced in subsequent studies (Ferrarini 2003, Korpi 2000, Korpi et al 2010), and will strive to locate contemporary Russian and Ukrainian family policies in the space of this multidimensional typology. The data to be collected for this purpose include conditions, levels and duration for several kinds of family policy benefits. To our knowledge, such a large scale comparative perspective and systematic comparison of family policy institutions in Russia and Ukraine with longstanding welfare states has so far been absent in the comparative welfare state literature due to the focus on welfare states with a long history of democratic rule.

### 6-1. MAKING THEM COUNT, COUNTING THE MENTALLY ILL, EVIDENCE FROM THE KINTAMPO DEMOGRAPHIC HEALTH SYSTEM

*Edward Adiibokah*

*EMail: adiiboka@yahoo.com*

Persons with Mental Disorders (PMDS) are among the most marginalised groups in developing countries, as they are socially excluded and overlooked in most development efforts. Health and Demographic Surveillance Systems (HDSS) platforms serve as unique opportunities for longitudinal studies on such marginalised groups. However, due to high levels of stigma and other operational difficulties, PMDS are often undetected in routine enumeration exercises. This study is situated in the methodological aspects of social demography of mental illness in a HDSS setting. Five hundred and sixty-nine PMDS were identified and followed on longitudinal basis for their inclusion in the Kintampo HDSS. Following a

“targeted” and “service provision” approach, coverage of PMDS went up to 68% in 2010, compared with previous levels of 54% and 49% in 2005 and 2008 respectively. A body of evidence for inclusion of PMDS and other groups, living with stigmatising conditions, currently exists that could potentially make a scientific contribution and inform policy.

## **6-2. DESIRES FOR CHILDREN AND THEIR MEASUREMENT IN LOW FERTILITY SETTINGS**

*Christoph Buehler, Joshua R. Goldstein and Saskia Hin*

*Email: ch.buehler@ish.uni-hannover.de*

Traditional survey instruments on reproductive desires are focused on the number of children an individual ideally prefers. This approach, however, faces the problem of a low ability to predict future reproductive outcomes. Instruments that measure a hierarchy of preferred family sizes, like the instruments by Coombs (1974) and Terhune and Kaufmann (1973), are more promising, because they inform about latent desires for smaller or larger families. Surprisingly, these instruments are up to now neither applied to the low fertility contexts of Europe nor are the data they provide directly compared. The paper closes this gap by comparing these two instruments with the help of data from the Dutch LISS-Panel. Both instruments provide meaningful and similar results, also in the Dutch low-fertility context. The instrument by Coombs produces more reliable results than the instrument by Terhune and Kaufmann. However, both instruments are exposed to biasing forces, which are social desirability in the instrument by Coombs placement effects in the instrument by Terhune and Kaufmann.

## **6-3. MEASURING SEXUAL IDENTITY IN US HEALTH SURVEYS**

*Virginia S. Cain*

*Email: vcain@cdc.gov*

Sexual orientation has been linked to a number of negative physical and mental health outcomes and access health care (Institute of Medicine, 2011). However, these results have come mainly from small scale non-representative samples. While some major US health surveys have asked questions about sexual orientation, identifying the lesbian, gay, and bisexual (LGB) population has been challenging. Problems with questions on sexual orientation have led to results with substantial rates of missing data which are not randomly distributed across subgroups within the population. Highest rates of missing data have been found among racial and ethnic minority groups and lower education groups. Efforts to improve questions using cognitive interviewing techniques have resulted in questions that address the conceptual complexity of the broad term sexual orientation by disaggregating sexual identity from sexual attraction and sexual behavior, concepts that are related but not identical. The improvements in question wording and response categories have substantially reduced the rates of missing data across population subgroups reducing the bias in the estimates. The present paper discusses the process of incorporating sexual identity questions into the largest US health survey, the National Health Interview Survey (NHIS). Newly designed questions will be field tested in a 5,000 case nationally representative sample in 2012 with a planned full implementation in the 2013 NHIS, a survey of approximately 40,000 households representative of the US population. The present paper examines the validity of questions used to measure sexual orientation or identity, presents results of cognitive interviewing which developed improved questions, discusses issues around question placement and the plans for incorporating the questions on sexual identity into the NHIS. The paper discusses the pilot test which includes a test of two modes of interviewing. e.g. interviewer administered and Audio Computer Assisted Self Interviewing (ACASI).

#### **6-4. USING RESPONDENTS' UNCERTAINTY SCORES TO MITIGATE HYPOTHETICAL BIAS IN COMMUNITY-BASED HEALTH INSURANCE STUDIES**

*Hermann Donfouet, Pierre-Alexandre Mahieu and Eric Malin*

*EMail: donfouetz@yahoo.fr*

Community-based health insurance is being considered as an effective way to reach the poor people to access adequate health care services in developing countries. Assessing what the poor are willing to pay is of paramount importance for policy-making. The contingent valuation method, which relies on a hypothetical market, is commonly used for this purpose. But the presence of the hypothetical bias which is most often inherent in this method tends to bias the estimates upward, and compromises policy-making. This paper uses respondent uncertainty scores in an attempt to mitigate hypothetical bias in community-based health insurance in one rural setting in Cameroon. Uncertainty scores are often employed in single dichotomous choice surveys. An originality of the paper is to use such approach in a double-bounded dichotomous choice survey. The results suggest that this instrument is effective at decreasing the mean WTP.

#### **6-5. EVALUATING THE MEASUREMENT RELIABILITIES OF DEVELOPMENTAL IDEALISM MEASURES**

*Arland Thornton, Georgina Binstock, Linda Young-DeMarco, Colter Mitchell, Kathryn M. Yount and Yu Xie*

*EMail: arlandt@umich.edu*

This paper investigates the measurement properties of empirical measures of developmental idealism. Developmental idealism is a set of beliefs and values stating that modern societies and families are better than traditional ones, that modern families facilitate modern societies, and that modern societies foster modern families. Previous research has demonstrated that developmental idealism is widespread internationally, but provides little evidence about whether beliefs concerning developmental idealism can be measured reliably at the individual level. We estimate levels of reliability of such measures using multiple conceptualizations of the factor structure underlying the empirical observations. We estimate measurement reliabilities using survey data collected in 2007 and 2008 from Argentina, China, and Egypt. The data indicate that when we have family items that are measuring very similar underlying constructs, the measurement reliabilities are very high. These results provide evidence that the constructs of developmental idealism can be measured with a high degree of reliability.

#### **7-1. EARLY LIFE ENVIRONMENTS AND FIRST-TIME PARENTHOOD: THE EXPERIENCE OF IMMIGRANT AND NATIVE WOMEN IN SWEDEN, 1990-2009**

*Serhiy Dekhtyar*

*EMail: serhiy.dekhtyar@ekh.lu.se*

The purpose of the study is to investigate how the childbearing behavior of immigrants and natives in Sweden in 1990-2009 is affected by their exposure to exogenously-determined early life conditions. The aim is to uncover if differences in the propensity of becoming a mother across immigrant groups and between immigrant and native-born childless women in Sweden can be traced back to their dissimilar early life experiences. Having access to large population-based registers presents us with two opportunities. First, we are able to longitudinally adjust for a wide variety of socioeconomic characteristics that have been shown to affect fertility outcomes across the groups in question. More importantly, however, we are able to identify biological sibling pairs in the registers and account for unob-

served familial confounding by using sibling fixed effects models, therefore strengthening the causal interpretation of early exposures' effects. In essence, we regress sister differences in fertility outcomes on sister differences in early life conditions for a sub-sample of siblings we identified.

## **7-2. DOES MOVING DISRUPT IMMIGRANT FERTILITY? THE CASE OF CANADA**

*Ana Ferrer*

*EMail: aferrer@ucalgary.ca*

In this paper we examine one aspect of the fertility decisions of immigrant families, namely whether migration disrupts the fertility of immigrants, sometimes referred to as the Disruption Hypothesis. Assessing the fertility experience of immigrants in the first years in the host country may be crucial in determining their economic assimilation into the new country, as households with infants usually face larger expenses and are constrained in the amount of time that can be supplied in the labour market. We use the 20 percent sample of the confidential files of the Canadian Census of Population for the years 1991 through 2006, to examine the probability of the presence of infants in recent immigrant households and investigate whether significant differences exist conditioning on immigrant's place of birth or education level. In addition, we explore whether cohorts effects are important in explaining the changes in fertility patterns for recent immigrants.

## **7-3. HOW DO IMMIGRANTS USE PARENTAL LEAVE IN SWEDEN?**

*Eleonora Mussino and Ann-Zofie Duvander*

*EMail: eleonora.mussino@gmail.com*

Sweden is a universalistic welfare state with a system of social policies directed towards working parents and a strong emphasis on gender equality without any distinction by citizenship. However, previous studies have shown that dramatic differences persist in the use of parental leave between immigrants and Swedish-born, even when the main socio-demographic characteristics are taken into account. In this study, we hypothesize that there are persisting differences in the uptake of parental leave between Swedish-born and foreign-born women and men. Partly these differences can be explained by status differences in the labor market. In particular we would like to answer to the following questions: Once that we control for labor market status, are the differences in the use of parental leave between immigrant and Swedish-born parents remaining? Which are the factors that most influence this segmentation? To address our research questions we use data from the population registers. We will focus on the cohorts of newborn between 1998 and 2004, following their parents each year during the subsequent four years. We expect different distributions of days during the period, over time and for the subpopulations under study. Our main interest will be how immigrant status in relation to labor market status and income influence the parental leave use of mothers and fathers. We will consider yearly use of parental leave benefits and estimate the leave length for fathers and mothers as well as the share of each parent.

## 7-4. GENERATIONAL FERTILITY CONVERGENCE IN ENGLAND AND WALES: ASSESSING THE OWN-CHILD METHOD

*Ben Wilson and Wendy Sigle-Rushton*

*EMail: b.m.wilson@lse.ac.uk*

Research on migrant fertility frequently makes use of the own-child method to measure fertility (e.g. Cho et al. 1970, Abbasi-Shavazi and McDonald 2000, Adsera and Ferrer 2010), but it remains uncertain whether results are substantially affected by own-child measurement error (e.g. Abbasi-Shavazi 1997). This research tests the reliability of the own-child method using data from the Office for National Statistics Longitudinal Study (LS), a one per cent sample of the England and Wales population. This unique data source links individual-level 2001 Census data to births registered in England and Wales. As expected, fertility is underestimated using the own-child method, but it nevertheless appears to be a reliable measure of fertility for studying generational fertility convergence in England and Wales. Evidence of generational fertility convergence is found, particularly for women with South Asian origins. This conclusion does not change when births missed by the own-child method are included in the analysis.

## 8-1. MEASURING THE MORPHOLOGY OF THE LIFE TABLE

*Jon Anson*

*EMail: anson@bgu.ac.il*

As mortality declines to ever low levels, there has been growing interest in measures of the shape, or internal structure of the life table, as a basis for comparison. However, the usefulness of these measures in comparing life table morphologies is compromised by their close correlation with the mean level of mortality. The maximal human life span is, in all essences, fixed. The decline in mortality is thus a movement of deaths from the younger to the older years of life, and their concentration in an ever narrowing age band. The shape of the life table functions (mortality and survivorship curves) is thus largely determined by the average level of mortality, and any meaningful attempt to measure the shape needs to separate out the necessary effects of declining mortality. Otherwise, we are merely comparing mortality levels by another name. Yet, as mortality declines to ever lower levels, the difference between life tables is going to be more and more in the details of the distribution of mortality, and these measures are going to play an ever more important role. In the present paper we consider how the various morphological measures may be used to compare the internal distribution of mortality within the life table, while yet allowing for the changes which necessarily occur as mortality declines. This will enable us to identify differences in the shapes of mortality and survivorship curves, that is, in the distribution of deaths over the life span, which are not a necessary corollary of the differences in the overall level of mortality. Such differences may then be related to differences in the conditions (social, economic, physical) in which the population lives its life, as will be illustrated using examples from various contemporary and historical populations, at the national and sub-national level.

## 8-2. LIVES SAVED IN A POPULATION

*Vladimir Canudas-Romo*

*EMail: vcanudas@jhsph.edu*

The number of lives saved and the ages when this occurs is the focus of this paper. For presentation, I have divided the manuscript into two complementary parts. First, I study the change over time in life expectancy in term of lives saved, as alternative to the usual inter-

pretation of average number of years gained. This alternative interpretation of changes in life expectancy can be used to rank periods of heaps or of few lives saved in a country. The measure can also be used to compare across countries. Secondly, we look at the mortality shift in age at death. To assess this change I look at a fixed mortality level at a given time and find the matching age at which this level of mortality is found in a more recent year. As an example, a person aged 50 in 1950 in Sweden has the same mortality level than a person aged 80 in 2000. However, when looking at life expectancy level for a 50 year old in 1950 this is found at age 56 in 2000. The reason for this paradox is the great disparity in life extension existent from age to age. Similarly, lives saved can be just a handful, but their life duration will vary from age to age, and we combine the two ideas in this study.

### **8-3. COMPRESSION OF MORTALITY: A COHORT-ORIENTED APPROACH**

*Dalkhat M. Ediev*

*EMail: dalkhat.ediev@oeaw.ac.at*

The rapid increase of human longevity has brought up important questions about what implications it may have for the variability of age at death. Earlier works reported evidence of a historical trend of mortality compression. However, the period life table model, which is widely used to address mortality compression, produces an artificially compressed picture of mortality as a built-in feature of the model. We base our study on examining the durations of exposure of birth cohorts (also as compared to period mortality schedules) to selected levels of mortality observed at old age. We also address the problem in a more conventional fashion, by examining the distribution of ages at death (in period tables and cohorts) above and below the mode. Overall, mortality has been significantly de-compressing already since the 1960s. This finding contradicts with most previously reported results. The decompression of old-age mortality may indicate further optimistic prospects of ever-decreasing mortality. Mortality may well not be concentrated in the future within a narrow age interval but more dispersed along age groups, though at ever later ages on average.

### **8-4. IDENTIFYING THE RUPTURES SHAPING THE SEGMENTED LINE OF THE SECULAR TRENDS IN MAXIMUM LIFE EXPECTANCIES**

*Jacques Vallin, Carlo G. Camarda and France Meslé*

*EMail: vallin@ined.fr*

In their 2002 paper, Oeppen and Vaupel showed that the trend in the highest life expectancy reached each year in the world follows a straight line with a 25% gradient, since 1841 (the start year of their database). If we had been nearing a limit, they claimed, we would have seen a flattening of the curve over recent decades. As this is not the case, there is no reason to believe that progress in life expectancy will stall in the near future. More recently, Vallin and Meslé (2009), by looking at more data (more life tables for the 1841-2000 period and additional tables before 1841 and after 2000) and, more importantly, by checking better data quality, recognized that maximum life expectancies follow a succession of four segments with associated different slopes: 0,5%, 11%, 32%, and finally 23%. This indicates that, at each stage, new tools for health improvements trigger new paces in life expectancy increase. They related the three cuts to important changes in the history of the health transition: the years 1790s, at the time of Jenner and of the French Revolution, the time of Pasteur around the year 1885 and at the end of the 1960s when started the so-called Cardiovascular Revolution. However, Vallin and Meslé's identification of the time cuts was intuitive, simply suggested by the general shape of the cloud of points. Therefore it is still controversial whether or not humans experienced a continuous and constant life expectancy increase. The objective of this paper will be to check the existence of eventual

cuts, their number and their calendar. Segmented regression provides an elegant framework and will be employed to statistically identify possible ruptures in the time series of maximum life expectancies. Further analysis by age will shed light on determinants of the eventual variations in gradient.

#### **8-5. MAXIMUM HUMAN LIFESPAN: WILL THE RECORDS BE UNBROKEN?**

*John R. Wilmoth and Nadine Ouellette*

*EMail: jrw@demog.berkeley.edu*

If we limit ourselves to cases that have been well verified, the oldest persons who have ever lived – one woman and one man – died in the late 1990s. Jeanne Calment was born in 1875 and died in 1997 at the age of 122.5 years; Chris Mortensen was born in 1882 and died in 1998 at the age of 115.7 years. It seems notable (and perhaps curious) that the world record in human longevity has not been broken for more than 13 years for either men or women. Indeed, this observation may be disconcerting for those who follow such trends closely. Does it raise doubts about the authenticity of those two cases? What is the likelihood that such records would be unbroken by chance alone over this time interval? In general, what is the expected waiting time between the breaking of such records? In this paper, we will attempt to answer such questions by building on our previous work on this topic. In particular, we will extend the model developed by Wilmoth and Robine (2003) to approximate the global trend in the maximum human lifespan, using that model here to estimate the probability of observing new world records over a given time period.

#### **9-1. ORIENTATION AND BEHAVIOR: GENDER DIFFERENCES IN FIELD OF STUDY CHOICE SET OF STEM-BOUND APPLICANTS**

*Sigal Alon and Thomas A. DiPrete*

*EMail: salon1@post.tau.ac.il*

Women now surpass men in overall rates of college graduation in many industrialized countries, but sex segregation in fields of study persists, even within STEM majors. In a world where gender norms have changed but gender stereotypes remain strong, we argue that attitudes and orientation towards behaviors are less constrained by gendered institutions than are behaviors themselves, and therefore sex segregation in the choice set of considered majors may be lower than the sex segregation in the chosen majors themselves. With a unique data on the broader set of fields that are considered by applicants to elite Israeli universities, we find support for this theory by examining whether second choice STEM fields are as segregated as are first choice STEM fields, whether gender differences in academic proficiency have the same effect on the choice set of men and women, whether choices depends on the major's characteristics (like sex composition, selectivity and labor market earnings), and whether and how recent trends in sex segregation in STEM fields shape the gender gap in choice set.

#### **9-2. EDUCATIONAL MISMATCH AND OCCUPATIONAL MOBILITY IN METROPOLITAN BRAZIL**

*Luciano Machado and Ana Hermeto*

*EMail: lmachado@bndes.gov.br*

This article seeks to analyze educational mismatch and occupational mobility in metropolitan labor market in Brazil, considering a supply and demand framework. We focus on four types of occupational mobility: upward mobility for the overeducated, downward mobility for the undereducated and upward and downward movements for the matched workers, using panel data from the Monthly Employment Survey (IBGE) over the 2002-



2008 period, based on the birth-cohort synthetic panel estimation. Particularly, we analyze how cyclical conditions in the labor market, captured by the unemployment rate, are related to upward and downward movements determined in the context of the education-occupation mismatch at the individual level occupations. The study addresses the effects of economic cycles, composition of supply, period and cohort to explain the behavior of mobility considered. Results show that the cycles faced by individuals in the labor market are relevant to their propensity to occupational mobility, impacting both upward and downward movements. Thus, theories focusing only on individual attributes to explain the behavior of educational mismatch in occupations over time fail to take into account the role of business cycles in facilitating or not the occupational matching process in terms of schooling. Regarding cohort effects, it was found that the possibilities of adjustment are associated with early stages of the careers of individuals in the labor market, for the over and under-educated workers. The pro-cyclical behavior of upward mobility of the over-educated is explicit evidence that conditions in the labor market influence the matching of workers in occupations. The fact that the unemployment rate affects the mobility decisions also impacts the duration of over-education in the labor market, so this situation may have occupational characteristics of short or long term depending on the cyclical conditions of the economy.

### **9-3. EDUCATIONAL HETEROGAMY AND THE DIVISION OF PAID LABOUR IN THE FAMILY: A COMPARISON OF PRESENT-DAY BELGIUM AND SWEDEN**

*Mieke C. W. Eeckhaut, Maria A. Stanfors and Bart Van de Putte*

*EMail: Mieke.Eeckhaut@UGent.be*

Building on the growing importance of partner effects in stratification research, this study adopts a couple perspective on the division of paid labour in the family. It considers the role of educational heterogamy, and takes account of the family life cycle by means of the presence of (young) children. The importance of these two factors for women's relative labour market participation is compared between Belgium and Sweden – two European countries that share socio-economic features but differ regarding labour market and social policies. Multinomial logistic Diagonal Reference Models are used to analyse the pooled cross-sectional data of the EU-SILC 2004-2008. Our results show that women's relative labour market participation is less education-driven in Sweden than in Belgium, and it is more related to the couple effect of educational heterogamy and the life cycle effect of the presence of (young) children, confirming more egalitarianism and family friendliness in Scandinavia than in continental Europe.

### **9-4. ETHNIC DISPARITIES IN THE GRADUATE LABOUR MARKET: A LONGITUDINAL STUDY**

*Aslan Zorlu*

*EMail: a.zorlu@uva.nl*

This paper examines ethnic wage differentials for the entire population of students enrolled in 1996 using unique administrative panel data for the period 1996 to 2005 from the Dutch tertiary education system. The study decomposes wage differentials into two components: a component which can be explained by the observed characteristics and unexplained component. The analysis provides novel evidence for the magnitude and the origin of ethnic wage differentials by gender. In general, ethnic wage gap is larger for migrant women than migrant men and larger for Western and Caribbean migrants than Mediterranean migrants. Ethnic minority students appear to have large wage surplus which is almost entirely explained from their favourable observed characteristics. Most notably,

Mediterranean female graduates have significant positive wage discrimination while Western female graduates seem to face a small wage penalty.

#### **10-1. SEXUAL INITIATION AND RELIGION AMONG BRAZILIAN TEENAGERS: THE CASE OF HIGH SCHOOL STUDENTS IN FOUR CITIES**

*Raquel Coutinho, Paula Miranda-Ribeiro and Carla J. Machado*

*EMail: raquelzc@cedeplar.ufmg.br*

This study aims at investigating the association among religion, religiosity, and sexual initiation of adolescents, 15-19 years-old, male and female, high school students in public state schools (n=2658). Results indicate strong association between religious affiliation, church attendance, and sexual initiation. Although sexual initiation is more frequent among adolescents who go to church only sporadically, the proportion who report having had sexual intercourse is high, even among the churchgoers. If compared to those who have no religious affiliation, committed Mainline Protestant and Pentecostal, males and females, as well as committed Catholic females are less likely to have had their first sexual intercourse. Results also indicate that the female sexual onset is usually at older ages if compared to that of the male, and there is intense gender representation.

#### **10-2. DOES ETHNICITY MATTER IN FAMILY PLANNING SERVICES? EVIDENCE FROM NEPAL DEMOGRAPHY HEALTH SURVEY (NDHS) 2006**

*Mukesh Mishra*

*EMail: call.mishra@gmail.com*

Background: Regardless of three decades of implementation of family planning program in Nepal, need of family planning services is largely unmet. Systematic studies evaluating the impact of family program on several ethnic groups of Nepal has not been carried out in large scale. This study sheds light on the investigation of, whether the use of contraceptives varies among different ethnic groups in Nepal and what are the predictors of contraceptive variance in ethnic groups in Nepal. Materials and methods: The study is based on data collected from Nepal Demographic Health Survey 2006. Multilevel logistic regression analyses of 10793 married women of reproductive age nested within 264 clusters from the surveys were considered as the sample size. Individual, household, and program variables were set and a multilevel logistic regression model was fitted to analyze the variables, using GLLAMM command in STATA-9. Results: Multilevel logistic regression analysis indicated that Muslims, Dalits and Terai madheshi women were significantly less likely to use modern contraceptives compared to the Brahmins and Chhetries (Higher Castes). Women who were exposed to family planning information in radio were more likely to use modern contraceptives than women not exposed to radio information (OR=1.22, P> 0.01). An odd of using contraceptives by Newar was (OR 1.09, P>0.05), the highest among all ethnic groups. Exposure of women to family planning messages through health facilities, family planning workers, and means of communication, increased the odds of using modern contraceptives. However, impact of the family planning information on contraceptive use varied among ethnicity. Conclusion: Special attention need to be paid, in particular to the ethnicity, while formulating family planning policies in Nepal, for better success rate of family planning intervention programs. Key Words: Modern contraceptives, Family planning, Nepal, Ethnic groups, DHS, Odd ratio.

### 10-3. EXPLORING RELATIONSHIPS BETWEEN GENDER ATTITUDES, COUPLE CONCORDANCE AND FAMILY PLANNING IN TANZANIA

*Geeta Nanda, Sidney Ruth Schuler and Rachel Lenzi*

*EMail: gnanda@fhi360.org*

There is a complex relationship between family planning (FP), couple communication and gender attitudes. This paper presents findings from a household survey with 200 couples from two regions in Tanzania. Logistic regression analyses suggest that couples in which both spouses hold gender-equitable attitudes are more likely to use contraception than couples in which one or both spouses have less equitable attitudes. When both spouses perceive that the other approves of FP, the couple is more likely to use contraception. And couples in which both spouses report that they discussed FP more than once in the last three months are more likely to use contraception than other couples. We conclude that interventions promoting gender equity and FP should target both members of the couple, which is often not the case.

### 10-4. LOVE MATTERS: ROMANTIC AND SEXUAL RELATIONSHIPS AMONG YOUTH OF SLUMS OF MUMBAI METROPOLITAN

*Shrikant Singh and Nidhi Sharma*

*EMail: sksingh1992@yahoo.co.in*

Slums house a mix of traditional and modern values regarding sex and sexuality. Overcrowded living conditions result in relaxation of restrictive social norms and sexual segregation offering varied avenues for sexual experiences. We aim to understand the youth's attitude towards romantic and emotional relationships; sex and sexuality conduct among unmarried, low-income youth. Data used is triangulated from 54 in-depth interviews and survey among 1239 men age 18 to 29 selected from three slums of Mumbai adopting randomized clustered sampling technique, during 2005-2009. Guttman's scale is used to capture various dimensions of relational satisfaction after testing of reliability. Premarital partnerships among youth are widely discouraged in India; yet, despite strict sanctions, nearly 10% of young women and 15–30% of young men form such partnerships. Attitude of youth is changing from romantic relationship to more casual sexual relations. 80% of romantic relationships are translated in sex. 10% of respondents reported sex with more than 2 girlfriends in last one year and 22% of respondents reported their "girlfriend" as married cohabitating with husband. Further, one-fourth of these girlfriends was relatives, neighbor or co-worker and was friends only for sexual benefits with no emotional dimension. Partner transition is based on perceived relational satisfaction. Higher relationship satisfaction with girlfriend is translating into lower multi-partner, less coercive sex but also lower condom use, whereas, better communication is affecting condom use and multi-partner positively but coercive sex negatively. Satisfaction with self is resulting in reduced multi-partner and also less cohesive sex. Those who reported more than one girlfriend reported lowest condom use with the first girlfriend (4%) whereas alcohol use and also coercive sex increased as we move to subsequent partners. Findings facilitate understanding of changing sexual culture & behaviors and highlights need to fully informed and equipped youth to make safe choices.

### **11-1. A DELAYED AND GRADUAL FERTILITY TRANSITION. NEW MICRO-LEVEL EVIDENCE FOR ALGHERO, SARDINIA (1866-1936)**

*Lucia Pozzi, Marco Breschi, Massimo Esposito and Stanislao Mazzoni*

*EMail: lpozzi@uniss.it*

Unlike other regions, the demographic history of Sardinia is relatively unexplored. Nominative studies are almost absent, especially for the pre-demographic transition period. The most deep analysis on fertility decline is still that offered by Massimo Livi-Bacci within the framework of the Princeton Project, at the macro-level. According to the results of this project, Sardinian has been the Italian region with the slowest and most gradual fertility transition. In the 50s, fertility levels in the island were the highest in the country: TFR was slightly lower than 4 children per woman while, for the country on average, rates ranged around 2.3. In clear contrast with its previous reproductive history, today Sardinia is the Italian region with the lowest fertility level. The objective of this paper is to retrace, by using a large data-set, reconstructed at the individual and nominative level for the community of Alghero, the very original path towards fertility control followed by the Sardinian population. In particular, our analysis will cover also the decades following the 1st World War, a central period in the Italian demographic transition up to now never explored at the micro-level.

### **11-2. THE BABY BOOM: NEW PERSPECTIVES AND NEW ISSUES. A RESEARCH INITIATIVE**

*David Reher, Miguel Requena, Maria Sanchez-Dominguez and Alberto Sanz-Gimeno*

*EMail: dreher@cps.ucm.es*

This international research initiative addresses the causes and implications of the baby boom that transformed reproductive behavior in much of the world between the mid-1940s and 1965-1975. The baby boom was an unexpected change of course of fertility that, at least in the developed world, was already fairly low during the interwar period. There are reasons to believe that it affected societies in both the developed and the developing world. Increases in fertility were short-lived because soon after there was another decline in fertility to levels near or below replacement in much of the world. Much of the existing research on this period has been based on concerns closely tied to the concrete interests of individual societies undergoing periods of increasing fertility. Innovative analytical perspectives are necessary before our understanding of this process can be considered adequate. A more nuanced, comparative understanding of the baby boom may shed some light on certain aspects central to the future of population in much of the world. The baby boom provides the only historical example of a major upward trend change in fertility in the recent past. Deepening our understanding of the processes involved may help us understand better the contexts within which a similar change might take place in the future. In this presentation, the basic research strategy of an international research initiative involving research teams from the developed and the developing world will be outlined. Special attention will be paid to the design of the survey, a centerpiece of this initiative, scheduled to be administered initially to 1000 women 60+ years of age in Spain in early 2012. The structure of the survey instrument and the pilot study are described. Very preliminary results of the survey will also be presented.

### **11-3. THE TRANSITION OF THE REPRODUCTIVE LIFE COURSE IN 19TH CENTURY EUROPE. A SEQUENTIAL APPROACH**

*Reto Schumacher, Koen Matthijs and Michel Oris*

*EMail: reto.schumacher@unige.ch*

Thanks to extensive research in population history and historical demography during the last 5 decades, we have got a good understanding of the first European fertility decline in the late 19th century. We know when and where the decline started, we know how fast it happened in the different regions, and we also know which behavioral determinants led to the decline in fertility. However, still little is known about the changes in the reproductive life course during the fertility transition. In this paper, we explore the transition of the reproductive life course during the first decline of fertility in Europe. We conceptualize the reproductive life course as the timing and the sequencing of events relating to reproduction, such as marriage and first and consecutive births. In a historical European population, the earliest stage of the reproductive life course typically relates to the phase between the beginning of the potentially reproductive age and entry into sexual union. It is followed by the interval between marriage and the first birth. The childbearing period is marked by the rhythm of successive births. The last stage of the reproductive life course is a period of potentially reproductive age during which no more births occur. In order to explore the diversity of life course transitions during the decline in fertility, we use historical datasets relating to a series of different European regions in the 19th century (Antwerp, Geneva, the Netherlands, Sweden and Wallonia). Applying descriptive and analytic techniques of sequence analysis, we also investigate individual variation. At each stage of the fertility transition, we identify subtypes of the reproductive life course and assess which social groups are parts of them. Doing so, we also address the de-standardization of the pre-transitional life course as well as the re-standardization process towards a post-transitional reproductive life course.

### **11-4. WHAT WE KNOW AND WHAT WE NEED TO KNOW ABOUT THE BABY BOOM**

*Jan Van Bavel and David Reher*

*EMail: Jan.VanBavel@soc.kuleuven.be*

This study of the baby boom is based on a sample of 18 different European and non-European countries classified according to the timing and intensity of their baby boom and to the role played by nuptiality, fertility and age structure in the increasing birth rate. The baby boom is found to be especially strong in non-European countries, fairly strong in some countries and quite weak in others. In many countries the boom started well before the aftermath of World War II, in others it did not start before the 1950s and there were often short-lived post war booms in many. Everywhere it posed significant challenges to political and social systems. Standard explanations for the baby boom are examined and many are found to be wanting. The authors argue that it is useful to understand the boom in terms of the relatively low levels of interwar fertility reached in most countries.

### **12-1. JOBS, CAREERS, AND BECOMING A PARENT UNDER STATE SOCIALIST AND FREE MARKET CONDITIONS: THE CASE OF ESTONIA**

*Sunnee Billingsley, Luule Sakkeus and Allan Puur*

*EMail: sunnee.billingsley@sociology.su.se*

The pre-conditions for childbearing were hypothesized in regards to norms prevailing in free market economies and the extent to which they are relevant in a communist or tran-

sitional context has yet to be fully explored. We compare the influence of job acquisition, while continuing or after completing education, on family formation in two distinct time periods—before Estonia’s independence from the Soviet Union and after 1991. In Estonia and many other transitional countries, postponement occurred when there was a significant loss of employment opportunities, increasing the complexity of the relationship between family formation and employment. We employ the Estonian Health Interview Survey (2006) and event history analyses. First results unexpectedly show a stronger relationship between job acquisition and becoming a parent before 1991. This relationship varies across educational groups and migrant status.

## **12-2. LONG-TERM EFFECTS OF REFORMS PROMOTING FATHERS’ PARENTAL LEAVE USE**

*Mats Johansson and Ann-Zofie Duvander*

*EMail: mats.er.johansson@forsakringskassan.se*

Since the introduction of the parental leave in Sweden a more gender-equal division of the leave has been aimed for. Several reforms have been introduced to reach this goal. In 1995 one month was reserved for each parent, implying that the month was forfeited if not used by the same parent. The reservation of one month was followed by another month in 2002. Although the main goal of these reforms was to promote fathers’ use of parental leave, there were also expectations that the reforms would have long-term effects on the division of household work and on gender equality in the labour market. Also, there are studies that imply that the risk for separation is lower and the continued childbearing is higher in couples who share the leave. This study uses a natural experiment-approach, using control and treatment groups with parents’ to children born just before and after the introduction of each reform to investigate the potential long-term effects of each reform. Parents are followed for eight years after each reform and we focus on four outcomes; the use of temporary parental leave for care of a sick child; yearly earnings of the parents; risk for separation, and continued childbearing. We use register data from the Swedish Social Insurance Agency including parental leave use of all parents residing in Sweden. The preliminary results indicate effects of the reforms on the use of temporary parental leave benefit as well as on third birth intensities.

## **12-3. DOMESTIC SERVICES AND FEMALE EARNINGS: PANEL MICRODATA EVIDENCE FROM A REFORM**

*Karin Halldén and Anders Stenberg*

*EMail: anders.stenberg@sofi.su.se*

Housework and family responsibilities are commonly assumed to be one of the major sources behind the observed gender earnings gap. While partly malleable to policy, there is little direct evidence on if/how minor reliefs in routine housework duties affect female earnings. A reform in Sweden in 2007 reduced the price of domestic services by 50 percent. Using population register data 2000-2010, we explore the variation across years in household tax discounts for domestic services to analyze the impact on annual earnings. We find significantly positive earnings effects for females in households outsourcing roughly between 50 and 150 hours of domestic work per year, but the average effects do not increase if the household uses above 150 hours per year. “Placebo” estimates indicate that results do not reflect earnings trends. Hence, a causal interpretation of the results is supported.

#### **12-4. HOW WORK-FAMILY POLICIES COMBINE TO SHAPE THE MOTHERHOOD WAGE PENALTY IN A CROSS-NATIONAL PERSPECTIVE**

*Michelle J. Budig, Joya Misra and Irene Boeckmann*

*EMail: budig@soc.umass.edu*

While family policies are argued to impact the motherhood wage penalty, the relationship between the size of motherhood penalties, and specific work-family policies or “policy packages” is not clearly understood in a cross-national context. Using original policy data, and microdata from the Luxembourg Income Study (LIS), we estimate multilevel models across 22 countries to examine relationships between the motherhood wage penalty and country-level work/family policies, including birth-related and extended leave policies, the availability of publicly supported childcare services, taxation of second earner’s incomes and transfer payments to families. However, policy schemes are always part of a broader policy context. Findings for individual policies may not be robust net of other policy combinations. Therefore, we investigate whether and how different combinations of policies alter the associations of specific policies with the motherhood penalty.

#### **13-1. DIVORCE AND CHANGES IN PSYCHIATRIC MORBIDITY: REGISTER-BASED TRAJECTORIES OF PSYCHOTROPIC MEDICATION AMONG MIDDLE-AGED FINNS**

*Niina Metsä-Simola and Pekka Martikainen*

*EMail: niina.metsa-simola@helsinki.fi*

Background: The prevalence of psychiatric morbidity might change before and after divorce in a manner similar to psychological distress. We measure psychiatric morbidity with prescribed psychotropic medication, and examine changes in medication prevalence 5 years before and 5 years after divorce. Methods: We used population-registration data on 166,049 married Finns aged 25-64, of whom 23,956 divorced during 1995-2003. We divided time before and after the date of divorce into three-month intervals, and assessed the prevalence of psychotropic medication (ATC-codes N05 & N06 excluding N06D) during each interval. These data were analyzed with repeated measures logistic regression using generalized estimating equations. We report changes in prevalence by sex, medication type and socio-demographic characteristics. Results: The average three-month prevalence of psychotropic medication was 7% among divorced men and 10% among divorced women. Compared to those whose marriage continued, men who eventually divorced had 1.57 and women 1.40-times higher odds for medication purchases already 3.5-5 years before divorce. Medication prevalence increased thereafter, the increase accelerating 2 years before divorce to 29% per year among men and 27% among women. The highest prevalence was reached 6-9 months before divorce. A decrease during the next 18 months followed, after which little change occurred. Largest pre- and post-divorce changes were observed in the purchases of antidepressants, and more so among those who were younger, employed, had high level of income or education, owned their home, or divorced from their first marriage. However, socio-economic resources had little mediating effect on the excess medication among the divorced. Conclusions: Pronounced psychiatric morbidity seems to be related to the process of divorce rather than to post-divorce disadvantage. Age and socio-economic factors moderate the effect divorce has on psychiatric morbidity, but excess medication among the divorced is not explained by socio-economic disadvantage, suggesting a need for psychological rather than socio-economic support.

### 13-2. THE RELATIONSHIP BETWEEN MORTALITY AND YEARS AS DIVORCED, WIDOWED OR REMARRIED

*Kjersti Norgård Berntsen and Øystein Kravdal*

*EMail: knb@ssb.no*

The chance of dying within any given year probably depends not only on marital status in that year but also on earlier partnership history, but there is still not much knowledge about such effects. Our intention is to see how mortality is associated with time since divorce, bereavement and remarriage and time between marital disruption and remarriage. We use register data that include the entire Norwegian population aged 40-89 from 1970-2008 (70 701 767 person-years and 1 484 281 deaths). The excess mortality of divorced men compared to their married counterparts increases with time since divorce, while there is no such trend among divorced women. The pattern is opposite for the widowed, among whom mortality increases more sharply with time since bereavement for women than for men, though the increase is modest for both sexes. The remarried have higher mortality than the first-time married, with one surprising exception: men who have remarried after a period of less than 10 years as divorced or widowed have the same mortality as the married. There is no clear association between mortality and time since remarriage. We discuss possible reasons for these patterns.

### 13-3. IN SICKNESS AND IN HEALTH: THE ROLE OF MARITAL PARTNERS IN CANCER SURVIVAL

*Astri Syse and Torkild Hovde Lyngstad*

*EMail: astrisy@gmail.com*

Cancer mortality is associated with marital status, with married persons having a survival advantage relative to others. Underlying mechanisms appear unclear, but some research suggests that persons with partners have better general health at diagnosis which is favorable for tolerating cancer treatment and thus prolongs survival, that having a partner is associated with earlier contact with health personnel in general and when one suspects something is wrong, and that having a partner at time of diagnosis will help ensure more optimal treatment and follow-up care, which in turn affects survival positively. All these suggested mechanisms invoke the mere presence of partners, but it is likely that partners bring varying amounts of resources into the household and that these resources of various types may produce differentials in survival net of own resources. The present study examines the role of marital partners' sociodemographic characteristics for cancer survival. Data on complete birth cohorts were obtained from the Cancer Registry of Norway, with other variables linked from different national registers through personal identification numbers. Data on the patients' spouses at time of diagnosis were linked through unique family numbers. Altogether, more than 280,000 patients diagnosed with their first cancer after age 50 during 1975-2008 were included. We studied gross differences in survival by partners' education and age. Next, we assessed the impact of these partner characteristics net of stage differences at diagnosis and other illness characteristics. Lastly, we simultaneously studied the impact of the resources of patients and their partners. Our results clearly indicate that partners' characteristics matter for survival. The relative survival of patients with highly educated partners, net of their own education, is significantly higher than that of patients with lesser-educated partners. Thus, the naïve perspective of only considering the presence of partners will conceal important differences in survival among cancer patients.



#### **13-4. THE RELATIONSHIP BETWEEN HOUSEHOLD WELFARE AND INFANT MORTALITY IN TURKEY: EVIDENCE FROM TDHS-2008**

*Baris Ucar*

*EMail: ucarbaris1@hotmail.com*

This study tries to understand whether there is a relationship between infant mortality and household welfare in Turkey. Data from TDHS-2008 was used in this study. Wealth index was used to measure household welfare. Besides descriptive analyses logistic regression method was realized to understand the determinants of infant mortality for the 1998-2008 birth cohort. In the descriptive analyses it was seen that infants were more likely to die in the poor households. While infant mortality rate is 11,6 in the rich households, it is 17,3 in the middle wealth group households and as high as 35,8 in the poor households. Although wealth index has an effect on infant mortality when no other determinant is included in the model, the results of the logistic regression showed that wealth index is not a determinant of infant mortality when other factors are included in the model. This implies that when other factors are equalized wealth index does not have an effect on infant mortality. Besides smoking in the house, some of the maternal factors such as preceeding and succeeding birth intervals, and age of mother at birth were found to be effective on infant mortality in the final model. Also a model was constructed for different wealth groups. Analyses on the determinants of infant mortality in poorer households shows that besides the determinants of infant mortality in the general model, for poorer households sex of the child, health insurance status and family type was found to be significant. The explanatory power of the model for poorer households was lower than that of the general model.

#### **13-5. SEX RATIOS AT SEXUAL MATURITY AND LONGEVITY: THE EVIDENCE FROM SWEDEN**

*Kieron Barclay*

*EMail: kieron.barclay@sociology.su.se*

This study uses Swedish register data to test the recently proposed hypothesis that imbalances in the sex ratio at sexual maturity may affect longevity (Jin, Elwert, Freese and Christakis, 2010). The study, published in *Demography*, by Jin et al. (2010) found support for this hypothesis in the United States for males, but not for females, with a higher proportion of males decreasing longevity. I replicate part of that study using population data from the Swedish administrative registers. Sex ratios were calculated using 1960 census data, and the sample group was followed until 2007, the latest point for which data is available. Using the exact same specifications for the calculation of the sex ratio, I find no support for the hypothesis in Sweden for either males or females. I then adjusted the age ranges within which the sex ratio was calculated, to reflect differences between Sweden and the United States in terms of patterns of cohabitation and mean ages for marriage and childbearing. I calculated sex ratios for two further age ranges: males aged 18-20 and females aged 16-18; and, males aged 20-32 and females aged 18-30. The results from these analyses indicate that a higher proportion of males at sexual maturity is significantly associated with mortality risk before the age of 65 for females, but not for males. These results lend tentative support to this hypothesis, but it is possible the sex ratios calculated within geographical units of various sizes do not accurately reflect the actual environments that individuals are exposed to. Further analyses for the final version of this paper will include looking at how sex ratios are associated with mortality risk for males and females over the age of 65, and analyses using sex ratios calculated with school data.

#### 14-1. GRANDPARENTS AND WOMEN'S PARTICIPATION IN THE LABOR MARKET

*Paula Albuquerque and José Passos*

*EMail: pcma@iseg.utl.pt*

The reconciliation of work and family life represents a challenge for most women. The different ways of combining work and childcare include part-time employment, the use of formal care and the use of informal care (which typically consists of care provided by grandparents). Informal childcare has, in fact, been the least studied of these alternatives. Many studies have confirmed the important role played by the availability and cost of formal childcare, as well as its public provision, in determining women's participation in the labor market (Stier, Lewin-Epstein and Braun 2001; Uunk, Kalmijn and Muffels 2005; Marcos 2006; Connelly 1992; Connelly and Kimmel 2003; Del Boca 2002; Del Boca, Pasqua and Pronzato 2007). However, informal childcare still remains under-researched (Kalb 2009). In this paper, we investigate whether the care provided by grandparents has a measurable impact on the participation of mothers in the labor market. We use data for Southern European countries. Most of the data used are taken from the second round of the European Social Survey (ESS) – 2004/2005. The econometric model used to estimate the impact of the use of care by grandparents on the probability of a mother of young children to work is the switching probit. This modeling strategy is indicated in situations of suspected endogeneity when both the explained variable and the explanatory variable of interest are dummies. We find that a mother of a child up to six years of age has a higher probability of working if she lives in a region with a lower unemployment rate, lives with a partner, especially one with low income, has a smaller number of children, has a higher level of education and makes use of the help provided by a grandparent to take care of the youngest child.

#### 14-2. TRENDS IN THE PREVALENCE OF GRANDPARENT HOUSEHOLDS IN SELECTED EUROPEAN COUNTRIES AND THE UNITED STATES

*Giorgio Di Gessa, Rachel Stuchbury, Eloi Ribe Montserrat, Anthea Tinker, Debora J. Price and Karen F. Glaser*

*EMail: giorgio.di\_gessa@kcl.ac.uk*

Our aim is to investigate trends in the prevalence of grandparent households over time (i.e. households including a grandparent-grandchild dyad) in selected European countries and the United States. We will also identify the socio-economic and demographic characteristics associated with variations in such households. Given changes in family behaviour (e.g. rises in divorce and step-families) and improvements in longevity, family ties among extended family members are likely to become more important, such as those between grandparents and grandchildren (Bengtson, 2001; Hagestad, 2006). Research from the U.S. has shown significant increases in the prevalence of multi-generational and grandparent-headed households. However, to date little is known in Europe about trends in grandparent households, the characteristics of these households, and how these characteristics vary across Europe. Given the important role that grandparents play in family life, a better understanding of grandparent households is likely to shed new light on a key aspect of grandparent care: those co-residing with grandchildren (Lewis, Campbell, & Huerta, 2008). Thus using the Integrated Public Use Microdata Series International (IPUMS) and the ONS Longitudinal Study for England and Wales we will use multivariate techniques to investigate how grandparent households vary across selected European countries and the U.S. and changes in the prevalence of adults living in these households over time. Preliminary results show increases in the prevalence of those aged 40 and over living in grandpar-

ent households in the United States since the 1980s. By contrast, of the European countries considered, only Romania shows a similar rise.

#### **14-3. HOW DOES FAMILY POLICY IMPACT ON GRANDPARENTAL CARE OF CHILDREN? A COMPARATIVE STUDY OF ITALY, THE UK AND THE NETHERLANDS**

*Debora J. Price, Eloi Ribe Montserrat, Anthea Tinker, Rachel Stuchbury, Giorgio Di Gessa and Karen F. Glaser*

*EMail: debora.price@kcl.ac.uk*

Our aim is to consider the family policy environments of contrasting European countries to determine the extent to which these environments support, encourage or assume grandparental care. In addressing these questions, in contrast to previous approaches, we consider that family policies cannot be considered in isolation but must be embedded both in wider policy frameworks affecting family life and in the social and cultural context of the organisation of work, family, retirement and care in each country. We look not only at the individual and social rights conferred by policies, but also at how they operate in practice across generations. We therefore conceptualise grandparenting as taking place within complex policy environments. Both parents and grandparents are living within culturally specific labour markets and families, and these may impact differently on people of different ages and generations. Using the exemplars of Italy, the Netherlands and the UK, we tabulate a range of policies in each country, critically assess the policy logics in terms of (1) intergenerational gender, family and care relations, and (2) engagement with the labour market, and then (3) integrate this analysis with a raft of indicators that measure country specific cultural and structural factors. Finally, we relate this analysis to the demography of grandparental care in each country. We find a complex set of limitations and conditions interact with cultural imperatives, values and norms. We test how gendered policy logics and care logics and structures may force, interact with and set limits to mothers' and grandmothers' participation in the labour force, thereby constructing and shaping intergenerational support.

#### **14-4. A COHORT COMPARISON OF OLDER CHINESE GRANDPARENTS CARING FOR THEIR GRANDCHILDREN IN RURAL CHINA**

*Merril Silverstein and Zhen Cong*

*EMail: merrils@usc.edu*

We examined how recent changes in family size, economic resources, education, and health in rural China have altered the degree to which grandparents care for their grandchildren. Using the Longitudinal Study of Older People in Anhui Province, we compared two cohorts of grandparents aged 60-68 years surveyed in 2001 (N=553) and 2009 (N=370). Descriptively the cohorts were no different in their grandchild care provisions. However multivariate path models revealed that forces driving cohort change worked in opposite directions. Having smaller families, fewer grandchildren, fewer migrant sons, and better educated adult children reduced childcare in the 2009 cohort. Lower levels of depressive symptoms enhanced the provision of grandchild care, and better physical health increased the odds of providing full-time custodial care in this later cohort. We conclude that social change in China has reduced the demand for grandparents to provide care but increased their capacity to do so, producing a dynamic equilibrium.

#### **14-5. FERTILITY AND CHILDCARE: THE ROLE OF GRANDPARENTS**

*Fleur Thomese and Aart C. Liefbroer*

*EMail: g.c.f.thomese@vu.nl*

This paper explores the involvement of grandparents in the care for young children and its effects on subsequent child births three years later in the Netherlands' Kinship Panel Study, a cohort of 1,484 Dutch men and women aged 18-49. Three theoretical explanations are tested. Rational choice explanations focus on the needs and opportunities of the parents and grandparents; norm-based explanations put forward the preference of the parents for family child care, and evolutionary theory focuses on the effectiveness of grandparental investments in enhancing fitness. Findings show that needs and opportunities inform the involvement of grandparents. The extent of involvement however depends on the parents' preferences for care from relatives, and there is a clear maternal tilt as evolutionary theory predicts. Involvement of both maternal and paternal grandparents in turn increases the likelihood of additional childbirths. The most likely explanation for this effect is the evolutionary kin influence hypothesis.

#### **14-6. UNMARRIED GRANDPARENTS PROVIDING CHILD CARE IN ITALY AND ENGLAND: A LIFE-COURSE APPROACH**

*Cecilia Tomassini*

*EMail: cecilia.tomassini@unimol.it*

Ageing populations, and other demographic changes such as more mothers in the labour market and higher levels of relationship breakdown, indicate that grandparents are likely to play an increasingly significant role in family life. This is particularly true in countries, as in Italy, where there is more limited formal childcare provision or in countries, as in England, where the supply of care services for children has different options (public and private). With some important changes in the new generations of grandparents (e.g. increased proportion of divorced grandparents, changes in proximity, more older people driving, etc...), we are interested to explore how unmarried grandparents take care of their grandchildren. We particularly focus on how different aspects of family life (e.g. timing of marital disruption) and characteristics of the family structure (number of children and grandchildren, competing demands from different sets of grandchildren) may have an impact on the involvement of unmarried older people in children care. Using the retrospective information on two large Italian and English datasets combined with actual demographic and socio-economic characteristics, we will explore whether and how much unmarried older people take care of their grandchildren in two different political and cultural contexts.

#### **15-1. UNRAVELLING GENE-ENVIRONMENT INTERACTION AND FERTILITY**

*Jornt Mandemakers, Felix Tropsf, Nicola Barban and Melinda Mills*

*EMail: j.j.mandemakers@rug.nl*

There has been a massive delay in the age at first birth across Europe since 1970. Explanations for changes in fertility behaviour in demography have almost exclusively relied on socio-environmental factors. The role of genetic endowment and their interaction with the environment (gene-environment interaction (GxE)), has been scarcely investigated. However, an increasing body of literature indicates an interplay between genetics, environment and fertility. Some studies demonstrate the existence of an important genetic component on number of children and age at first child using data from the Danish Twins registers (Kohler et al. 1999; Kohler and Rodgers 2003; Rodgers et al. 2008). Many human traits

and behaviours result from both genetic and environmental factors. Genes provide the potential for a trait, but environmental conditions determine whether that potential will be realized. To understand GxE interactions, we must evaluate the estimated heritability of a trait in a particular environment. The extent to which people can modify their fertility behaviour depends on socio-cultural and economic circumstances. To test this hypothesis and to gain further knowledge on what kind of environmental factors are most important for human fertility behaviour we need to undertake heritability analyses of twins in different environments. The aim of this study is extend existing research on this topic by estimating the heritability of fertility behaviour (e.g., age at first birth) in the context of the UK. Specifically, we will compare the heritability in different cohorts, separate in time and space and compare within cohorts of twins born in diverse social backgrounds. The UK is an important case to study since the fertility regime differs from Denmark, it has a less homogeneous and more ethnically diverse population and is a less egalitarian society, likely leading to larger differences in twin environments.

## **15-2. INTERGENERATIONAL CONTINUITIES IN CHILDBEARING IN DEVELOPED COUNTRIES**

*Michael Murphy*

*EMail: m.murphy@lse.ac.uk*

The relationship between fertility of parents and children has been designated as ‘weak’ by many investigators who have looked at this topic. This paper reviews the evidence over the past century and argues that, even allowing for problems with available data sources, the relationship was generally close to zero but slightly positive for pre-transitional populations, but that it has tended to become more substantial over time in developed countries and it is now of a similar order of magnitude as widely used explanatory variables such as female educational level. Questions about intergenerational fertility have recently been included in large-scale surveys in developed countries including the Fertility and Family Surveys (FFS), International Social Survey Programme (ISSP) 2001 round, the Generations and Gender Programme (GGP) and one large UK national source (UNSOC). These databases considerably extend the number and types of countries for which such information is available. Two main research questions are addressed. The first is to establish how far the increase in the strength of the relationship has continued and how far similar patterns hold for other areas of the World with similar levels of development. The second research question is how far the simple correlations between fertility of parents and children can be explained by differences between population subgroups such as by educational level or religion. The first question is addressed by presenting correlations of fertility of successive generations. The second question is addressed by presenting generalised linear models to assess the relative strength of inherited fertility, educational level and religious attendance across a wide range of countries.

## **15-3. DOES FERTILITY BEHAVIOR SPREAD AMONG FRIENDS?**

*Nicoletta Balbo and Nicola Barban*

*EMail: n.f.g.balbo@rug.nl*

This paper investigates how social interactions among friends shape fertility. We specifically examine whether and how friends’ fertility behavior affects an individual’s transition to parenthood. By integrating insights from economic and sociological theories, we elaborate on the mechanisms via which interactions among friends might affect an individual’s risk of becoming a parent. By exploiting the survey design of the Add Health data, we follow a strategy that allows us to properly identify interaction effects and distinguish them from

selection and contextual effects. We engage in a series of discrete time event history models with random effect at the dyadic level. Results show that, net of confounding effects, a friend's childbearing increases an individual's risk of becoming a parent. We find a short-term, curvilinear effect: an individual's risk of childbearing starts increasing after a friend's childbearing, it reaches its peak around two years later, and then decreases.

#### **15-4. COMPARATIVE ANALYSIS OF INTERGENERATIONAL INFLUENCES ON FERTILITY IN THE DEVELOPING WORLD**

*Kristin Snopkowski and Rebecca Sear*

*EMail: kristin.snopkowski@lshtm.ac.uk*

The question of why people have the number of children that they do has still not been fully answered. We test the hypothesis that one factor may be the influence of kin on fertility. We present the results of a systematic review of all published studies which have investigated correlations between the presence of kin and female fertility. This review demonstrates substantial evidence that the presence of family members is correlated with fertility, but these results do not always show consistent relationships. In some cases, particularly in high fertility societies and particularly for a woman's in-laws, kin increase fertility rates (by reducing birth intervals and increasing total number of offspring born), but in low fertility societies and for a woman's own parents, kin may slow down fertility (by increasing birth intervals and increasing offspring survivorship). This literature is, however, very varied, so that we then analyse Demographic and Health Surveys (DHS), to determine the influence of kin availability on fertility using consistent methodologies across a range of populations. We look at the effect of different kin members on fertility indicators, including age at first birth, birth spacing and total children born as mediated by maternal and child health outcomes, including birth weight, health of offspring, percentage of necessary immunizations and weight for age percentiles in 28 different countries. Additionally, contraceptive uptake is analyzed as another route by which kin may influence fertility outcomes. These analyses demonstrate that different kin members impact fertility in unique ways that are mediated by cultural constraints.

#### **15-5. FERTILITY AND PERSONAL NETWORKS: THE MEANING OF CHILDREN IN FRIENDSHIPS AMONG MEN**

*An-Magritt Jensen*

*EMail: anmagritt.jensen@svt.ntnu.no*

The hypothesis of "the low fertility trap" (Lutz et al., 2007) claims is that: "The fewer the children belonging to the environment that the young people experience, the lower the number of children that will be part of their normative system in terms of what is a desirable life" (op.cit. 13). While most European countries have experienced very low fertility for a long period, the TFR in Norway has increased since the mid-1980s and is now among the highest in Europe. Paradoxically, during the same period childlessness among men has also grown. More men live without children and the "child environment" is increasingly gendered. This paper concentrates on young people's "child environment" through the perspective of men primarily. The analysis is based upon the project "The Social Meaning of Children" financed by the Research Council of Norway with Anne Lise Ellingsæter, An-Magritt Jensen and Merete Lie as project leaders. The data is semi-structured interviews of 90 women and men in their prime reproductive ages (25-40 years), with and without children, from upper middle and working classes and selected from two large Norwegian cities during 2010. The network analysis focuses on the role of friends in particular, emphasising the concepts of social influence and social learning (Mische, 2011; Rossier

and Bernardi, 2009). A preliminary observation suggests that friend-networks in relation to children are highly gendered. Few men discuss childbearing with other friends. Their female partner's friends seem to play a larger role of social influence in childbearing, than men's own friends. However, not-(yet) fathers pick up what happens to their own friends after a child birth. This social learning can both be positive and negative for their own willingness to have children.

#### **16-1. LIVING ALONE OR IN A COUPLE: WHAT IMPACT ON THE CAPACITY OF EUROPEAN ELDERLY MEN AND WOMEN TO BALANCE THEIR BUDGET?**

*Patrick Festy, Joëlle Gaymu and Marc Thévenin*

*EMail: festy@ined.fr*

A lot of research has dealt with economic living conditions of elderly Europeans. Women, persons living alone and people residing in the South of the continent generally have a more fragile material situation than men, couples and those in the North or the center. Our paper moves beyond objective disparities; it relies on a more "subjective" measurement of economic living conditions of elderly Europeans, using survey questions on perceived difficulties to balance one's budget. From data of the second wave of SHARE, we define the determinants of elderly persons' declarations of difficulties in making both ends meet.

#### **16-2. WHO BENEFITS THE MOST FROM A TERTIARY DEGREE? A CROSS-NATIONAL COMPARISON OF SELECTION AND THE ECONOMIC RETURNS TO POST-SECONDARY EDUCATION**

*Jennifer A. Flashman and Renee Luthra*

*EMail: jennifer.flashman@yale.edu*

Given a limited amount of resources and the prospect of an extended recession, it is critical to understand what is gained from the often substantial investments in post-secondary education by both individuals and the state. In this paper, we ask two questions: 1) What are the returns to a university education? and 2) How do these returns differ across country contexts? Drawing on panel data and matching techniques, we explore the covariation between the propensity to complete a university education and its economic returns. We utilize a cross-national approach, comparing parallel analyses of three country cases: the United States, the United Kingdom, and Germany. The educational characteristics of institutions in these three countries vary widely and this variation should lead to different returns to a university degree. By taking this approach, we can begin to discover in what educational contexts those most likely to benefit from a university degree actually attain one. Our initial findings reveal surprising consistency in the negative relationship between the propensity to complete college and its income returns in early adulthood. At age 33, English and Welsh men with the lowest propensity to attend university receive the greatest benefit from a university education. Men with propensities between 0 and .1 would increase their earnings 28% if they attended college. By contrast, men who are almost certain to attend college, with propensities between .8 and 1, would increase their earnings by only 4% if they attended college. These results mirror results from the United States: men with the lowest propensity to attend college stand to gain a 35% increase in earnings, whereas men at the highest propensity levels (.6-.8) would gain only 8%. The lower cost of University attendance in the UK does not appear to alter negative selection in terms of expected returns.

### 16-3. THE IMPACT OF EDUCATIONAL HOMOGAMY ON LITERACY LEVELS

*Joan Garcia Roman, Iñaki Permanyer and Albert Esteve*

*EMail: jgarcia@ced.uab.es*

In this paper we explore the impact that increases in homogamy levels have had on corrected literacy levels, the later being defined as classical literacy rates corrected by the way in which literates and illiterates are allocated across households and penalizing those distributions with high levels of literacy segregation. In order to disentangle the joint effect that homogamy levels and education expansion have had on corrected literacy levels we have developed a new measure that combines into a single dimension the joint effect of both factors at the same time. Based on IPUMS and DHS data for 73 countries and 217 samples, our results suggest that increases in the preference for homogamy have not been strong enough to prevent educational expansion to reach an expanding number of layers of the population and increase corrected literacy levels all over the world. Nevertheless, corrected literacy rates would have been on average 7% higher had it not been for homogamy preferences.

### 16-4. DOES LONE MOTHERHOOD INDEED DECREASE WOMEN'S SUBJECTIVE WELL-BEING?

*Anna Matysiak, Anna Baranowska and Monika Mynarska*

*EMail: amatys@sgh.waw.pl*

This paper contributes to the discussion on the effects of single motherhood on happiness. We use a mixed-method approach. First, based on in-depth interviews with lone mothers who gave birth out of wedlock, we explore mechanisms through which children may influence mothers' subjective well-being. In the second step we analyze panel survey data to quantify this influence. Our results leave no doubt that raising a child outside marriage poses many challenges, but at the same time parenthood has some positive influence on lone mother's life. Our qualitative evidence shows that children are a central point in unmarried women's life, and that many lifetime decisions are taken with consideration of the child's welfare, including escaping from pathological relationships. Our quantitative evidence shows that although the general level of happiness among unmarried women is lower than among their married counterparts, raising a child does not have a detrimental effect on their subjective well-being.

### 16-5. YOUNGSTERS, FAMILY CHARACTERISTICS AND STUDY INVOLVEMENT

*Sarah Botterman, Nele Havermans and Koen Matthijs*

*EMail: sarah.botterman@soc.kuleuven.be*

Education is a social stratification mechanism that divides the haves from the non-haves. As a consequence, several research efforts have investigated the relationship between family characteristics and youngsters' educational outcomes. In this paper, special focus is placed on the subjective indicator of study involvement. Next to the effect of parental divorce, also intermediating factors that often coincide with a divorce are taken into consideration. In this way, the financial problems at home, the presence of parental conflict and the quality of the relationship between youngsters and their father and mother are considered possible explanatory factors of study involvement. As results show, divorce has a clear negative effect on study involvement, yet, its effect reduces as parental conflict and a bad relationship with mother and father have more substantial effects on study involvement. Additionally, we look at interaction effects between divorce and the important mediating factors of parental conflict and the relationship between youngsters and their



mother and father. The interaction terms relating to divorce and quality of relationship with mother and father yield no significant results. Nonetheless, results show that there is a positive and significant interaction term of parental conflict and divorce, meaning that in case of a divorce, parental conflict has a less negative effect on the level study involvement for youngsters than when youngsters' parents are still together.

#### **17-1. HAVING CHILDREN AT A DISTANCE: TRANSNATIONAL FAMILY CONSTITUTION AMONG MALE MIGRANTS TO FRANCE SINCE THE 1960S**

*Tatiana Eremenko*

*EMail: tatiana.eremenko@ined.fr*

International migrants are portrayed either as individuals making a unidirectional move, settling permanently in the destination country and bringing their families, or constantly mobile persons evolving in transnational spaces. However migrants' family histories draw a more complex picture. Since the 1960s male migrants arriving in France found themselves living separately from their spouses for years. One consequence of the immigrants' transnational family lives was the fact of having children born in their country of origin while they were residing abroad. This paper analyses the extent of this phenomenon and how it varies among different groups of migrants, as well as the factors determining this behavior. Descriptive statistics and event history models are applied to two survey samples of migrants residing in France: MGIS (1992) and TeO (2008). The phenomenon of having children at a distance seems to have decreased significantly over the last decades, suggesting that migrants families in the past lived in a transnational space than at present. This behavior is also correlated with other transnational practices such as having a property in country of origin or frequent visits there.

#### **17-2. TIMING PREFERENCES FOR FAMILY FORMATION AMONG IMMIGRANT AND MAJORITY GROUPS IN EUROPE**

*Jennifer A. Holland and Helga A. G. de Valk*

*EMail: holland@nidi.nl*

Timing preferences for family life transitions are indicative of how individuals perceive the life course. They provide insight into differential values and ideals across groups and are an innovative measure of immigrant adaptation. We use data from the European Social Survey (Round 3, 2006) to assess timing preferences for marriage and having a first child, for men and women of immigrant and majority group origin in 25 European countries. We build individual-level models to explore how timing preferences vary by immigrant status and regions of residence and origin. We find that both regions of residence and origin shape preferences, although the pattern and strength of the association vary by among immigrants. Results suggest that cultural and sociopolitical contexts play a role in determining timing preferences for all members of a society, irrespective of origin.

#### **17-3. RACIAL DISCRIMINATION AND GENDER RELATIONS: PATTERNS OF UNION FORMATION OF SUB-SAHARAN AFRICAN MIGRANTS LIVING IN FRANCE**

*Elise Marsicano, Nathalie Lydié and Nathalie Bajos*

*EMail: elise.marsicano@inserm.fr*

Whereas exogamy is considered a reliable indicator of immigrant's assimilation, we propose to study patterns of union formation taking into account racial discrimination experienced by immigrants groups. The purpose of this research is to describe and analyse patterns of union formation of Sub-Saharan African migrants living in France. We support

the idea these patterns are an indicator of racial boundaries produces in the French society and revealed gender-specific processes. Analyses are based on a French survey performed in 2005 among 973 women and 901 men born in a Sub-Saharan African country, living in Paris and its surrounding, and aged 18-49. Our results show that mixing – i.e. relations with partners born in a different country – is common, especially in non-cohabiting relationships. However, a significant proportion of respondents have a partner from a different Sub-Saharan African country. This intra-African segregation of sexual networks is likely to be favoured by living conditions of these populations in France. They experience racial discrimination in accessing housing and employment, which results in residential segregation in deprived areas and professional segmentation in devalued industries. These processes probably produce specific patterns of union formation, beyond national origin. Important gender differences arise in non-cohabiting relationships given that it is mostly intra-African mixing among women and extra-African mixing among men. Women's sexual networks may be less diversified, especially because of family reunification and of their poorer access to the job market. Moreover, this could be an indication of the gendered nature of sexual norms. The greater control over women's sexuality may therefore lead to a stronger constraint on their choice of a Sub-Saharan African partner.

#### **17-4. LEAVING THE NEST IN GERMANY: DIVERSITY ON THE AGE-RANGE AND MOTIVATIONS ACROSS BIRTH COHORTS AND ETHNIC GROUPS**

*Sergi Vidal and Diana Lopez-Falcon*

*Email: svidal@empas.uni-bremen.de*

Although there are mainstream claims on the de-standardization of the transitions to adulthood, the truth is that the age-range at which the majority of the population leave the parental nest for first time has been stable during the last decades in Germany. However, the stability on the timing of nest leaving has not prevented the pluralisation of motivations for residential independence and the subsequent new living arrangement situation. Indeed, the increase on student mobility and non-family living arrangements among young adults have lead to the decoupling between nest leaving and forming a family. In this article we study to what extent the increasing rate of foreign population over the young adult population in recent birth cohorts have impacted the dynamics of nest leaving in Germany. Socio-economic as well as cultural-normative differences between foreign origin families and the average population are claimed to be at the core of the opportunities of young adults to spring towards residential independence. We want to test to what extent foreign and native show differential patterns of nest leaving and whether the changing ethnic composition of the young adult population has polarising effects on the pathways to residential independence. For the analysis we use longitudinal data from the German Socio-Economic Panel (GSOEP) between 1984 and 2008. The method is based on regression analysis of event-histories and results will bring evidence on the variation of intensities of nest leaving and the motivations to do so. We will assess differences across birth cohorts and ethnic origins (i.e. Germans and Turks). The relevance of our findings will add to the debates on structural disadvantages at early stages of life based on ethnic-driven inequality.

#### **18-1. INCIDENCE AND DURATION OF CHILD-PARENT SEPARATION DUE TO INTERNATIONAL MIGRATION. SELECTION AND INTEGRATION EFFECTS**

*Cris Beauchemin, Amparo Gonzalez-Ferrer and Pau Baizán*

*Email: cris.beauchemin@ined.fr*

In the process of migration, families undergo profound transformations that are often complicated by extended periods of separation between loved ones. Governments of receiving

countries frequently trumpet their concerns about the potential multiplier effect of family-linked migration and periodically restrict new immigration grounded on family ties. In contrast, immigrants' associations and officials from the sending countries often complain about the tedious procedure of family reunification, and emphasize transnationalism as an increasingly common family arrangement. Yet, the empirical data to support any of these two positions is extremely limited and weak. In this paper we examine the incidence and duration of child-parent separations among Senegalese migrants, by utilizing the recently released data from the EU Project "Migrations between Africa and Europe" (MAFE). Our findings indicate that child-parent separation due to international migration is not a negligible issue for the Senegalese population. In 2007, approximately 16 percent of Senegalese children had been separated from one or both parents for at least one year during their childhood as a result of parental migration to Europe. Quite surprisingly, this percentage goes up to 31 if we focus exclusively on children of Senegalese origin born in Europe, which suggest a great deal of transnational practices among Senegalese migrants. In addition, these separations are relatively long, especially if the absent parent is the father. We examine the factors that affect the probability of ending child-parent separations, and whether these vary depending on the place where the separation ends, Europe or Senegal, by means of multinomial event history models. The preliminary results suggest important differences between the families in which parents decide to end separation from their children by returning to Senegal, and those who decide to bring the children to Europe.

## **18-2. THE IMPACT OF LABOUR MARKET DYNAMICS ON THE RETURN-MIGRATION OF IMMIGRANTS**

*Govert Bijwaard*

*EMail: bijwaard@nidi.nl*

Using administrative panel data on the entire population of new labour immigrants to The Netherlands, we estimate the causal effects of individual labour market spells on immigration durations using the "timing-of-events" method. The model allows for correlated unobserved heterogeneity across migration, unemployment and employment processes. We find that return probabilities increase unemployment durations for all immigrant groups, while re-employment spells typically delay returns. The precise quantitative impacts on migration durations depend on both the timing and lengths of the employment and unemployment spells, and are evaluated in several factual and counterfactual examples.

## **18-3. RETURN MIGRATION BY TIME SPENT IN SWEDEN**

*Christian Skarman*

*EMail: christian.skarman@scb.se*

The purpose of the study is to determine if taking time since immigration into account would help making better projections of the emigration. The study includes all persons that immigrated to Sweden 1997-2009. For this population event history analyses has been used in models containing the fixed variables sex, age at immigration, country of birth and reason for residence permit and the time varying variables citizenship, employment status and parenthood. The results show that the relationship between re-emigration and time in Sweden is strong among persons born in countries with a high development level and is nearly non-existent for persons born in countries with a low level of development. The results also show that the propensity to re-emigrate is much higher among work migrants than among refugees and it is more common to re-emigrate if one is male, younger, childless, unemployed and if that person does not have Swedish citizenship.

#### 18-4. THE RELATIONSHIP BETWEEN RETIREMENT INCOME AND RETURN MIGRATION AMONG MEXICAN ELDERLY IN THE US

*Alma Vega*

*E-Mail: [almav@demog.berkeley.edu](mailto:almav@demog.berkeley.edu)*

While recent decades have paid increased attention to Mexican immigration to the U.S., far less is known about return to the country of origin, particularly during later life. Elderly return migration potentially impacts U.S. spending on old-age support programs, selectivity issues regarding U.S.-residing elderly immigrants, and our general understanding of immigrant assimilation. This study determines the correlates of return migration among Mexicans aged 60 years and older in the U.S., paying particular attention to the role of retirement income. Using logistic regression techniques on the Integrated Public-Use Micro-data Series (IPUMS), it considers whether lower retirement income levels prompt Mexican immigrants in the U.S. to return migrate during later life. Preliminary results indicate that return migrants are more likely to be lower in the income distribution than those who stayed in the U.S. even after controlling for a battery of demographic variables. This finding suggests that retirement in the U.S. is a normal good for older Mexican immigrants in the U.S., the probability of which increases with higher income levels.

#### 18-5. SELECTIVITY OF THE RECENT RETURN MIGRATION TO POLAND

*Marta Anacka and Agnieszka Fihel*

*E-Mail: [marta.anacka@gmail.com](mailto:marta.anacka@gmail.com)*

In the wake of the 2004 EU enlargement Poland witnessed an exceptionally large outflow of its nationals. However, as noticed first by Ravenstein, each migration is accompanied by a compensating counter current consisting of persons who, for various reasons, decided to move back to the place of their own or their ancestors' origin. According to our estimates based on the Polish Labour Force Survey, the return migration to Poland started to intensify in 2007. The aim of this paper is twofold. First, we discuss possible estimates of comings back from various destination countries. Second, with the use of statistical indexes and an econometric model based on the LFS data we analyze the selectivity of returnees with regard to the main socio-demographic characteristics. We compare the obtained results with the previous studies on selectivity of the out-migration from Poland (Grabowska-Lusinska, Okólski 2009) and of return migration in the early 2000s (Fihel, Górny, Matejko 2006). Our analysis proves a strong selectivity of return migration: it is more likely for middle aged persons and migrants with vocational level of education. Geographical selectivity showed that the probability of coming back is higher in the case of persons staying in Germany than in Ireland, the United Kingdom and the United States. This result contradicts an intuitive presumption that returns should take place first from the countries seriously stricken by the 2007 financial crisis. Surprisingly, originating in rural area in Poland determines the propensity to return to the largest extent and we discuss possible explanations of this result.

### **19-1. OLDER DIVORCED AND WIDOWED PARENTS' DECISIONS AT THE START OF A NEW PARTNER RELATIONSHIP: MONITORING AND ANTICIPATING CHILDREN'S BEHAVIORS AND ATTITUDES. RESULTS FROM QUANTITATIVE AND QUALITATIVE RESEARCH**

*Jenny Gierveld and Eva-Maria Merz*

*EMail: gierveld@nidi.nl*

Using panel data from the Netherlands Kinship Panel Study (NKPS), wave 1 (N = 8,148) and wave 2 (N = 6,670), this study investigates several aspects of the process of repartnering of divorced and widowed older adults. Earlier research has shown that starting a new partner relationship is helpful in alleviating loneliness and many older adults without partners are interested to start a new intimate bond. However, the NKPS data showed that part of the older adults who started a new partner relationship opted for unmarried cohabitation or remarriage, others started a (long term) lat relationship. This study examined the determinants of lat versus unmarried cohabitation or remarriage via multivariate analyses. Data showed sharp differences between respondents: parents more frequently opt for long-standing lat relationships, childless older adults more frequently opt for transitional lat relationships followed by unmarried cohabitation or remarriage. Additionally, and based on in-depth interviewing of a selection of the NKPS parents who repartnered (n of the qualitative mini panel = 46; mean age is 65), parents' considerations behind the decision for lat or for sharing a new composite household were investigated. In this paper particularly the intergenerational bonds between older parents and their children was studied. Data showed that a majority of parents was involved in 'boundary work': parents tended to take into account the (anticipated) negative comments and behavior of their children concerning the new partner, by explicitly aiming at protecting the family realms from intruders. Other parents explicitly refrained from this boundary work and provided motives for prioritizing their own (future) well-being by forming a new (composite) household with the new partner.

### **19-2. GROWING UP IN A BLENDED FAMILY OR A STEP FAMILY. WHAT IS THE IMPACT ON EDUCATION?**

*Donna K. Ginther and Marianne Sundström*

*EMail: dginther@ku.edu*

This paper studies the incidence and the long-term impact of growing up in a blended family or a step family on children's educational outcomes in Sweden. We use a random sample of almost 36,000 children born in Sweden from 1964 to 1965 who have been matched to all their siblings born in 1960-1970, for a total sample size of over 95,000 children. Childhood family and siblings structure is inferred by tracing the relationship between biological parents, co-resident and non-resident siblings using the bi-decennial censuses combined with the Swedish multigenerational register. These children are followed into adulthood and the impact of family and sibling structure on their educational outcomes examined. The cross-section results indicate that growing up with half siblings is negatively correlated with educational attainment. Children who live in traditional nuclear families get more schooling than those in other family structures, while children who live with a single parent get the least. To assess causality we estimate sibling-difference models and our preliminary findings show that living with a single parent or a stepparent have negative effects on educational attainment, as compared to living with both biological parents. In line with this, joint children in blended families have better educational outcomes than their half siblings and this difference is larger in stepfather families than in stepmother families. One possible explanation for this interesting finding is that the father in the blended family does not share his income equally between his 'own' children and his step children.

### 19-3. TWO-HOME RESIDENTS: LONG-LASTING OR TRANSITORY FAMILY SITUATION? THE CASE OF FRANCE

*Laurent Toulemon and Sophie Pennec*

*EMail: toulemon@ined.fr*

With the increasing diversity of family situations, more people, children as well as adults, now 'usually' live in more than one dwelling. The significance of the "two-home" family situations heavily depends on whether they are long-lasting or transitory. The aim of this paper is to describe the transitions into and out of the different "two-home" situations, in order to better describe the dynamics of these situations and to understand their place in the family biographies of adults and children. In a preliminary presentation at the 2009 IUSSP conference (<http://iussp2009.princeton.edu/abstractViewer.aspx?submissionId=93441>), we used the three first waves of the French EU-SILC survey (2004, 2005 and 2006). We found that having two homes is a relatively frequent and temporary situation. Some 3 to 4% inhabitants have two homes, with a first mode of 11% at age 20, and a secondary mode widespread between ages 55 and 90; between one third and one half of two-home people at one point in time have become one-home residents one year later. We estimated the proportion of ever multi-resident and the mean duration of an episode of multiresidence: a mover-stayer model was used to estimate the entries into multiresidence by age, and a model with exponential exits from multiresidence, with a group of "short-term commuters" whose the episodes were shorter than one year. The aim of the current proposal is twofold: first, to use the six available waves (2004 to 2009) in order to estimate more accurately the parameters of our models of population heterogeneity: heterogeneity was found to be large but very difficult to estimate with three waves only. Second, to describe the very diverse family situations and transitions related to temporary or long-lasting episodes of multiresidence.

### 19-4. FAMILY STRUCTURE, PARENT SEX AND CHILDREN'S EMOTIONAL WELL-BEING

*Jani Turunen*

*EMail: jani.turunen@sociology.su.se*

This paper focuses on gender differences in emotional well-being of adolescents in five different family settings; original two-parent families, single mother-, single father-, mother/stepfather- and father stepmother families. It analyzes two main mediators; economic deprivation and parental socialization. The analysis is based on unusually rich data from the child supplements of the Swedish Level of Living study (LNU) from 2000 and the Surveys of Living Conditions (ULF) from 2001, 2002 and 2003. The results show significantly lower well-being of children in single mother and stepfamilies. These associations are mainly mediated through economic deprivation in single mother families and through parental socialization in stepfamilies. Controlling for both economy and parenting, we find lower well-being levels for boys and girls aged 16-18 years in single mother families and for boys aged 13-15 and girls below age 16 in stepfamily setting compared to their peers in early adolescence in original 2-parent families. The results indicate clear age and gender differences in psychosomatic wellbeing as we see lower well-being levels in mother-stepfather families and a negative age gradient for girls, and negative association for boys in single mother families but no differences by age.

#### 19-5. ENTANGLED IN A COMPLEX NETWORK OF FAMILY RELATIONSHIPS: THE QUALITY OF THE STEPPARENT-STEPCHILD RELATIONSHIP WITHIN DIFFERENT CUSTODY ARRANGEMENTS FOLLOWING PARENTAL DIVORCE

*Sofie Vanassche, Koen Matthijs and Gray Swicewood*

*EMail: sofie.vanassche@soc.kuleuven.be*

Custody arrangements following divorce and stepparent-stepchild relationships are inter-related in a complex way. The increasing number of children living in joint physical custody following parental divorce can have different consequences for the quality of these relationships: closer relationships with both biological parents, the higher risk on role ambiguity in more complex family systems and differences between part-time and fulltime step relationships can have different effects on the quality of the relationship between stepchild and stepparent. Using data from the research project Divorce in Flanders (DiF) we study how the custody arrangement following divorce is associated with the quality of the stepparent-stepchild relationship. We test the importance of fulltime and parttime co-residence, the importance of a limited childrearing role of the stepparent, the possibility of positive spillover effects of good parent-child and partner relationships and the danger of role ambiguity within complex family systems. We compare the results for the reported relationship quality by respectively stepparent and stepchild and compared to the relationship with both parents. This multi-actor perspective has both theoretical and methodological advantages.

#### 20-1. DETERMINANTS OF 'AGEING IN PLACE' IN CONTINENTAL EUROPE

*Celia Fernández-Carro and Juan A. Módenes*

*EMail: cfernandez@ced.uab.es*

'Ageing in place' is the widely extended and preferred residential way of ageing in western societies (Costa-Font, 2009). This concept refers to the capacity of older population to remain in their own home as long as possible despite changes in their needs (Means et al., 2008) and, normally, until some disability forces them to move to an institution. This residential feature is especially relevant due to the consequences of a longer life, as the increase in the length of time that the elderly live independently in their own dwellings (Tomassini et al., 2004; Oswald & Wahl, 2005). Even so, there is a few studies focused on explore the determinants that shape this kind of residential choice among elderly (Sabia, 2008). This paper aims to contribute to the best understanding of elderly residential preferences measuring the duration that elderly live in their own dwellings depending on socio-demographic characteristics, family composition and contacts, and dwelling conditions. Special attention is paid to the kind of support that the older households give/receive as determinant of the timing of ageing in place. The second objective is to compare the residential behavior of the elderly in some European countries in terms of stability, exploring the influence that each welfare system has on the 'ageing in place' patterns. The data for the analysis will be drawn from the Survey of Health, Ageing and Retirement in Europe, using the 2004 and 2007 waves. This paper uses regression models to estimate how long elderly remain in their private homes and which determinants shape their decisions.

## 20-2. OLDER TURKISH MIGRANTS IN GERMANY: WHY DO THEY HAVE A HIGHER RISK OF FEELING LONELY?

*Tineke Fokkema and Robert Naderi*

*EMail: fokkema@nidi.nl*

The embedment of older people is due to the demographic transition in the most developed countries an important social question. This does not only affect the intergenerational relation and actual networks. It is also a question if and how older people feel embedded or lonely. This question is even more important looking at migrant populations. Many of the first generation immigrants in Germany are retired and do not intend to return to their country of origin for several reasons. It is a common belief that older migrants are, on average, lonelier than their native-born counterparts. Coping with differences in culture and social norms, language difficulties, adverse health status, economic hardship, being home-sick, missing and worrying about their families and friends left behind, and the return-or-stay dilemma are often cited as the primary causes of their higher levels of loneliness. In this paper, we will examine the differences in the prevalence of later-life loneliness and its determinants between Turkish older migrants, aged 50-79, living in Germany and their German peers with no migration background. The data are from the first wave of the German Generations and Gender Survey (GGS) conducted in 2005, and an additional survey from 2006 of Turkish nationals in Germany. For the comparison only Germans without migration background are included to the analysis. To identify the factors explaining possible differences in loneliness among the two groups, multivariate regression analyses will be performed using the six-item De Jong Gierveld Loneliness Scale as dependent variable. Aim of this paper is to understand differences in loneliness between the two populations in Germany and to find explanatory factors.

## 20-3. THE “STAYERS”. LIFE-LONG SEDENTARY BEHAVIOUR, FAMILY AND AGEING IN SWEDEN

*Anna Hjältn*

*EMail: anna.hjalm@geography.umu.se*

Although “staying”, in the sense of not moving, is a common feature in human life, it remains heavily under researched. Among the few studies addressing the life and decisions of non-migrant we find register studies focusing on economical effects and reasons for sedentary behaviour and survey based studies focusing on what place characteristics make people stay. Less is known about sedentary behaviour from a family or network perspective. From this point of view it is possible that the “stayers”, as they may have many long-term relationships – to the house, the place, the view, the friends and family, have a broader social network – or – that the “staying” behaviour has rendered those staying put a lot of “broken” links in the network, when others moved away and familiar settings changed. In an ageing society, where social networks has been shown to be of importance for old age well-being, this notion of long relationships or broken links calls for attention. In this study, a work in progress, the focus is set on the extreme end of the migratory scale – the life long “stayers” and their families. In the study the behaviour of Swedish born citizens aged 60 and older is explored using both qualitative and quantitative data. In an initial part some descriptive statistics of “staying” and family, and the possibilities and limitations of Swedish register data is explored, using longitudinal micro-level population data from the Linnaeus Database. The second part of the paper, based on interviews with life long “stayers” in the town of Umeå, Sweden, seeks a fuller understanding of how life long staying and the effects on social networks is understood and described by those living it.



#### **20-4. MIXED BLESSINGS? THE CHANCES OF LEAVING AN INHERITANCE AMONG IMMIGRANTS AND NATIVE-BORN ELDERLY POPULATIONS IN EUROPE**

*Albert Sabater*

*EMail: asabater@ced.uab.es*

**Introduction:** It is widely acknowledged that intergenerational transfers are a major source of social bonds. In Europe the setting up of welfare systems and the widespread existence of pensions systems have been crucial in making older people as providers of financial support to their offspring. Whilst abundant literature has dealt with the description and explanation of intergenerational transfers, little is known still about the patterns of downward financial flows to younger generations via inheritance between immigrants and native-born elderly populations. **Aim:** Of importance here is to assess the differences in the chances of leaving an inheritance among various immigrants and native-born elderly populations in Europe. This paper makes two specific contributions. First, it assesses the probability of leaving an inheritance based on nativity, immigrant origin, age at migration and duration of residence. Second, it sets out cross-region and country differences in the chances of leaving an inheritance. **Data:** The study uses data from the Survey of Health and Ageing and Retirement in Europe (SHARE), which allow us to provide comparative evidence between people aged 50 and for 11 (wave 1) and 14 (wave 2) European countries. **Results:** The odds of leaving an inheritance are significantly lower for immigrants than for the native-born elderly although important differences are found too among immigrant groups. Age at migration appears to be a more powerful predictor of leaving an inheritance than duration of residence. The chances of receiving an inheritance and homeownership are the two most powerful predictors of leaving an inheritance. The findings make evident the need to address social disparities in order to tackle the growing wealth gap and intergenerational inequality that creates unequal socioeconomic positions across generations.

#### **20-5. INEQUALITIES IN SUBJECTIVE HEALTH AMONG OLDER EUROPEANS: A SYSTEMATIC LITERATURE REVIEW**

*Sanna L. Read, Emily Grundy and Catriona Towriss*

*EMail: sanna.read@lshtm.ac.uk*

Systematic reviews aim to provide a complete summary of scientific literature relevant to a particular research question and are now a nearly universal first stage of empirical research in many disciplines such as epidemiology and public health but not yet widely used in demography. We conducted a systematic literature review on inequalities in subjective health in older age in Europe. The dimensions of subjective health considered were self-rated health, quality of life, life satisfaction, and loneliness. The review focused on educational, socioeconomic and gender differences in these outcomes. We considered evidence on possible interactions between the various social indicators and other factors that may contribute to or mediate associations, such as health related behavior and social support, as well as age and gender differences in associations. Journal articles published between 1995 and 2011 were identified using Medline, Global Health, Embase, Social Policy and Practice, Cinahl, Web of Science and IBSS. A total of 43 studies on self-rated health, 20 studies on quality of life, nine studies on life satisfaction and five studies on loneliness were identified. In general lower education and poorer socio-economic position were associated with poorer subjective health. Indicators of current circumstances such as income and home ownership showed a stronger association with outcomes than past circumstances such as occupational status or education. Associations tended to be weaker in the oldest age groups. Adjusting for intermediate factors, such as social support and health related

behaviours, reduced the association between subjective health and socioeconomic position. Gender differences were not consistent and tended to diminish after adjusting for health and life circumstances.

#### **21-1. THE GROWTH OF THE WORKING AGE POPULATION: DIFFERENCES BETWEEN URBAN AND RURAL REGIONS ACROSS EUROPE**

*Joop De Beer, Nicole Van der Gaag, Corina Huisman and Rob Van der Erf*  
Email: beer@nidi.nl

Population ageing will lead to a reduction in the growth of the working age population across Europe. Even though population ageing is a general trend across Europe, there are regional differences. Whereas many urban regions are likely to continue to grow, many rural regions will experience a decline. The growth rate of the working age population depends on cohort turnover, i.e. the replacement of older generations by the inflow of young generations, and on the direction and size of migration flows. Since young migrants tend to move from rural to urban regions, urban regions tend to have both a younger and a more strongly growing working age population. This is reinforced by the inflow of immigrants from other countries. This paper aims to analyse differences in the effects of migration and cohort turnover on the growth of the working age population between rural and urban regions. The analysis will be based on demographic data for NUTS 2 regions. The distinction between rural and urban regions is usually based on the NUTS 3 level. However, there are much more demographic data available on the NUTS 2 level rather than the NUTS 3 level. For this purpose we develop an urban-rural classification at the NUTS 2 level. In many regions the future cohort turnover effect will be negative since young age generations are relatively small compared with older generations. Since the direction of migration flows depends on economic differences across regions and since generally urban regions are more competitive than rural regions we may expect that migration may compensate the negative effect of cohort turnover in urban regions and reinforce it in rural regions. Furthermore we may expect that the positive effect of migration in competitive urban regions will exceed that in underperforming urban regions.

#### **21-2. USING SPATIAL ECONOMETRICS TO ANALYSE MIGRATION MARKETS IN METROPOLITAN AREAS IN SPAIN (1988-2010)**

*Xavier Franch and Joaquín Recaño Valverde*  
Email: xfranch@ced.uab.es

The purpose of this paper is to describe the more contemporary evolution of the migration in different Metropolitan areas of Spain during the last two decades. We study migration trends of Metropolitan areas of Madrid, Barcelona, Valencia, Sevilla and Bilbao. The territorial units of analysis are the Spanish municipalities and a classification of these municipality areas based on the Spanish Census of 1991 and 2001. The data come from three data sources elaborated by the National Institute of Statistics: 1) the Residential Variation Statistics that offers the migratory annual flows between the different Spanish municipalities 2) the Municipal Register which records municipality residents and it's the Official Population since 1996 3) and the Spanish Population Census. Our analysis covers the period from 1988 to 2010. We analyse the internal migratory flows using spatial econometrics to identify significant spatial clusters and to provide a new approach of the migration in Metropolitan areas in Spain. According to this, we propose two spatial models to describe the trends of migration from Metropolitan areas to other municipalities and the trends of migration to these Metropolitan areas.

### 21-3. MIGRATION OF EARLY MIDDLE-AGED POPULATION BETWEEN CORE RURAL AREAS TO FAST ECONOMICALLY GROWING AREAS IN FINLAND IN 2004-2007

*Matti Saari*

*EMail: matti.saari@stat.fi*

The internal migration rates of towns have been biggest in age groups from 25 to 34 in recent years in Finland and they have been almost as high as migration rates of 15-24 year-olds of the countryside. However, persons around the age of 30 have moved most actively to the rural areas proper within rural areas (Nivalainen 2008). Because migration to rural areas has not been studied very little, especially by age group, this study set out to investigate regional factors connected with the rural internal migration flows of the population aged 30 to 39. In the first decade of the 2000s, economic growth has been faster in rural areas than in urban areas (Saari 2010). Rural areas have often received growth impulses which have increased local and other production, as well as the demand of labour there. This is connected with the fact that the migration of the population aged 30 to 39 from urban to rural areas has been clearly livelier than in the peak years of the 1990s. However, the development in rural areas has been polarised in the past few years (Aro 2007). The aim of the study is to examine the out-migration tendency among the 30 to 34-year-old population in the core rural areas with poorest growth to other rural areas and the connected regional factors in 2004-2007. Thus, the study uses the regional push and pull theory. The variables used for both in and out-migration areas are areal socio-economic variables.

### 21-4. A LESLIE-TYPE URBAN-RURAL MIGRATION MODEL, AND THE SITUATION OF GERMANY AND TURKEY

*Harald Schmidbauer and Angi Rösch*

*EMail: harald@hs-stat.com*

The phenomenon of population ageing is often accompanied by substantial rural-urban migration. It is therefore compelling to analyse the implications of fertility, mortality, and migration patterns together. We introduce a new Leslie-type population model which describes the age structure of urban and rural populations and allows for migration in both directions. This model can project the current population structure into the future and also permits an analysis of the long-run properties of the population such as future urbanisation and age dependency ratio under the assumption that current conditions persist, as well as under assumptions of certain secular trends in demographic phenomena. We show how this model can be transformed into a Markov chain, whose steady-state behaviour is used to derive genealogies in terms of the Markov chain running backward in time. In addition to projecting the future population structure, our model facilitates a plausibility check for age-specific fertility, mortality, migration, and population growth data, which can be crucial in cases where the reliability of data is questionable. Furthermore, it permits an assessment of the difference between the actual population and its stable counterpart, which can be a valuable tool for policy makers. Applying the model to real-world populations, we study the population structures of Germany and Turkey when exposed to their current respective fertility, mortality, and migration patterns. We find that the current extent of German rural depopulation is a transient phenomenon. We also find that the current Turkish population is younger and its urbanisation is higher than those of its stable counterpart. The impact of migration policies on the population structure, in particular growth, urbanisation, and age dependency ratio, is discussed for both countries.

## **21-5. A LIFE COURSE AND SPATIAL PERSPECTIVE ON INTERNAL MIGRATION. A CASE STUDY OF THE FRENCH SPEAKING COMMUNITY OF BELGIUM**

*Ulrich Pötter and Ingrid H. Schockaert*

*E-Mail: poetter@dj. de*

The purpose of our paper is to contribute to the development of a method for the analysis of internal migration within a life course and geographical perspective. We will develop our arguments using data of a retrospective survey, carried out by the University of Liege among senior residents of the French speaking community of Belgium between the age of 55 and 74. First, we will visualize the “residence-migration trajectories” by means of a 3-dimensional picture, using lines to illustrate respondent’s moves from one location to another and the time spent in each location. Rotating the picture, shortening or stretching the time dimension, and selecting age groups or cities, will be used to facilitate its interpretation. Secondly, we break down the respondent’s complete trajectories into residence episodes, starting at the beginning of each new place of residence and ending with the next move. We will build several indicators to describe their time and special elements. We demonstrate the use of these indicators through some uni- and bivariat descriptive examples of migration episodes. Preliminary analysis portrays the general migration patterns in our sample: migration occurs mainly between Walloon cities, resulting in an overrepresentation of East-West axis; they concentrate during early childhood and young adulthood; distance drops as age increases and moves to the city suburbs boost; after the age of 35, migration becomes rare and distance until after retirement. We also depict the rise of the new city Louvain-la-Neuve and the status change of Namur to an important administrative centre. Finally, we propose two pathways for further development of our approach.

## **22-1. SMOKING MOTHERS, FUMING BABIES: THE EFFECTS OF MATERNAL SMOKING ON BIRTH WEIGHT BY MOTHER’S COUNTRY OF ORIGIN USING A MULTILEVEL APPROACH**

*Sol Juarez and Juan Merlo*

*E-Mail: sol.juarez@ekh.lu.se*

We investigate the effects of maternal smoking on birthweight by mother’s country of origin in Sweden. Previous studies have shown that the prevalence of smoking is lower among foreigners than Swedes, within a similar downward trend. However, this does not necessarily capture all aspects of the consumption patterns (such as the number of cigarettes per day). In this sense, although they show the same general trends, the potential effects of smoking on reproductive health do not have to be the same for all groups of origin. Developing countries are experiencing an increase in the overall prevalence of smoking among women, which is related to the change in the social perception of tobacco and, consequently, in their consumption patterns. This transformation is mainly observed in non-western countries such as India, China, and the Russian Federation, where “westernization” has relaxed the strong taboo against smoking women. So, in this context, it is expected that for certain immigrants (such as the above-mentioned) consumption might tend to be different and, therefore, have a differential impact on health. This paper focuses on birthweight because of its importance in population health, and insofar as it is a strong predictor of early mortality and of some adult morbidities, not to mention other significant outcomes such as educational attainment. This study is based on data from the Swedish Medical Birth Register for years 2002-2009 (823,553 births), which contains all deliveries in Sweden in this period. Individual birthweight (in grams) is analyzed by using a multilevel linear regression model, with individuals at the first level and mother’s country of origin at the second level

(more than 100 different countries). The associations between variables were assessed by using beta coefficient (95% confidence intervals) in the fixed-effect part of the models.

## **22-2. IMPACT OF HEALTH EDUCATION USING AUDIOVISUAL MEDIA AND LEAFLETS TO INCREASE KNOWLEDGE ABOUT BREASTFEEDING MANAGEMENT AT INTEGRATED SERVICE POST (POSYANDU) OF GONDOKUSUMAN I HEALTH CENTER YOGYAKARTA MUNICIPALITY**

*Susanti Lesmana and Wenny Artanty Nisman*

*EMail: bastoro\_dwinantoaji@yahoo.com*

Background: Breastfeeding management is a factor that affects the achievement of exclusive breastfeeding coverage. Limited knowledge of mothers about breastfeeding management results in low coverage of exclusive breastfeeding. Health education using audiovisual media and leaflet is a method to increase knowledge of mothers about breastfeeding management. Objective: To identify impact of health education using audiovisual media and leaflet to increase in knowledge about breastfeeding management. Method: The study was a pre experiment that used one group design with pre test and post test without control group. Samples of the study consisted of 37 nursing mothers at Bacirow integrated service post (Posyandu) in the working area of Gondokusuman I Health Center Yogyakarta Municipality. The study was undertaken in 6th February 2011. Data were obtained from questionnaire on knowledge and analyzed using Wilcoxon test. Result: The result of the study showed there was significant difference between average score of pre test and post test on knowledge with score of mean pre test 68.17, mean post test 84.83 and  $p=0.000$  ( $p<0.05$ ) which meant that there was increase in knowledge between before and after intervention on health education using audiovisual media and leaflet. Conclusion: There was impact of health education using audiovisual media and leaflet to increase in knowledge of nursing mothers about breastfeeding management. Keywords: health education, audiovisual media, leaflet, breastfeeding management

## **22-3. FAMILY STATUS AND LOW BIRTH WEIGHT RISK: TRENDS AND CHANGES OVER TIME**

*Jitka Rychtarikova*

*EMail: rychta@natur.cuni.cz*

The frequency of children born with low birth weight (less than 2 500 grams) has recently increased in the Czech Republic. In 2010, 8.2 % live births with low birth weight were reported, compared to only 5.7 % in 1986. Over the same time period, the percentage of extramarital live births increased from 7.4 % to 40.3 %. Unmarried mothers are often considered to be more likely to deliver a low-birth weight baby. However, the adverse effect on low birth weight outcome can also vary according to age, education and other factors. In addition, the increasing size of the population of unmarried mothers is becoming more heterogeneous today than in the past when they represented a small marginal group. The proposed research focuses on examining changes in low birth weight over time (1986-2010) across three groups of live births: children born to unmarried women, those coming from premarital conceptions, and children conceived after marriage. The analysis also allows us to compare the impact of two different socio-economic settings (before and after 1989) on birth weight. The aim is primarily to disentangle the effect of changing structure of mothers from the effects of intensity change. In the first stage, the trends in low birth weight by three family statuses (extramarital, premarital, and marital) for the years 1986-2010 will be compared based on several risk factors changing over time (multiplicity, maternal age, birth order, and educational attainment). Next, logistic regression will

be used to estimate the unadjusted and adjusted odds ratios of risk factors for low birth weight (dependent variable). The data are individual anonymous records of vital statistics (2 735 238 live births) collected by the Czech Statistical Office for the period 1986-2010.

#### **22-4. MEASURING SOCIO-ECONOMIC DIFFERENTIALS IN LOW BIRTH WEIGHT: LOOKING BEYOND PARENTAL EMPLOYMENT AND EDUCATIONAL ATTAINMENT**

*Francisco Viciano, Sol Juarez, Bárbara Revuelta Eugercios, Diego Ramiro-Fariñas, Víctor Montañes Cobo and Juan Merlo*

*EMail: franciscoj.viciano@juntadeandalucia.es*

This paper aims to contribute to the understanding on social inequalities, focusing on low birth weight socio-economic differentials. SES (Socio-economic status) is not a direct observed measure and, although it is widely known that variables such as income, education and occupation of both father and mother cover different aspects of the social stratification, they tend to be taken isolated as if they were interchangeable. This working approach clearly dissociates model specification from theory, since it does not contemplate the complexity existing between these different dimensions of life, especially for women in reproductive ages.

#### **23-1. IMPACT OF OBESITY ON DISABILITY AND MORTALITY IN BRAZIL**

*Flavia Andrade, Ahmad Nazan, Maria Lebrao and Yeda Duarte*

*EMail: fandrade@illinois.edu*

In the past three decades, obesity rates in Brazil tripled among men and almost doubled among women. Obesity has been associated with disability and mortality, but little is known about these associations in Brazil. We explore this gap using two waves of SABE in Sao Paulo, Brazil. Three measures of disability are included: activities of daily living (ADL), instrumental activities of daily living (IADL) and Nagi. Prevalence of ADL and Nagi was highest among obese individuals, followed by those underweight. Compared to normal weight individuals, those obese were 2.4 times (95% CI, 1.52-3.80) more develop ADL between waves and more likely to remain disabled (for all disability measures). Recovery from Nagi was lower among individuals who were underweight. Those who were underweight faced higher mortality risks than those who were normal weight. This study confirms that obesity is associated with increased disability in Brazil.

#### **23-2. THE IMPLICATIONS OF AGING AND DIVERSIFICATION OF POPULATION ON OVERWEIGHT AND OBESITY AND THE ECONOMIC BURDEN ASSOCIATED WITH OVERWEIGHT AND OBESITY IN THE US FROM 2000 TO 2050**

*Nazrul Hoque*

*EMail: nazrul.hoque@utsa.edu*

Overweight and obesity a major health concerns in contemporary America. The percentage of the population that is considered overweight and obese has increased substantially over the past years for both adults and children. Approximately 133.6 million American adults, or 66.0% of all adults are either overweight or obese. Obesity rates have more than doubled since 1990, increasing from 11.6% in 1990 to 26.3% in 2007. This increase is of substantial concern because of the health risks associated with overweight and obesity. Overweight and obesity are related to increased risk for heart disease, type 2 diabetes, and a number of other diseases. Approximately, 300,000 to 400,000 deaths each year in the U.S. are attributable to overweight and obesity. In addition to observing differences in obesity for males and females, higher body mass indices tend to be more prevalent

among minority population members due to an association between low socioeconomic status and obesity and a variety of other factors such as historical and cultural aspects. For example, in 2001 23.7% of Hispanic and 31.3% of Blacks were either overweight or obese compared to 19.6% of Anglo. In the U.S., the proportion of Anglo population decreased from 69.2% to 63.8% while the Hispanic population increased from 12.5% to 16.3% from 2000 to 2010. The U.S. population is projected to become a majority minority by 2042 with approximately 30% Hispanics and about 12% Blacks by midcentury. This paper examines the implications of future demographic changes on overweight and obesity and costs associated with overweight and obesity in the U.S. Decomposition techniques are used to examine the relative impacts of population growth, aging and changes in the racial/ethnic composition of the population on increases in the prevalence and related costs of overweight and obesity in U.S., an important input for the formulation of nationwide health policies.

### **23-3. BACK TO SCHOOL: DELAYED COLLEGE EDUCATION AND TRAJECTORIES OF BODY MASS**

*Richard Miech, Michael J. Shanahan, Ross Macmillan and Jason D. Boardman*  
Email: [rmiech@gmail.com](mailto:rmiech@gmail.com)

This study examines whether the attainment of a college degree after first labor force entry significantly improves health, as measured by the body mass index (BMI). The analysis uses the longitudinal, nationally-representative Add Health study and focuses on 12,540 respondents who were first interviewed in 1994-5 when they were in 7th-12th grade and last interviewed in 2007-2008. Acquisition of a college degree after first labor force entry significantly improved BMI trajectories, but only for women. Analysis of potential mechanisms linking college degree status and BMI did not support an expected role for personal control, and instead suggested the importance of other health behaviors. For women, these results suggest that a college education is one of few weight management plans that actually works, and suggests that the historical trend leading increasing numbers of workers to pursue a college in later life should have a positive impact on population BMI.

### **23-4. CUMULATIVE CHILDHOOD ADVERSITY AND ACTIVE LIFE EXPECTANCY AMONG US ADULTS**

*Jennifer Karas Montez and Mark D. Hayward*  
Email: [jkmontez@hsph.harvard.edu](mailto:jkmontez@hsph.harvard.edu)

Studies of the early-life origins of adult physical functioning and mortality risk find that childhood health and socioeconomic context are particularly important predictors, often irrespective of adult experiences. However, these studies generally assess functioning and mortality as distinct processes and rely on cross-sectional prevalence estimates that neglect the interplay of disability incidence, recovery, and mortality. We hypothesized that early-life disadvantages both shorten lives and increase the number of years lived with functional problems, and that one's educational attainment could at least partially overcome the health consequences of early-life disadvantages. Drawing on the 1998-2008 Health and Retirement Study, we examined these hypotheses for non-Hispanic whites and blacks 50 to 100 years of age using multistate life tables. Within levels of educational attainment, adults from disadvantaged childhoods lived fewer total years of life, fewer years of active life, and spent a greater portion of life functionally impaired compared with adults from advantaged childhoods. Achieving higher levels of educational attainment often overcame the health-related consequences of childhood disadvantages, particularly among men, while low educational attainment often erased the health-related benefits of childhood advan-

tages. Policies aimed at improving population health and reducing disparities should target childhood and adolescence, particularly through access to quality education.

### **23-5. CAN HEALTH CONDITIONS PREDICT BODY WEIGHT? AN ANALYSIS OF ITALIAN CONSCRIPT PATTERNS IN THE COHORTS OF 1951 AND 1980**

*Luca Pieroni and Donatella Lanari*

*EMail: lpieroni@unipg.it*

There is growing evidence that excess weight is associated with the chronic diseases and all-cause mortality. Correlations are found with major causes of metabolic, cardiovascular, neoplastic, digestive tract and several other major diseases, and with a premature mortality. The purpose of this study is approaching the well-being of Italian population from the perspective of the biological standard of living proxied by the anthropometric indicator of BMI. First, we analyse trends in BMI of nationally representative samples of Italian conscripts born in 1951 and 1980, and examine changes in the categories of underweight, overweight and obesity. Second, we investigate the relationship between health and BMI by using as proxies of health conditions specific pathologies based on the diagnoses of military conscripts, such as diabetes mellitus, asthma, and respiratory, cardiovascular and psychological diseases according to which young adult men were classified as unfit for military service. To investigate the relationships described we used data of conscripts from the archives of various military districts situated in the North, Centre and South of Italy, collected in a large dataset of young men who underwent the compulsory medical examination to ascertain their fitness for military service in the Army in 1969 and 1998, respectively. Our results seem to reflect the commonly held hypothesis that, in a poor and not uniformly developed economic and social context, overweight and underweight tend to be concentrated in high and low socio-economic status groups. In addition, we estimate the magnitude effects of each disease group over the heterogeneous BMI distribution. By using the significant estimates of physical health disorders on BMI increase, we explain why the 1980 generation has suffered the risk of an increase in obesity.

### **24-1. INTERGENERATIONAL CONTACT IN EUROPE: ALTRUISM OR EXCHANGE?**

*Valeria Bordone and Pearl Dykstra*

*EMail: valeria.bordone@wu.ac.at*

Contact between elderly parents and their adult children is recognized as one of the basic opportunity structures of intergenerational support. This paper examines cross-national differences in the frequency of parent-child contact in 15 European countries ( $N = 23,097$ ). Using data from the two waves of the Survey of Health, Ageing and Retirement in Europe (SHARE), we analyse the role of altruistic and exchange motives. Altruism assumes that intergenerational interactions are governed by concern about the well-being of the other: interactions are more frequent if needs are high. Exchange assumes that intergenerational interactions are governed by the prospect of future returns: interactions are more frequent if more rewards are anticipated. Indicators of altruistic motives are widowhood and poor health of the parent, and divorce, widowhood, and parenthood of the adult child. Indicators of exchange motives are the likelihood of leaving an inheritance, parental divorce, and living nearby. Two sets of analyses are carried out, one including coresidential ties, and one excluding intergenerational coresidence.



## **24-2. THE RELATIONSHIPS AMONG FAMILY ECONOMIC STATUS, INTERGENERATIONAL SPATIAL PROXIMITY AND PARENTAL HEALTH – LESSONS FROM THE HEALTH AND RETIREMENT STUDY (HRS) AND THE PANEL STUDY OF INCOME DYNAMICS (PSID)**

*HwaJung Choi, Robert Schoeni and Michele Heisler*

*EMail: hwajungc@umich.edu*

1. Background/Motivation: Informal care provided by adult children is a primary care source for older adults with disabilities in US. Close residential proximity to parent/s is necessary to care for the functionally dependent parent/s. However, moving to achieve such proximity may pose both financial and non-financial burdens. At the same time, residential proximity between parent/s and a child might have been determined by health and family economic conditions during earlier life course. Little is known how intergenerational proximity has been shaped over the life-course responding to health and family economic conditions. 2. Methods: To address life course trajectory of intergenerational proximity in the association with family economic status and parental health, detailed longitudinal datasets on both parent/s and child are necessary. We exploit the Health and Retirement Study (HRS) and the Panel Study of Income Dynamics (PSID). Spatial information is available at Zipcode level for both parent/s and children in HRS and at block level in PSID. Self-rated health status, ADLs and cardiovascular events are explored as health condition and health shock variables. Economic quartiles are used as family economic status. 3. Result/ Conclusion: Disabilities are more prevalent among lower income older adults and informal care from children is the primary care source for these. When older adults encounter health shock, they and their children tend to move in with or move closer to each other, especially among moderate income families, women and those without spousal resources. After examining origin and trajectory of intergenerational proximity, empirical findings suggest that low-income families have greater restrictions on longer-distance residential mobility over the life-course, which is also significantly associated with parental poor health status in earlier life-course. In public health policy, burden-sharing in (informal) care might reduce mobility restrictions of potential care-givers in seeking better economic opportunities. This might be especially true for the lower-economic population.

## **24-3. MAPPING INTERGENERATIONAL CARE ACROSS HOUSEHOLDS IN THE UK: ANALYSING PROXIMITY, PROPINQUITY AND RESOURCES IN THE ‘TACIT INTERGENERATIONAL CONTRACT’**

*Alex Fanghanel, Ernestina E. Coast and Sara Randall*

*EMail: a.fanghanel@ucl.ac.uk*

Intergenerational exchanges of care form the backbone of informal care arrangements in the UK. Against a background of cuts in public spending and an increasingly ageing population, the centrality of familial or kinship care, in the provision of everyday or practical intergenerational care (including providing housing, personal care, doing the shopping, providing childcare etc) is an ever more pressing question for policy-makers and ageing professionals. At present, flows of intergenerational care are difficult to capture precisely in surveys enumerated at the household level. In 2011 in the UK, the household was defined as ‘one person living alone or a group of people (not necessarily related) living at the same address, who share cooking facilities and share a living room or a sitting room or a dining area’. Within this definition of the household, recognition of transfers of care which transcend the household are lacking. This has implications for recognising the financial, residential and temporal (amongst others) obligations which might tie households together and

impact in a very real way on the day-to-day well-being of people at a societal level. Drawing on data gathered from interviews with policy makers and ageing specialists as well as from 36 purposively-sampled household interviews, this paper examines how proximity – the spatial closeness between people – and propinquity – the emotional closeness between people – and access to financial resources – intersect to influence normative familial expectations (e.g. children will contribute to their elderly parents' care, grandparents can be relied upon to look after grandchildren) intertwine to create a network of intergenerational care that transcends both familial kinship ties and the household itself. Diagrammatically reproducing these relationships with genographs, we outline the heterogeneity of these relationships and suggest how the complexity of day-to-day household arrangements of intergenerational care can better be accounted for at policy level.

#### **24-4. GEOGRAPHIC CONFIGURATION OF FAMILY NETWORKS – REGIONAL DIFFERENCES IN GEOGRAPHICAL PROXIMITY TO PARENTS, SIBLINGS AND ADULT CHILDREN**

*Emma Lundholm*

*EMail: emma.lundholm@geography.umu.se*

In ageing societies there are concerns about regional disparities in dependency ratio resulting in an increased pressure on the welfare state, especially in rural areas. The potential need for care through the public sector is however also dependent on access to local family networks and it is therefore of interest to also look at disparities between regions when it comes to family networks. Care and support within families is important for both younger and older generations and geographic proximity is an essential aspect of family networks. The configuration of family networks is the result of migration in different phases of life, made by the individual or other family members. The aggregated migration flows, for instance urbanisation processes, leave their marks in the family networks, for example elderly people left behind in the rural areas and young families in urban areas with less child care support. The focus of this study is the regional differences in proximity between family members and the demographic processes that produce geographic variation in elderly people's access to family networks with special attention to how this pattern is shaped by previous and contemporary migration flows. The study is based on Swedish register data and covers the entire Swedish population where individuals are linked to parents, siblings and adult children, additionally, partners parents and siblings are also included in the analysis.

#### **24-5. INTERGENERATIONAL PROXIMITY AS RESOURCE FOR WELL-BEING AT OLDER AGES**

*Marieke van der Pers, Clara H. Mulder and Nardi Steverink*

*EMail: m.van.der.pers@rug.nl*

Geographic proximity is the strongest predictor of support exchange among family members and seems to contribute to feelings of security as well. This study focuses on the function of adult children and especially having them living geographically close by. By doing so, we treat intergenerational proximity as a resource within the Social Production Function – Successful Ageing Theory. This theory enables us to conceptualize how and whether living in close proximity to adult children can be a significant contributor to well-being at older ages. We argue that under well-defined resource restrictions like living without a partner or being disabled, adult children may partly compensate for the lacking resources. We expect close proximity of one or more adult children to act positively on life satisfaction, where we expect older persons without a partner, and/or with disabilities but also

men to benefit more from having children -living close by. Record linkage of register and survey data (POLS 2003) shows us that the presence of an adult child is only effective in a positive way when an older person lives together with a partner whereas intergenerational proximity has the strongest effect when an older person is disabled and living without a partner at the same time.

#### **25-1. SEX-ROLE SPECIALIZATION OR INCOME POOLING? THE EFFECTS OF WOMEN'S WAGES ON FERTILITY IN ITALY AND POLAND**

*Daniele Vignoli, Anna Matysiak and Tymon Sloczynski*

*EMail: vignoli@ds.unifi.it*

This paper aims to deepen our understanding of women's fertility and employment behaviours by addressing the role of women's wages and household income in the decision-making about family formation and women's involvement in paid work. We address two competing hypotheses, namely the sex-role specialisation hypothesis vs. the income pooling hypothesis. For our analysis we implement panel data of the EU-SILC (Community Statistics on Income and Living Conditions) and compare two European countries – Italy and Poland; i.e., a Western and an Eastern European country. We model probability of childbirth using methods of panel data analysis that allow for accounting for selection bias caused by unobserved time-invariant characteristics of women which jointly affect fertility and labour market outcomes of individuals. The paper contributes to the understanding of the impact of women's empowerment on fertility as well as the differentials in fertility and women's employment levels across Europe.

#### **25-2. WOMEN'S WAGES AND FERTILITY REVISITED. EVIDENCE FROM NORWAY**

*Tom Kornstad and Marit Rønsen*

*EMail: tom.kornstad@ssb.no*

Since the 1960s, Beckers' New Home Economics has provided a central theoretical framework for studies of fertility behaviour. Crucial determinants of this theory are the family's budget constraint and the cost of a(nother) child. Since the mother is usually the main care-giver, the largest component of the cost of a child is her foregone earnings. Thus, New Home Economics predict a negative relationship between female wages and fertility. This prediction has been tested in a number of studies over the past decades, but the results are far from unanimous. In this paper we review past evidence of the impact of female wages on their childbearing behaviour and discuss possible sources for the divergent results. Moreover, we supply new evidence from Norway based on data from the last two decades. Norway is an interesting country in this respect since Norwegian women differ from their "sisters" in many other countries by combining high fertility with high labour market participation. The analysis is carried out by estimating a hazard rate model of birth transitions including the predicted wage as a time-dependent variable together with other variables that are known to affect fertility behaviour. We use a rich Norwegian register data set (1988-2008) with information on the dates of birth of all children over the life-cycle linked with information from the Labour Force Survey, and plan to model the transition to first, second and third birth, using a discrete hazard rate model. As a point of departure we will estimate the various fertility transitions separately, but will also consider modelling the transitions simultaneously. Heckman's selection model is used in the estimation of the wage equations.

### 25-3. THE IMPACT OF EARNINGS ON FIRST BIRTH RATE AMONG NORWEGIAN MEN

*Rannveig Kaldager*

*EMail: rvk@ssb.no*

Previous research on socioeconomic determinants of male fertility has found a positive impact of educational attainment on first birth rate. Both higher earnings potential and more gender egalitarian attitudes are expected to make men with higher educational attainment more attractive as partners and thus more likely to have a first child. To distinguish the impact of earnings potential from the impact of attitudes and values, this study uses observed annual earnings as a proxy for earnings potential. Hazard regressions are estimated on highly accurate data from the Norwegian population registers, covering all men born 1955-1988 who are at risk of having a first child in the period 1975-2009. Results show that the yearly first birth rate, net of controls, increases monotonously with earnings quintile. Being in the 5th earnings quintile more than doubles yearly first birth rate compared to being in the 1st earnings quintile, net of controls. The estimates for educational attainment decrease substantially when observed annual earnings are included in the model, indicating that earnings potential at least partly explains the impact of educational attainment on first birth rates. Throughout the period of study, the labour force participation of Norwegian mothers increased substantially, and Norwegian fathers increasingly took part in care work. The results indicate that the impact of earnings on first birth rate is stable throughout the observation period. In spite of gender de-specialisation in the family, selection on earnings potential into fatherhood remains stable.

### 25-4. THE IMPACT OF WOMEN'S RELATIVE EARNINGS AND GENDER EQUITY ON THE RECUPERATION OF FERTILITY AMONG OLDER COUPLES IN BRITAIN

*Ann M. Berrington and Serena Pattaro*

*EMail: a.berrington@soton.ac.uk*

Around one in five women in Britain currently reaching the end of their childbearing years remains childless. Whilst much previous research has highlighted the risk factors for early childbearing, relative little is known in Britain about the factors associated with the successful recuperation of fertility at later ages. This paper uses a couple approach to investigate how entry into parenthood at later ages depends on the man's and woman's relative resources and gender role equity. We focus on men and women in their thirties since it is at this age that we see significant recuperation of childbearing in Britain following postponement. The research uses detailed life course data from the 1970 Birth Cohort Study. Childless couples interviewed at age 30 are followed up at ages 34 and 38. At age 30, information was collected about the individual and their partner's levels of education, employment circumstances, occupation and levels of pay. In addition, the respondent provided data on the division of domestic tasks within the household, their own gender role orientation and their intentions for having children. We use event history analysis to model the timing of first birth as a function of these fixed and time-varying factors. Hence we are able to identify factors associated with the recuperation of fertility and the relative importance of individual and couple level characteristics. We control for the selection into our sample of high-resource couples who remain without a child at age 30. We add to the existing literature in a number of ways: 1) by incorporating recent debates concerning the importance of gender equity on fertility into a broader couple-focused approach, 2) by comparing the fertility outcomes for both men and women and 3) by taking into account a detailed set of fixed and time-varying socio-economic determinants and anticipatory factors.

## 25-5. CHILDBEARING AND LABOR MARKET: TIME AND SPACE DYNAMICS

*Elena Kotyrlo*

*E-Mail: elena.kotyrlo@econ.umu.se*

Fertility is an important determinant of long-run population growth and labor market conditions. The present study focuses on the effects of time and space dynamics on the description of fertility in Sweden. These effects were expected to be generated by labor mobility across municipalities. The influence of time dynamics in postponing or accelerating childbearing was assessed by considering two different effects of earnings. Firstly, the effect within one generation was considered by comparing a family's current earnings with their earnings in the recent past and expected earnings in the future. The second effect, referred to previously as the Easterlin hypothesis, was examined through the generations by comparing a household's earnings for a younger generation with earnings of the parental generation. The hypotheses were tested for the period 1981-2008. The study involved estimating space and time dynamics by using the SAR(2,1) model and the general method of moments for aggregate panel data. By comparing different specifications, positive spatial autocorrelation of fertility was identified. Current earnings appeared to have a negative effect on fertility rates within municipalities, and in the long-run, across them. The inverted Easterlin hypothesis was weakly supported within municipalities. The study makes an important theoretical contribution through the application of a stationarity condition and evaluation of the long-run effect in the direct, indirect and total forms of the SAR (2,1) model with second-order autoregressive and first-order spatial disturbances.

## 26-1. THE EXCESS MORTALITY OF DEPRESSION: VARIATION ACCORDING TO CAUSE OF DEATH AND SOCIAL FACTORS

*Heta Moustgaard, Kaisla Joutsenniemi and Pekka Martikainen*

*E-Mail: heta.moustgaard@helsinki.fi*

The excess mortality of depression is widely acknowledged but no data on alcohol-related mortality in depression exists. It also remains unclear whether the excess mortality of depression varies according to social factors. This study aimed to quantify the contribution of alcohol-related causes of death in the excess mortality of depression and to assess the modifying effects of social factors on the excess. A register-based 14% sample of community-dwelling Finns aged 40–64 at the end of 1997 was assessed for depression, using register data on antidepressant use and psychiatric hospital care in 1996–1997. The depressed outpatients ( $n=13,658$ ), depressed inpatients ( $n=897$ ), and the non-depressed ( $n=217,140$ ) were followed up for cause-specific mortality in 1998-2007, distinguishing between alcohol- and non-alcohol-related deaths. Depressed out- and inpatients had significant excess mortality for suicide, external and internal causes. Alcohol-related causes accounted for 50% of the excess among depressed men and 30% among women. Excess mortality varied little by social factors, particularly in non-alcohol-related causes. Where variation was significant, the relative excess was larger among those with higher education, home owners, the employed and the partnered. Absolute excess was, however, larger among the less privileged. The results highlight the major role of alcohol in depression mortality.

## **26-2. REVERSING EAST-WEST MORTALITY DIFFERENCE AMONG GERMAN WOMEN, AND THE ROLE OF SMOKING**

*Mikko Myrskylä and Rembrandt D. Scholz*

*E-Mail: myrskylä@demogr.mpg.de*

After unification in 1990 the German East-West mortality difference narrowed rapidly, particularly for women. Here we document for the first time that for women aged 50-65 the difference has reversed and mortality is lower in the East. The reversal is surprising in the light of mortality related macro factors such as living standards and unemployment, which continue to be worse in the East. We use the indirect Preston-Glei-Wilmoth method to remove smoking-attributable deaths and find that the mortality cross-over is fully attributable to smoking: non-smoking related mortality continues to be higher in the East. The findings provide new insights into the sources of the post-unification German mortality convergence, which existing research largely attributes to converging living standards and medical care. In contrast, our findings show that the seeds for the female East-West mortality cross-over were planted before the unification in the 1960s-1980s when the women now aged 50-65 adopted their smoking behaviors.

## **26-3. MORTALITY AND THE HEAT WAVES 2003 AND 2006 IN SWITZERLAND. A STORY ABOUT VULNERABILITY**

*Michel Oris and Mathias Lerch*

*E-Mail: Michel.Oris@unige.ch*

The aim of our communication is twofold. First, we seek to identify subpopulations most vulnerable to death during the last two heat-waves in Switzerland. The analysis will focus on individual profiles defined by sex, age, living arrangement and socioeconomic position as well as on dwelling characteristics (i.e. floor within the building). Second, we investigate to what extent the effect of heat-waves on mortality varies according to context, which we characterize at the communal level using indicators of urban status, economic deprivation, social cohesion, built environment (size and population density, green areas) and communal expenses in health care while controlling for the confounding impact of air pollution (particular matters). The Swiss National Cohort database is mobilized for our research: registered deaths for the years 2001-2008 have been linked to individuals enumerated at the 2000 Census. Working on the exhaustive Swiss population aged above 54 who lived in one of the non-mountainous communes equipped with a meteorological station of MétéoSuisse, we specify a three-level-random-intercept logistic regression model with persons-days nested temporally and spatially (3-day intervals as level-2 and communes as level-3). Through the specification of cross-level interaction effects we are able to identify the beneficial impact of environmental amenities and good practices in public health on heat-wave mortality in Switzerland.

## **26-4. RISK HEALTH BEHAVIOUR PATTERNS IN GERMANY. RESULTS FROM THE GERMAN HEALTH UPDATE 2009**

*Elena von der Lippe, Stephan Müters and Panagiotis Kamtsiuris*

*E-Mail: E.vonderLippe@rki.de*

Lifestyle related risks are known to have strong impact on health. Health outcomes depend on many factors, like environmental pollution, use of public health services, but a very important factor also is the lifestyle. In our study we investigate the health risk behaviour of people and try to outline differences in the behaviour in the German population. We study risk behaviours like smoking, alcohol consumption, sport activity, and diet. The

empirical analysis is based on the data from the German Health Update 2009. We use hierarchical cluster analysis in order to define the different groups of risk behaviour patterns and then logistic regression to outline the most influential demographic characteristics on certain behaviour patterns. Our results show that there are five main groups of health risk behaviours in the German population. The first is a no-risk health behaviour and with each cluster there is one more risky behaviour included in the pattern. The last cluster consists of people who have risk health behaviour in all of the four indicators. Our results show that health behaviour is influenced by many demographic factors of the individuals, but also by health and social factors. People's health behaviour is to highly extend driven by the own health conditions – the healthiest one feels, the riskier behaviour he has. Good health conditions, young ages, and gender are the most important preconditions for risky health behaviours. Certainly, the health behaviour is a part of dynamic and interactive processes of daily living. The change of the health behaviour over the lifecourse of the individuals involves looking backwards over previous experience and anticipating future experience often in terms of stereotypical realities. In consistency with our results we consider that public health preventive programs should aim at explaining young people the long-term consequences that certain risk behaviours may have.

## **26-5. MORTALITY AND SELF-PROTECTIVE BEHAVIOUR AMONG THE RUSSIAN YOUTH**

*Elena V. Zemlyanova and Alla E. Ivanova*  
*E-Mail: zem\_lena@mail.ru*

Currently, mortality rates among the Russian youth are several times higher compared to mortality rates among their peer in the Western and Eastern European countries. However, at the end of the “Soviet” period the difference was twice lower. The situation in the young age groups is heterogeneous. The lowest rates of mortality is registered in the 15-19 years old age group. Mortality male rates as of early 1980s were achieved in the year 2000, while the “Soviet” era mortality rates in females were achieved in 2008. In the age group of 20-24 the mortality growth rates were higher. In males, the mortality rates of the 1980s were achieved only in 2008, while in females the mortality rates still exceed the rates of 1980s by 4%. The fastest growth in mortality rates was registered in the age group of 25-29 compared with other young age groups. Current rates are 5% higher in males and 32% – in females compared to the 1980s. Mortality reduction in youth was not accounted for by improved lifestyle and was only due to other factors. Representative all-Russia survey of the youth (1000 respondents) in 2006 and 2010 showed that risk groups in terms of harm to health among the Russian youth hardly changed at all: due to alcohol use – 16.1% of males and 12.7% of females (per capita use of absolute alcohol >16 l in males and >6 l in females); due to smoking – about 10% of males and 0.5% of females (daily smoke more than 1 pack of cigarettes); extreme body weight deficit or obesity – 5-10% of youth. It is the risk groups who are least ready to change their behavior primarily with regard to the use of psychoactive substances – alcohol and tobacco.

## **27-1. EFFECTS OF MIGRATION ON FERTILITY PATTERNS FOR NON-NATIVE WOMEN IN SPAIN**

*Daniel Devolder and Xiana Bueno*  
*E-Mail: ddevolder@ced.uab.es*

The aim of this study is to explore the effects of migration on fertility for foreign-born women living in Catalonia (Spain) in 2007. A common shortcoming when studying migrant's fertility is the lack of information about childbearing patterns in the country of

origin. One of the features that make this research particularly relevant is the opportunity of consider the whole reproductive life of migrants, i.e. before and after their arrival to the destination country. Data come from the Catalan Demographic Survey of 2007, a retrospective survey with complete union and childbearing histories, for both native and foreign-born women. We analyse this dataset using three kinds of methods. First, we compute age-specific fertility rates by age at arrival of women. Secondly, we estimate the risk of birth at each duration of stay of the migrants in order to identify the possible effects the migration movement may have on fertility patterns, both before and after the moment of arrival. Thirdly, we use logistic regression models for the risk of having a birth during the two main periods for which these effects occurs: a few years before or immediately after migration. These regression models allow us to explore the importance of some socio-demographic determinants, which may help in explaining the general effects on fertility patterns observed in the second step. Results show the existence of general patterns: there is an interruption effect on childbearing in the few years just before migration; then a significant recovery of fertility immediately after arrival into Spain; and a more extended effect of adaptation to native's behaviour after some years of stay. We also observe that the above mentioned effects varies depending of the continent of origin, the age at arrival, migrant's motivation, birth order, or the union status at time of migration.

## **27-2. INTEGRATION PROCESSES: REPRODUCTIVE CHOICES AND EDUCATION OF IMMIGRANT AND SECOND GENERATION GROUPS IN THE UK**

*Lorraine Waller and Sylvie Dubuc*

*EMail: lorraine.waller@spi.ox.ac.uk*

Following WWII immigration, the fertility of immigrants' children increasingly shapes the ethnic diversity of the European population, although, little is known about their fertility. This paper provides novel fertility estimates for immigrant and second generation women in the UK, by ethnic groupings (including Black Caribbean, Indian, Pakistani, Bangladeshi, Chinese, Black African, White British and White Other), using the LFS-OCM method (Dubuc, 2009). The LFS-OCM estimates correct for migration-specific tempo effects, minimising the risk of overestimation of immigrants' fertility using classical Period TFR. Results reveal intergenerational fertility transitions that strongly contribute to the fertility convergence between ethnic groups and indicating degrees of fertility 'assimilation' or 'intergenerational adaptation' to the UK mainstream childbearing behaviour, although ethnic differences remain. The analysis of fertility by educational attainment of women reveals consistent educational association with fertility patterns across immigrant and ethnic groups. Results provide evidence for educational/structural factors to be major determinants of ethnic fertility differentials and intergenerational changes. Findings further suggest a 'socialisation' impact of the UK context in shaping fertility of the second generation.

## **27-3. ENTRY INTO MOTHERHOOD AND COMPLETED FERTILITY OF SECOND GENERATION IMMIGRANTS IN FRANCE**

*Ariane Pailhé, Amélie Charruault and Christelle Hamel*

*EMail: pailhe@med.fr*

While fertility behaviors have been extensively examined for first generation immigrants in France, much less attention has been paid to the second generation. This paper studies the transmission of first-generation immigrants' fertility behavior to second-generation women and men. Based on the idea that fertility is an important component of the integration of immigrants (and second generation immigrants) into their host society, the main question answered is twofold: first, to what extent the children of immigrants have assimilated



lated to host-country norms in terms of age at entrance into motherhood and completed fertility, second, to what extent are observed differences due to structural determinants (such as their belonging to disadvantaged social milieu or their lower level of education). To what extent the descendant relatives of immigrants, who are born and socialized in metropolitan France, reproduce their parents' fertility behavior, or that of the mainstream population, once taking into account their social background? To answer this question the article analyses both the timing of first childbearing and the fertility reached at age 40 among different groups: descendants of North African immigrants, descendants of southern European immigrants, descendants of UE immigrants and mainstream population, i.e. French-born with French parents. As these children of immigrants are coming of age, it is now possible to compare their completed fertility with those of French natives. Our research design uses the Trajectories and Origins survey, a survey on population diversity in France conducted in 2008 on a sample of 22,000 persons aged 18-60 and living in metropolitan France. First results show that fertility varies by immigrant generation, with significant declines between the first and subsequent generations: childbearing behaviors of second generation immigrants are much closer than that of French natives.

#### **27-4. FAMILY MATTERS: MIGRATION AND CHILDBEARING DECISIONS OF 'NEW' POLES IN THE UK**

*Paulina Trevena, Derek McGhee and Sue Heath*

*EMail: P.M.Trevena@soton.ac.uk*

Following the rapid migration wave from Poland to the UK triggered by the 2004 EU Enlargement, the Polish community has become the single largest foreign national group in the country. Although Polish migration was initially seen as a transient phenomenon dominated by young and single males with no dependants, the significant increase in numbers of Polish pupils in British schools and the current 'Polish baby boom' in the UK point to a shift towards family settlement and family formation. Why is this so? What is the overall role of the family in the migration process? Are the Polish families in the UK to stay? These are the questions we would like to discuss. Our analysis is based on the results of a large-scale qualitative study ('International migration and its impact on family and household formation among Polish migrants living in England and Scotland') involving 83 in-depth interviews with Polish migrants living in four different locations across the UK, both urban and rural. We have found that in the case of couples, especially those with children, family issues play a crucial role in the process of migration and settlement in the UK. In the case of family migration, the general pattern still is for the father to migrate first, typically with a view to temporary economic migration. However, his stay is frequently prolonged and ultimately results in the relocation of the whole nuclear (and often also wider) family to the UK. Polish migrants, especially those who struggled to make ends meet in Poland, are keen to bring over their children and, in the case of childless couples, to start a family in the UK because of three major reasons: the availability of work, the relatively higher living standards and the security of living in a country with a well-developed welfare system.

#### **28-1. KIDS AT RISK: CHILDREN'S EMPLOYMENT IN HAZARDOUS OCCUPATIONS IN BRAZIL**

*Deborah S. DeGraff, Andrea R. Ferro and Deborah Levison*

*EMail: ddegaff@bowdoin.edu*

Little is known about the connection between parental work and child labor in less developed countries, yet it exists. Building on our earlier research, this paper focuses on jobs that may be hazardous for children (e.g., domestic service, street peddling, tobacco cultiva-

tion) in Brazil. We seek to better understand the nature of these hazardous jobs, how children come to be employed in such risky occupations and how this relates to parental characteristics, especially parental employment. The analysis uses household-level data from Brazil's 2001 Pesquisa Nacional por Amostra de Domicílios (PNAD-2001), which included a supplement on child work. We use simple and conditional correlations to characterize aspects of children's employment in risky work in comparison to other types of work and to non-employment, and estimate multinomial logit models of children's participation in risky work relative to other work or non-employment. Potential differences between boys and girls are examined throughout the analysis.

## **28-2. WEALTH EFFECTS IN THREE MOBILITY REGIMES: UNITED STATES, GERMANY, AND SWEDEN IN COMPARISON**

*Fabian T. Pfeffer and Martin Haellsten*

*EMail: fpfeffer@umich.edu*

A growing body of stratification research suggests that parental wealth plays an important role in the intergenerational transmission of advantage in the United States. This contribution assesses the role of wealth in the status attainment process of children and young adults across three industrialized nations, the United States, Germany, and Sweden. By doing so, it answers the question of whether the influence of parental wealth on educational and occupational careers is a hallmark of industrialized nations in general or whether some nations may have successfully limited inequalities in opportunities as they arise from the economic wealth of one's parents. We discuss important differences in the education and welfare state systems of the three countries analyzed here and hypothesize how these relate to the hypothesized mechanisms underlying intergenerational wealth effects. Drawing on survey data from the United States and Germany as well as register data from Sweden, we are able to confirm important intergenerational wealth effects for all three countries. In conjunction with our discussion of relevant aspects of institutional arrangements, these results serve to elucidate some of the causal pathways through wealth may translate into attainment opportunities. In particular, the similarities in the relationship between parental wealth and educational attainment across these three contexts suggest that wealth functions as an important safety net to buffer the universal risks involved in educational careers. Different institutional arrangements may also explain the observed cross-national differences in the relationship between parental wealth and occupational attainment.

## **28-3. ALL STUDENTS LEFT BEHIND: AN AMBITIOUS PROVINCIAL SCHOOL REFORM IN CANADA, BUT POOR MATH ACHIEVEMENTS FROM GRADE TWO TO TEN**

*Pierre Lefebvre, Catherine Haeck and Philip Merrigan*

*EMail: lefebvre.pierre@uqam.ca*

We investigate the impact of an ambitious provincial school reform in Canada on children's mathematical ability. It is the first paper to exploit a universal school reform of this magnitude to identify the causal effect of a widely supported teaching approach on the development of the mathematical skills of students. The provincial experiment/reform studied in this paper has some evaluation advantages and cut across some of the methodological difficulties of previous research. First, the reform was implemented in each and every schools across the province in both primary and secondary schools. Second, the reform was implemented in steps, such that one grade apart students were either treated during their entire school life or not at all. Third, our data set provides a longer observation period than typically encountered in the literature. Results suggest that the reform had negative effects on

the development of students' mathematical abilities at all points on the skills distribution and that the effects were larger the longer the exposure to the reform.

#### **28-4. GENDERING THE COST OF CHILDREN IN TERMS OF TIME: AN ESTIMATE FOR ITALY WITH TIME-USE SURVEY DATA**

*Maria-Letizia Tanturri*

*EMail: tanturri@stat.unipd.it*

The high cost of children in terms of time may be an important factor associated with low fertility in Italy, but empirical data are lacking. This paper investigates how Italian couples' time dedicated to childcare, unpaid and total work varies by presence, number and age of children. The methodology is a loose adaptation of that used for the estimate of the monetary cost of children. The analysis is based on a sample of 4,827 couples – childless or with at least one child under thirteen – using the Italian Time Use survey of 2002-2003. OLS model results corroborate the hypothesis that Italian children are great time consumers. *Ceteris paribus*, parents' workload increases by more than 3 hours a day when there is a child under 3. Time costs increase with the number of children, albeit less than proportionally, and decrease with the age of the youngest child. Most of these costs are borne by women. Mothers of one child under 3 increase their workload time by 2 hours a day, while fathers by little less than 1. If children are three and one is an infant, mothers have to work 3 hours a day more while men less than 2.5. The costs of children shrink considerably when children reach school-age, but they still remain substantial for mothers. The gender role-set seems to be less unequal as the number of children grows: for the first infant women pay 64% of the incremental cost of children, while for three children (the youngest under three) they pay 57%. Conversely, the proportion of incremental child-cost paid by women increases as the age of the youngest increases. In this case men seem to activate themselves only in case of extreme need, that is when children are babies.

#### **29-1. COMPARATIVE POLICY PERSPECTIVES OF HAPPINESS AND CHILDBEARING**

*Arnstein Aassve and Maria Sironi*

*EMail: arnstein.aassve@unibocconi.it*

This paper considers the links between parenthood, happiness and policies, taking a comparative perspective. Its motivation derives from recent analysis suggesting a positive relationship between happiness and fertility but more importantly – that the demography literature argues that there is little room for policy in influencing fertility. Taking a multi-level approach, we find that parental happiness, and thus wellbeing associated with childbearing, depends on a series of country characteristics – ranging from economic prosperity, trust, social capital and gender equality. We reflect on its policy implications and highlight the fact that direct measures of child friendliness, such as the supply of public childcare – though important – appear to matter less than for instance gender equality.

#### **29-2. DEMOGRAPHIC TRANSITION AND DEMOGRAPHIC DIVIDEND IN THE STATES OF INDIA**

*Debasis Barik*

*EMail: debasisbarik25@gmail.com*

Demographic transition is inevitable and the utilization of the windows of opportunity it creates depends on policy framework of concerned nations. India has entered into the phase of demographic dividend since 1980 and will experience it till 2035 (UN; 2002). Unlike earlier studies, the present paper has made an attempt to understand demographic transition in state level and the dividend created through it in 21 major states following the

process adopted by Mason and Lee (2006). Population has been projected using smoothed age-sex data of Census 2001 as base year population following Cohort Component method of projection. Bihar and Uttar Pradesh are the youngest and Kerala is the oldest among major states followed by Tamil Nadu. First dividend is positive for all states in 2001. Delhi will observe negative dividend since 2016-21, followed by Kerala and Tamil Nadu. Most of the North Indian states will observe positive dividend till 2036-41.

### **29-3. POPULATION POLICIES FOR LOW FERTILITY COUNTRIES: THE NEED FOR THINKING BEYOND THE CONVENTIONAL REPERTORY**

*Paul Demeny*

*EMail: pdemeny@popcouncil.org*

A dominant tone of policy discussions in Europe concerning measures that may raise birth rates has undergone a notable shift in the most recent years. A palpably higher degree of complacency about the diagnosis of possible social and economic problems caused by very low fertility and about the adequacy of corrective remedies that may be required now tends to prevail. As expected, a modest increase of birth rates has accompanied the end of the shift of maternity schedules toward higher ages. Additionally, some examples seem to demonstrate that vigorous emphasis on classic pronatalist components of welfare-state measures can generate higher fertility. And findings that promotion of gender equality, well justified on grounds unrelated to fertility, amplifies the effectiveness of such measures, provide additional reassurance that effective recipes for achieving higher fertility are available when needed. But as multiple European and East-Asian examples indicate, complacency may be unwarranted. While modern industrial societies, especially if willing to adopt fairly liberal immigration policies, can certainly accommodate fertility levels that remain below replacement even by a non-trivial margin, the dominant completed fertility characterized by the choice of 2, 1, or no-child by women and couples can produce an average figure that over the longer-run yields rapid population decline and shifts in the age distribution with heretofore not encountered grave economic and social consequences. New approaches are needed that go beyond the present armamentarium of fertility-supporting policies. These include legislation that grants voting rights to heretofore disenfranchised citizens: children under the conventional voting age, with their right to be exercised by their parents or personal caregivers; concentration of economic support for parities three and higher; and reform of the state-managed pension system that reestablishes a direct link between mandated contributions of workers and the pensions received by their retired parents.

### **29-4. DEMOGRAPHIC TRANSITION, WINDOW OF OPPORTUNITY, AND POPULATION BONUS: TOWARD A NEW POPULATION POLICY IN IRAN**

*Hatam Hosseini*

*EMail: h-hosseini@basu.ac.ir*

This paper examines demographic transition and its consequences with an emphasis on demographic window in Iran. The results show that Iran is entering the third stage of demographic transition. The window of opportunity which opened in 2006 with its potential population bonus provides a golden opportunity for the Iran's economy. Based on an intermediate scenario of the UN population projections (2009), Iran's window of opportunity will remain open for almost four decades from 2005. This demographic dividend needs to be managed efficiently in order to be transformed into a better and sustainable economic growth. Thus, there is a need for a comprehensive population policies to not only manage the window of opportunity but also to introduce policies for maintaining fertility at its current level so that Iran will not be facing the prospects of very low fertility experienced in other Asian countries.

## 29-5. OPTIMAL FERTILITY

*Erich Striessnig and Wolfgang Lutz*

*EMail: erich.striessnig@wu.ac.at*

In this paper we challenge the widespread notion that replacement level fertility is the most desirable level of fertility both for countries currently above and below this level. We first discuss possible alternative criteria for choosing one fertility level over another. Dismissing for the time being the two extreme criteria of ever increasing national strength (which would imply unlimited population growth) and preservation of the environment (which would see human numbers converge to zero), we focus on age dependency as the sole criterion. But we do so by relaxing the strong assumption that all individuals of a given age are equal in terms of their economic contribution to society and introduce education as probably the most relevant observable source of population heterogeneity. Our criterion variable is the education weighted support ratio and we perform thousands of alternative simulations for different constant levels of fertility starting from empirically given populations. If education is assumed to present a cost at young age and results in higher productivity during working age then for most countries the optimal long-term total fertility rate turns out to be well below replacement level.

## 30-1. SAME-SEX MARRIAGE FREQUENCIES IN EUROPE

*Maks Banens*

*EMail: maks.banens@univ-lyon2.fr*

Same-sex marriage and registered partnership created new, unexpected inequalities between European countries: British or Swiss frequency rates are ten times higher than Swedish or German rates, hundred times Slovenian rates. Unlike other inequalities, these are not considered as socially problematic per se. Yet, they have to be explained and the explanation might detect effects of social inclusion or exclusion. Previous studies invalidated the hypothesis that these inequalities might be explained by unequal levels of legal and financial advantages coming with the registration (Festy, 2006). This one tries to formulate new hypotheses. The study is based on two types of material. First, it relies on socio-demographic indicators of same-sex union registration, marriage values, homophobia and gender inequality. Second, it relies on interviews with same-sex couples, registered or not, in most western and central European countries, aiming at a better understanding of motivation for same-sex couples to register or not in the concrete circumstances of their social environment. Preliminary results show a major influence of social attitudes towards homosexuality. But these attitudes should be understood as social management of homosexuality more than as simple homophobia.

## 30-2. SAME-SEX MARRIAGES AND PARTNERSHIPS IN TWO PIONEER COUNTRIES, CANADA AND SPAIN

*Clara Cortina, Benoît Laplante, Ana Fostik and Teresa Castro Martin*

*EMail: clara.cortina@cchs.csic.es*

The legalisation of same-sex marriages in 12 countries around the world, together with the legal recognition of same-sex partnerships in other 21 countries has considerably changed the marriage institution worldwide (Cherlin 2004). Some authors consider that same-sex marriage is not only a major legal change but also a real new social phenomenon (Chamie and Mirkin, 2011). Nevertheless, the difficulties in enumerating same-sex couples with available official data (Festy 2007) make it difficult to evaluate really the incidence of same-sex nuptiality. In this paper, we focus on Canada and Spain, two countries that legal-

ized same-sex marriage in 2005, just after the two pioneers, Belgium and The Netherlands. We use marriage records (2005-2010) and census microdata (Spain 2001 and Canada 2006). First, we review previous literature in order to discuss the limits of enumerating same-sex couples with census data and marriage records. Second, and taking these limitations into account, we try to understand how prone are gays and lesbians to marry when they have the choice to do so by comparing the incidence of heterosexual and homosexual non-marital cohabitation. Third, we analyze the socio-demographic profiles of same-sex partners and spouses.

### **30-3. LIVING APART TOGETHER: COMPARING OLDER ADULTS IN DIFFERENT RELATIONSHIP TYPES**

*Edith E. Gray, Ann Evans and Anna Reimondos*  
*Email: Edith.Gray@anu.edu.au*

Recent research on people in 'living-apart-together' (LAT) relationships shows that older adults are more likely to be in these relationships by 'choice'. In comparison with young adults and those in middle adulthood, older adults were more likely to state that they made a definite decision to live apart, that they did not intend to live together within the next three years, and that they were unlikely to get married. They also had the longest duration times of LAT (Reimondos et al. 2011). Some researchers have recently suggested that people who opt for a LAT relationship do so because they value independence. Further, people who opt for LAT because they value independence tend to have more liberal views than people in other types of relationships and they tend to be higher educated and less religious. However, while many people lived apart for ideological reasons, it was also clear that others lived in these arrangements because of necessity (Liefbroer et al. 2011). This paper investigates the situation of people in LAT relationships compared with other relationships (or absence of). While it is clear from previous research that there are substantial numbers of people who live apart from their partner in Australia, little is known about their characteristics. This paper will contribute to understanding the types of people who live apart. Using HILDA data this paper compares older Australians who are in a LAT relationship with people who are married, cohabiting, and single in the following domains: (1) relationship histories; (2) attitudes; (3) socio-economic background; and (4) health and wellbeing. The findings have implications for the treatment of those in a LAT relationship as 'single' in models where relationship type is associated with outcomes.

### **30-4. SAME SEX HOUSEHOLDS IN THE UNITED STATES CENSUS: MEASUREMENT ISSUES AND SUBSTANTIVE RESULTS**

*Howard Hogan and Martin T. O'Connell*  
*Email: Howard.R.Hogan@census.gov*

This paper addresses the measurement same-sex couple households from the 2010 Census and the related American Community Survey (ACS). Initial comparisons between the 2010 Census and the ACS indicated the 2010 Census number was 52 percent higher than the ACS estimate. Investigation indicates that the questionnaire design of the 2010 Census for the field data collection phase caused sufficient errors in recording sex to inflate the census counts, especially for the numbers of same-sex spousal households. These errors may have included mismarks of male/female on the questionnaire or errors in the optical reading of the marks. These errors would tend to misclassify an opposite-sex couple as a same-sex couple. A very small percentage of these errors had a significant impact on the overall estimate of same-sex couples. This paper estimates that 28 percent of all same-sex couple households in 2010 Census tabulations are likely to be opposite-sex couple households.

This problem is more severe for those couples who reported being spouses than unmarried partners. This problem was most evident for households in the non-response follow-up (NRFU) phase of data collection where one partner's sex in an opposite-sex household was incorrectly marked or captured in the processing phase, resulting in a same-sex couple household. As the ratio of opposite-sex to same-sex spousal households is much greater than the ratio of opposite-sex to same-sex unmarried partner households, the effects of these errors are disproportionately greater on the numbers of same-sex spouses than unmarried partners. The paper presents both the methodological issues in estimating the true number of same-sex households and presents the new estimates.

### **30-5. WHY DO INTIMATE PARTNERS NOT LIVE TOGETHER? UNDERSTANDING DIVERSITY IN LAT RELATIONSHIPS ACROSS EUROPE**

*Aart C. Liefbroer, Judith A. Seltzer and Anne-Rigt Poortman*

*EMail: liefbroer@nidi.nl*

The prevalence and meaning of Living Apart Together relationships across Europe is examined. Persons in a LAT-relationship view themselves as intimate partners but do not live together. Three main reasons for not living together are distinguished: partners can feel that they are not ready yet to start living together, they can opt for a LAT for practical reasons, or they can choose to do so to secure their autonomy. Using data from the Generations and Gender Survey on seven European countries, the prevalence and correlates of these types of LAT-relationships is examined. In addition, hypotheses on variation in the prevalence of these different types of LAT-relationships across countries are tested. To many, not living with a partner does not simply constitute some kind of extended dating period. Practical constraints seem to matter particularly much in Eastern European countries. In France and Germany, LAT as a conscious choice is more prevalent.

### **31-1. INTERMARRIAGE ATTITUDES AMONG MINORITY AND MAJORITY GROUPS IN WESTERN EUROPE: THE ROLE OF ATTACHMENT TO THE RELIGIOUS IN-GROUP**

*Sarah Carol*

*EMail: carol@wzb.eu*

The key question of this paper is whether social integration, both for minority (migrants) and majority groups (natives) in Western Europe, varies across contexts of exit (ethnic origins) and contexts of reception (Western European countries); and if so, how does religious identity and practice serve to mediate these contextual differences? To investigate this question I draw on the international comparative dataset EURISLAM which includes comparisons between Muslim migrants of ex-Yugoslav, Turkish, Moroccan and Pakistani origin with majority group members of Belgium, Britain, Germany and Switzerland. Social integration is measured through attitudes towards intermarriage across Muslim/non-Muslim lines. As results show, ethnic groups differ in their probabilities to approve of intermarriage. Especially migrants from the former Yugoslavia encounter a significantly lower approval of intermarriage by natives. However, approval of intermarriage is closely tied to religiosity. Once religiosity is controlled for, all migrant groups become significantly more positive about intermarriage than natives. Following theories on in-group favouritism and the homophily principle, we find that religious identity among migrants and practice among both natives and migrants are associated with reluctance to intermarry. Policy makers are advised to take note that contextual differences in perceived social integration of immigrant groups could be confounding other factors, including how differences in religiosity affect social integration.

### **31-2. PATTERNS OF RELIGIOSITY AMONG NEW TURKISH AND POLISH IMMIGRANTS IN GERMANY**

*Claudia Diehl and Matthias Koenig*  
*EMail: cdiehl@uni-goettingen.de*

Immigrants' religious adaptation in Western European countries receives growing academic and societal attention but quantitative research on the topic is still in its infancy. This applies particularly to the question of what happens with immigrants' religiosity immediately upon arrival. We present initial findings from a new dataset on the socio-cultural integration of recent immigrants in Europe. In 2010/2011 about 7.000 migrants who had recently arrived in several European destination countries were surveyed as part of the DFG/NORFACE funded project "Causes and Consequences of Socio-Cultural Integration Processes among New Immigrants in Europe" (SCIP), a mini-panel study of selected migrant groups. In this paper, we draw upon data from the first survey wave in Germany conducted among 2.500 recent immigrants from Poland and Turkey, in order to describe and explain immigrants' religious practices and identities during the earliest phase of integration. In our analyses, we move beyond classical accounts of secularization and assimilation theory and test more differentiated hypotheses on new migrants' religious adaptation patterns. Doing this, we address the dynamic and potentially "uprooting" phase in the integration process upfront and take into account differences in both groups' religious background as well in the group specific opportunities for religious participation. First of all, we built on approaches emphasizing the traumatic and transitional experience of the migratory act in itself that may turn migration into a "theologizing" experience, especially for Turks who face greater cultural and social distances upon arrival. Independent on the impact of migration on migrants' private religiosity, we expect, secondly, Poles to show higher levels of religious participation (as measured by worship attendance) upon arrival than Turks. Thirdly, we expect the relationship between ethnic and religious identifications to be positive for immigrants from Turkey but not necessarily for those from Poland.

### **31-3. THE INTERGENERATIONAL TRANSMISSION OF RELIGIOSITY AMONG MUSLIM FAMILIES IN FOUR EUROPEAN COUNTRIES**

*Frank Kalter and Konstanze Jacob*  
*EMail: kalter@uni-mannheim.de*

Comparative research on religious trends among Muslim immigrants in Europe suffers from at least two major methodological drawbacks. First, there is a lack of truly comparative data. Second, trends can usually only be analyzed over period time by trend designs or by looking at synthetic cohorts. This paper studies secularization patterns and trends among Muslim families by using data from the new Children of Immigrants Longitudinal Survey in Four European Countries (CILS4EU). This offers a unique opportunity to investigate the religious integration of immigrant youths in Europe. The project seeks to answer key open questions on the integration of children of immigrants in four European countries: England, Germany, the Netherlands and Sweden. Between November 2010 and June 2011, approximately 20,000 14-year old adolescents of native and immigrant origin were surveyed within schools. Additionally, we conducted self-completion and telephone interviews with one of their parents. Identical questions on religion in the youth and parental questionnaires, respectively, provide the opportunity to analyze different dimensions of the processes of intergenerational transmission of religiosity within immigrant families particularly accurately. Several aspects of religious affiliation, religious self-identification, religious identity and religious behavior, both private and public, are included in the inter-



views. Two research questions guide this paper. The first one is descriptive: What patterns of secularization do we find among different Muslim groups in England, Germany, the Netherlands, and Sweden? By analyzing adolescent-parent dyads, we investigate how religious identification and religious behaviors change over successive immigrant generations. We especially ask about within-group variations between host countries, and about within-host-country differences between different origin groups. The second aim of the paper is to analyze the potential causes behind the diverse patterns. Referring to rivaling theoretical approaches we are especially interested in the impact of structural and social integration.

#### **31-4. A COMPARISON OF MAJORITY AND MINORITY RELIGIOSITY ACROSS EUROPE**

*Ayşe Güveli and Lucinda Platt*  
*EMail: aguweli@essex.ac.uk*

Studies on religion have made a come back after having been neglected with the prediction that religion will fade within modern world. Despite the historically low levels of religious commitment in the European societies, religion is becoming increasingly important in public and scholarly debates, predominantly in relation to immigrant and minority religions. This study focuses on the differences in religiosity between majority Christian or secular populations and immigrants in European countries. To what extent do immigrant and majority populations differ in their religious commitment and how can we explain these differences in European societies? We frame our question using theoretical perspectives deriving from demand- and supply-side theses, integration theory, and vulnerability and cultural axiom theses (Chaves & Gorski, 2001; Iannaccone, 1994; Stark, Finke, & Iannaccone, 1995; Berger, 1967; Bruce, 1999; Norris and Inglehart, 2004). We hypothesise that religiosity will be influenced by the institutional context within the destination country, in terms of support for religion, which itself will vary according to the migrant's religion; but that migrant characteristics will also matter, as well the country-specific density of the different ethno-religious groups. To test our hypotheses concerning differential religiosity, we therefore employ both individual and contextual factors in terms of origin, destination and setting, determinants which have increasingly been employed in recent migration studies (Borjas, 1987, 1992, 1993; Van Tubergen, 2006). We pool the existing four rounds of the European Social Survey (ESS) and also employ the European Value Survey (EVS) 2008. Both data sets include migration status and country of origin of the respondents and their parents, as well as questions on religion and religious practice. Our preliminary analyses indeed show that migrants are substantially more religious than natives but that the extent varies across migrant groups and religion and across destination countries. Keywords: religiosity, immigrants, European societies, multilevel analysis.

#### **32-1. PLAGUE IN SEVENTEENTH-CENTURY EUROPE AND THE DECLINE OF ITALY: AN EPIDEMIOLOGICAL HYPOTHESIS**

*Guido Alfani*  
*EMail: guido.alfani@unibocconi.it*

This paper compares the impact of plague across Europe during the seventeenth century. It shows that, contrary to received wisdom, seventeenth century plague cannot be considered a "great equalizer": the disease affected southern Europe much more severely than the north. In particular, Italy was by far the area worst struck. Using both new archival sources and previously published data, the article introduces a novel epidemiological variable that has not been considered in the literature: territorial pervasiveness of the contagion. This variable is much more relevant than local mortality rates in accounting for the

different regional impact of plague. The paper shows that pandemics, and not economic hardship, generated a severe demographic crisis in Italy during the seventeenth century – at a time when northern European populations were growing quickly. Plague caused a “system shock” to the economy of the Italian peninsula that might be key in understanding the start of its relative decline compared to the emerging northern European countries. The paper also provides new insights about changing of the biological characteristics of plague over time, and about the reasons for its disappearance from Europe as an endemic disease.

## **32-2. DISASTER AT A DISTANCE: DEMOGRAPHIC CONSEQUENCES OF THE TAMBORA 1815 ERUPTION ON ITALIAN TOWNS IN THE APPENINES**

*Katherine M. Condon*

*Email: kat.condon@hotmail.com*

In April 1815, one of the largest known volcanic eruptions occurred at Tambora in Indonesia. The initial eruption killed about 10,000 people instantly and the overall local death toll was estimated at 88,000. Volcanic dust impacted areas beyond the South Pacific; blanketing much of Europe and North America during the summer of 1816 and has been blamed for the below-normal daily temperatures experienced at that time. Lower temperatures came at a critical time for agricultural production, causing many crops to fail, and leading to widespread famine and increased mortality in 1817 in Europe. I document significant mortality consequences of the eruption by examining death data for 32 towns in the Abruzzi region of Italy. Deaths in 1817 were significantly greater compared to adjacent years. Further, I find that the mortality crisis peaked between March 1817 and March 1818, and most age groups were impacted.

## **32-3. TOLERANCE LABEL — JUSTIFIED OR NOT?**

*Sabira Kulsariyeva and Anel Sharipova*

*Email: s.kulsariyeva@gmail.com*

The population of Kazakhstan today has cardinaly changed the attitude towards migrants. In the late 1930s Kazakhstan (at that time one of the Soviet Union republics) was a monoethnic nation. Changes in the population composition has occurred as a result of one of the most violent phenomena of Stalin's epoch when millions of so called “unreliable” nations – Koreans in the Far East, the peoples of the Caucasus and the Crimea, Greeks, Poles and Germans, – were forcibly deported to Kazakhstan. At the end of the violent transfer those people were disembarked from the train cars and left in the desert without roof over their heads, with no provision supplies or whatsoever personal belongings. On a large scale the local population had helped the deported people to survive sheltering and supporting them, despite of the Soviet's authorities' punitive measures against such activity. The attitude has continued when the deported peoples were rehabilitated. In fact, many ethnic groups were able to integrate into Kazakh society, to occupy certain niches of the economy and have become fully responsible citizens. Every nation has its cultural centers, and all nations has formed the Assembly of Peoples of Kazakhstan. But even in spite the fact that Kazakhs consider themselves as a tolerant ethnic group, the problem of youth's views on immigration rates in Kazakhstan nowadays remains daunting. A sociological survey was conducted in two major universities in Almaty. The response poll showed that today youth does not always act sympathetically towards the migrants, and students do not consider it necessary to show positive attitudes to people not in distress. An accepting and hospitable community, which Kazakhstani society has always been for the migrants, happens not to be as tolerant as before. So is the label of tolerance justified today?

#### **32-4. ESTIMATING THE REPRODUCTIVE NUMBERS OF INFLUENZA PANDEMICS FROM MULTIPLE HISTORICAL DATA SOURCES**

*James E. Oeppen and Carlo G. Camarda*

*E-Mail: oeppen@demogr.mpg.de*

One of the contributions that historical demography can make to modern science is to expand the contexts available for testing methodologies designed to address contemporary problems. This is particularly relevant for influenza modelling as there have only been five genetic shifts leading to pandemics in the past 125 years. An influenza pandemic is the outcome of an interaction between two populations – the human immune system and the new variant of the influenza A virus – each with very different demographic characteristics. Accurate real-time estimation of the parameters of this interaction, together with their confidence intervals, would be of enormous help to health planners. Our model aims to improve the estimation of the daily Reproductive Number ( $R_0$ ) of past pandemics in their growth phase (NRR in demographic terms), while explicitly accounting for the mis-recording created by week-ends and public holidays. When  $R_0$  is greater than unity a pandemic continues to grow, so the evolution of this crucial parameter is an indicator of the need for intervention and a measure of its success or failure. To evaluate the model we use data from two influenza pandemics: 1889-90 in Munich and 1918 in New York State. Treating these historical data as an ex ante estimation problem shows how well this key parameter might be estimated in a future pandemic.

#### **33-1. REPRODUCTIVE HEALTH IN URBAN NIGERIA: A QUANTITATIVE ASSESSMENT OF CONTEXTUAL FACTORS INFLUENCING ACCESS TO ANTE-NATAL CARE AND PATTERNS OF UNDER-FIVE MORBIDITY AMONG POOR AND NON-POOR URBAN MARRIED WOMEN**

*Sunday T. Omoyeni and Adekunbi Omidemi*

*E-Mail: sunny4exploit@yahoo.com*

Past research efforts have been concentrated on explaining disparities in health care services utilization and outcomes between rural and urban dichotomies, without giving adequate attention to the health disadvantages faced by the urban poor women within the context of increasing volume of rural-urban migrants and poor reproductive outcomes in Nigeria. This study, therefore, examined the contextual and social factors influencing maternal and child health outcomes among urban women in Nigeria. The study utilized data on a sample of 3,022 and 3,609 urban poor and non-poor women respectively, from the 2008 Nigeria Demographic and Health Survey. Cross tabulations and binary logistic regressions were used to examine possible relationships between selected socio-demographic variables and maternal and child health outcomes. The results revealed the existence of disparities in urban reproductive health outcomes, with urban poor women experiencing higher burden of poor maternal and child health outcomes. About 74% of urban poor women had home deliveries compared to 26% of urban non-poor women. Also, about 61% of urban non-poor women reported at least 4 ante-natal visits relative to 39% of urban poor women. The odds of urban non-poor children experiencing diarrhea ( $OR=0.87$ ), fever ( $OR=0.81$ ) and poor immunization ( $OR=0.45$ ) decrease significantly relative to urban poor. Findings showed that educational level, employment status, age at first birth and ethnicity explained most of the variations in maternal and child health outcomes among urban women. The findings of the study may have implications for giving more attention to meeting urban poor women health needs, with a focus on the factors challenging their access to quality maternal and child health care services.

### 33-2. POSTNATAL CARE IN NIGERIA: A MULTILEVEL ANALYSIS OF COMMUNITY CONTEXTUAL FACTORS

*Dorothy Ononokpono, Clifford O. Odimegwu, Eunice N. S. Imasiku and Sunday Adedini*  
E-Mail: [doraon5@yahoo.com](mailto:doraon5@yahoo.com)

Most maternal and neonatal deaths occur in the first week after delivery, yet majority of women in Nigeria deliver at home unattended by skilled professional and without adequate postnatal care. Previous studies on postnatal care focus on individual and household level influences, but the role of community attributes has been largely ignored. This study builds on previous studies and examines the influence of community contextual factors on the decisions to seek postnatal care in Nigeria. We used data from the 2008 Nigeria Demographic and Health Survey and a sample of 17,635 women age 15-49 years who had most recent delivery in the five years preceding the survey. Using multilevel regression analysis, preliminary results indicate that individual, household and community contextual factors were important in explaining individual differences in the decisions to seek postnatal care. Religion, parity, exposure to family planning messages and economic status were significant predictors of postnatal care ( $p < 0.001$ ). Community contextual factors including community women's education (AOR=1.2, 95% CI=1.13-1.54;  $p < 0.001$ ), community hospital delivery (AOR=4.5; 95% CI=3.91-5.33), ethnic diversity (AOR=1.3; 95% CI=1.13-1.55;  $p < 0.001$ ) and distance to health facility (AOR=1.3; 95% CI=1.23-1.47) were significantly associated with postnatal care. Women from communities with high female education, hospital delivery and ethnic diversity were more likely to seek postnatal care than their counterparts. Regional variations were observed with women from south west 1.3 times more likely to seek postnatal care than those from north west. Findings suggest that community interventions to increase the use of postnatal care services should target the uneducated, poor and those women who live in disadvantaged regions. Results also indicate the need for mass media programmes that will educate women about the importance of postnatal care; and provision of social infrastructure in disadvantaged communities to alleviate the problem of distance which is a major barrier to seeking postnatal care.

### 33-3. UTILIZATION OF MATERNAL CARE SERVICES IN RURAL PHILIPPINES

*Thankam S. Sunil and Lisa K. Zottarelli*  
E-Mail: [thankam.sunil@utsa.edu](mailto:thankam.sunil@utsa.edu)

According to the National Demographic Health Survey in The Philippines, conducted during 2003, only 20 percent of mothers received all the recommended types of antenatal care, 34 percent of births were delivered in a medical institution, 38 percent of deliveries were assisted by a medical doctor and 61 percent of the births were taken place at homes. Wide differentials are also observed between rural and urban areas. The recommended minimum of four antenatal care follow-up visits were received by 78 percent of births to mothers living in urban areas, but for only 62 percent of births to mothers living in rural areas. Similarly, 55 percent of deliveries in urban areas, only 23 percent of deliveries in rural areas, took place in health care facilities. These measures indicate that the utilization of various maternal care services are not encouraging, particularly in the rural areas. In the present analysis, using a theoretical framework developed by Andersen and Newman (1973), we incorporated both individual and program characteristics in addressing the utilization of maternal care services in rural areas of The Philippines. To capture the complexity of the various aspects of maternal care utilization we construct a composite index based on the various components of the maternal care services. The analysis based on such an index may provide a better picture of the utilization of maternal care services.

### 34-1. THE SOCIO-DEMOGRAPHIC DETERMINANTS OF DISABILITY – FINDINGS FROM POLAND

Anita Abramowska-Kmon  
E-Mail: aabram@sgh.waw.pl

Nowadays, in the context of population ageing the health status and its determinants are broadly discussed issue because health is the main factor of so-called quality of life. Many studies have shown that health status does not only depend on biological factors (age, sex), but also on social and demographic factors (place of residence, living arrangements, marital status or level of education). The main purpose of the paper is to analyse the socio-demographic determinants of disability in Poland. The data used come from the panel survey “Social Diagnosis – living conditions and quality of life of Poles”, carried out in Poland since 2000. The random effects probit model with the dependent binary variable describing disability has been estimated. Our findings are similar to the results obtained for other European countries. We found that women have lower probability of being disabled than men. As it could be expected, the likelihood of having a disability increases with age. Married people have lower odds of becoming disabled than those never married, while for divorced this probability was higher. Moreover, the educational level has a strong impact on probability of being disabled: persons with higher level of education have lower risk of having a disability than those with lower level of education.

### 34-2. DOES AN INCREASE IN HEALTH INSURANCE COVERAGE REDUCE SOCIOECONOMIC INEQUALITIES IN PREMATURE MORTALITY? AN ANALYSIS OF THE POST-REFORM PERIOD IN COLOMBIA

Ivan I. D. Arroyave, Doris Cardona, Alex Burdorf and Mauricio Avendano  
E-Mail: i.arroyavezuluaga@erasmusmc.nl

**Background** Recent health care reforms in several middle-income countries have increased health care insurance coverage (HIC). This study examines the impact of a major increase in HIC in Colombia on socioeconomic inequalities in total and cardiovascular disease (CVD) mortality from 1998 to 2007. **Methods** Data on deaths by educational level from mortality registries were linked to population census data (n=3,984,450) for the period 1998-2007. We used Poisson regression to examine inequalities in mortality by education based on the relative index of inequality (RII). We compared trends in inequalities between periods of moderate (1998-2002) and accelerated (2003-2007) increase in HIC. **Findings** Lower education was associated with higher total and CVD mortality, and these inequalities widened over the study period. Among men, the RII increased from 2.27 (95%CI [Confidence Interval] 2.23, 2.32) in 1998-2002 to 2.71 (95%CI 2.65, 2.76) in 2003-2007, while among women it increased from 2.62 (95%CI 2.55, 2.71) to 2.87 (95%CI 2.79, 2.95). Within each period, however, inequalities increased at a different rate. In 1998-2002, a period of moderate increase in HIC, inequalities increased every year by 10% in men and 3% in women. In contrast, in 2003-2007, a period of accelerated increase in HIC, inequalities increased by 2% in men and 1% in women. **Interpretation** Socioeconomic inequalities in mortality widened throughout the post-reform period, but increased coverage may have slowed down increasing trends in inequality. Increasing insurance coverage may not be sufficient to eliminate inequalities, but it may contribute to curb increasing inequality trends.

### **34-3. WIDENING SOCIOECONOMIC MORTALITY GRADIENT IN GERMANY AND ITS IMPLICATION FOR THE CLOSING EAST-WEST MORTALITY GAP**

*Eva U.B. Kibele, Domantas Jasilionis and Vladimir M. Shkolnikov*

*EMail: e.u.b.kibele@rug.nl*

Widening socioeconomic mortality gradients have been found in many European countries, ranging from supposedly egalitarian countries in Northern Europe to the Eastern European countries which have undergone great societal changes in the past few decades. This study seeks to find out how the socioeconomic mortality gradient developed among the elderly in Germany. In particular, the socioeconomic mortality gradients in eastern and western Germany and their trends are studied in order to see whether and how the differential mortality trends in population groups contributed to the closing East-West mortality gap in Germany. Mortality trends of the male population aged 65+ years in Germany over the years 1995-96 to 2007-08 are studied using data of the German Federal Pension Fund that cover over 80% of the retired German population. Former occupation and pension income are used as an indicator of socioeconomic status. The results reveal that the mortality risk is higher among people with a lower SES compared to lower mortality of people with higher SES. This difference has increased between 1995-96 and 2007-08, showing a widening of the old-age mortality gradient. Pronounced mortality reductions in the population with high socioeconomic status in eastern Germany greatly contributed to the mortality decrease in eastern Germany, and hence to the life expectancy convergence between the eastern and the western part of Germany.

### **34-4. SOCIOECONOMIC INEQUALITIES IN MORTALITY AT OLDER AGES IN QUEBEC (CANADA): PERSPECTIVES FROM THE MODAL AGE AT DEATH**

*Chantale Lecours, Robert R. Bourbeau and Nadine Ouellette*

*EMail: chantale.lecours@umontreal.ca*

Previous studies showed important differences in adult mortality according to the socioeconomic status of individuals, revealing that the level of education, type of occupation, and level of income have huge impacts on health and mortality. However, few studies addressed this issue in old-age mortality specifically. In this paper, we use a recently proposed method to investigate whether changes in the modal age at death and in the mortality dispersion above this age vary along the levels of deprivation within a population. We rely on the method of P-splines, a nonparametric approach, to smooth mortality data for each quintile of deprivation and then estimate the modal age at death and the mortality dispersion above that age. Using data for Quebec (Canada) for periods 2000-2002 and 2005-2007, we show that inequality according to the deprivation index persist, in particular among Quebec men, beyond the age where premature mortality occurs.

### **34-5. INDIVIDUAL AND CONTEXTUAL DETERMINANTS OF SOCIAL INEQUALITY ON MORTALITY IN SOUTHERN EUROPE**

*Diego Ramiro-Fariñas, Francisco Viciano, Víctor Montañes Cobo and Juan Merlo*

*EMail: diego.ramiro@cchs.csic.es*

Studies on social inequality and mortality have a long tradition in demography and epidemiology. However, in Spain, as well as in the rest of Southern Europe, the statistical sources available don't allow going further from ecological territorial analysis. Although this kind of analysis allows us to study the association between social characteristics and mortality, it does not allow measuring the real impact of these determinants on mortality. Recent developments on the integration and linkage of individual statistical registers, as

the Longitudinal Population Database of Andalusia Region, which follows up 9 million individual trajectories, will allow a precise quantification and decomposition of the effect of social determinants on mortality. Some preliminary results show that life expectancy differentials for the population over 40 years old, by individual characteristics, such as educational level attained, are very significative. Those characteristics associated to household of residence, as well as housing ownership and other non measured characteristics had also an important impact. However, despite of an important residential segregation, characteristics regarding the area of residence had a weak and marginal impact once discounted the effects of individual and familial characteristics.

### **35-1. FAMILY FORMATION IN TIMES OF UNCERTAINTY: FRANCE AND GERMANY COMPARED**

*Marie-Therese Letablier and Anne Salles*

*EMail: marie-therese.letablier@univ-paris1.fr*

What are the implications of the labour market uncertainty and economic insecurity on family formation? The implications of economic insecurity on fertility decisions will be analyzed in France and Germany representing two contrasted countries with regard to fertility level, young adults' employment patterns and policies supporting parenthood. France has one of the highest fertility levels in Europe whereas Germany has one of the lowest despite a contrasted situation regarding the incidence of unemployment among young generations. We suggest in this contribution to explore the paradox that characterizes the two countries: the high economic insecurity due to a high labour market uncertainty does not result in a low fertility in France while a lower labour uncertainty in Germany is connected to a low fertility. We hypothesize firstly that the impact varies according to gender and class and secondly that the impact depends on the institutional and cultural context. Methodology uses a comparative qualitative approach, analyzing the narratives from a sample of young men and women living in two medium sized cities in Western Germany and France. Results emphasize the strong effect of norms related to gendered parenthood and to the value of children in the two countries, and notably the acceptance of external childcare. They also underline the effect of policies supporting parenthood in reducing the perception of insecurity, therefore enabling a transition into parenthood. We conclude that the contrasted situations in the two countries may be explained firstly by the subjective meaning of children as an economic and social risk, and secondly by the perception young adults have of policies in their ability to support transition to parenthood, that is high or low trust in policies and in their ability to reduce the risk perception.

### **35-2. THE WELFARE STATE'S IMPACT ON RISK ATTITUDES AND THE CONSEQUENCE FOR FERTILITY BEHAVIOUR**

*Christian Schmitt*

*EMail: cschmitt@diw.de*

Fertility rates in Germany have been exceptionally low for several decades. I investigate to which extent risk aversion or risk affinity translates into fertility behaviour, and whether fertility is affected by economic and social conditions, which are capable of mediating risk attitudes. I aim at answering two major research questions: 1) Does risk aversion foster or hamper the likelihood to opt for the transition to parenthood? 2) Are fertility choices affected by interactions between individual risk attitudes and changes in economic and social conditions? In order to address these questions I distinguish risk attitudes and fertility choices in East and West Germany. Institutional support across Germany might be capable to compensate for occupational adversities like unemployment, e.g., thus containing

individual economic risks. However, the Welfare State's provision of services and support might also raise the internalised level of minimum security, required to make binding long-term commitments like deciding for a first child. In this context, I assume that socialisation under different institutional and social contexts of the FRG and the GDR affected the evolution of different base levels of risk attitudes, where the high predictability and low variability of the GDR's institutional system fostered a higher level of risk aversion. The key research question rests on whether differences in risk attitudes translate into differences in fertility behaviour. Relying on microdata from the Socio Economic Panel Study (SOEP), the empirical investigation of this issue is based on piecewise constant estimates of first-birth decisions. The findings suggest systematic differences in risk attitudes between individuals who grew up in East and West Germany prior to the fall of the Wall. Moreover childbearing decisions appear to be linked to risk-attitudes with a mediating impact of occupational insecurities, which vastly overshadow the role of risk aversion in opting to start a family.

### **35-3. MINDING THE DOWNSIDE OF MARKET FLEXIBILIZATION. DOES PRECARIOUS WORK AFFECT SHORT-TERM FERTILITY INTENTIONS AND THEIR REALIZATION?**

*Doris Hanappi, Valérie-Anne Ryser, Jean-Marie Le Goff and Laura Bernardi*  
Email: [doris.hanappi@unil.ch](mailto:doris.hanappi@unil.ch)

This paper looks at the relation between precarious work and short-term fertility intentions as demographic response to economic turbulence and market flexibilization. Rational choice explanations of low fertility in industrialized countries often state that low fertility is the outcome of high labor market uncertainty. Although the empirical evidence that modern societies do face the downsides of market flexibilisation is strong, three relevant issues from a life course and fertility perspective have not received much attention so far. First, gender-specific differences in the realizations of fertility intentions as a consequence of precarious work have been largely ignored. Second, while several studies have shown the impact of job instability, job insecurity, and income, empirical evidence on the effects of job quality is limited. Third, the relationship between objective and perceived precariousness in low-fertility societies remains unclear. This is particularly true for gender-differences in the behavioral responses to precarious work. Even though precarious work is less dramatic than unemployment, it substantially affects people's life planning, and in particular, reproductive decision-making. We examine these downsides in two steps. First, the realization of fertility intentions is expected to depend on gender-specific effects of objective and perceived job insecurity and control over work. Second, a better, more stable and satisfying financial situation of households is expected to lead to a higher likelihood of positive fertility intentions and their realization. Building subjective and objective indicators of precarious work, we test these hypotheses with a representative sample of the Swiss population aged between 19-43, who took part in the waves 2002 and 2009 of the Swiss Household Panel.

### **35-4. PRECARIOUS BABY PLANS? EXAMINING THE IMPACT OF ECONOMIC CIRCUMSTANCES ON CHILDBEARING INTENTIONS OF GERMAN MEN AND WOMEN**

*Claudia Geist and Sarah R. Brauner-Otto*  
Email: [claudia.geist@soc.utah.edu](mailto:claudia.geist@soc.utah.edu)

Examining the sensitivity of childbearing plans to changes in economic circumstances is crucial to understanding how global and regional economic crises may affect the demo-



graphic future of low fertility countries. Using two waves of the German PAIRFAM panel data for young adults who were age 25-27 and 35-37 at the time of the first interview, we examine how unemployment and earnings loss affects fertility plans in German men and women. We assess the role of economic circumstances for both single and coupled men and women. We further examine the gendered meaning of employment and earnings changes by investigating the impact of economic changes in both partners in a couple. We take advantage of the longitudinal data structure by using fixed effects models, to account for unobserved stable characteristics of respondents and their partners.

### **35-5. ECONOMIC RISK, FERTILITY AND THE WELFARE STATE: UNDERSTANDING INDIVIDUAL RATIONALES**

*Anne Lise Ellingsaeter and Eirin Pedersen*

*EMail: a.l.ellingsater@sosgeo.uio.no*

At the centre of the academic debate concerning fertility decline in western welfare states is the question if family policies may sustain or increase fertility levels. Statistical evidence on the association between family policies and fertility is mixed. Qualitative and interpretative approaches studying whether and how policy arrangements may enter the transition to parenthood can be a valuable complement to statistical correlation analyses. The present study investigates Norwegian young adults' considerations about economic conditions, family provider models and labour market risks related to the choice of becoming a parent, and the role they assign to childcare policies. Norway is an interesting case, a social democratic welfare state that has generated close to replacement level fertility: In 2010 the total fertility rate was 1.95, and the completed fertility at the age of 40 among women born in 1969 was 2.0 The analysis is based on 90 semi-structured interviews in 2010 among urban women and men in working class and upper middle class occupations. The analysis finds that the transition to parenthood is characterised by a rather high degree of perceived economic security. Economic security is founded on two pillars: childcare policies supporting the dual earner family; compensating income lost during child rearing and providing childcare when both parents are working, and a strong and well-regulated labor market, providing jobs. The choice of having a child is made with seemingly little detailed knowledge of policy arrangements and without thinking about the risk of unemployment. This reveals a great deal of trust in the welfare state's ability to mitigate the economic risk that parenthood entails. The transition to parenthood is affected by class and gender, however: Different employment contracts and consumption standards deemed necessary for having children influence choice.

### **36-1. THE TRANSITION TO ADULTHOOD AMONG PALESTINIANS LIVING IN THE OCCUPIED PALESTINIAN TERRITORY**

*Niveen M. E. Abu-Rmeileh and Dennis Hogan*

*EMail: nrmeileh@gmail.com*

Palestinians in the West Bank and Gaza Strip have an expectation of life at birth of 72 years, but a TFR=4.6, and 44% of the population under age 15. The population is nearly 80% urban, 90% literate, and youth average more than 12 years of education. This paper investigates the transition to adulthood among Palestinian youth. Of these, 17% are members of refugee families who live in UN supported refugee camps. The social exclusion of these refugees and the situations of women who are well educated but rarely employed are considered. Survey data representing (N=18,000) youth in the West Bank Gaza Strip in 2006 are used. The study uses age-specific rates of activity states, patterns over time, and life table estimates of transitions to adult roles. The study uses logistic regressions to

examine other social, economic, and health factors involved in Palestinian youth's transition to adulthood.

### **36-2. THE TURKISH SECOND GENERATION IN EUROPE: FAMILY LIFE TRAJECTORIES AND INDEPENDENCE IN THE TRANSITION TO ADULTHOOD**

*Nicola Barban and Helga A. G. de Valk*

*EMail: n.barban@rug.nl*

In this paper we study the timing and sequencing of major events in the transition to adulthood of second generation Turks and majority group young adults in Europe. First, this study adds to the literature by questioning what paths (order and timing of events) are predominant by applying sequence analyses. We study the timing of four major events namely leaving the parental home, unmarried cohabitation, marriage, and having a first child and link them to transitions in the public domain (education and work). Second, we study the diversity in trajectories both between the Turkish second generation and majority group young adults as well as between the different European countries. Finally, we analyse the factors explaining different paths into adulthood among the studied groups in the different countries. Our analyses are based on survey data from "The integration of the second generation" (TIES, 2007) for France, Germany, the Netherlands, Sweden and Switzerland.

### **36-3. CHANGING PATHS TO ADULTHOOD IN ITALY. MEN AND WOMEN ENTERING STABLE WORK AND FAMILY CAREERS**

*Letizia Mencarini and Cristina Solera*

*EMail: letizia.mencarini@unito.it*

Paths to adulthood have changed greatly in the last decades: entries into the labour market as well as into partnership or parenthood have been postponed, with also new sequences and interconnections. In this piece of work we observe life-courses from the ages of 14 to 35 of men and women born in four successive cohorts. We distinguish them by level of education, and we analyse the timing and frequencies of their first job, the first job as an insider (as an employee with a permanent contract or as a typical self-employed worker), episodes of atypical work or unemployment between first job and age 35, couple formation, and childbirth. Our analyses confirm that today's young Italians form a 'postponement generation', which achieves later, if at all, what previous generations had already achieved in their twenties. For men, until the cohort born in the 1960s, the norm for both high- and low-educated men was to be insiders at age 35, and to achieve that status rapidly. What has changed is that now men become labour-market insiders later, and the route is more tortuous, with long and repeated spells of unemployment or atypical work. For women – for whom being in employment, and working as insiders, has never been the norm – the change has been their greater involvement in the labour market, but with the greater risk, compared with men, of job insecurity, especially if their education level is low. In the later cohorts, the ages at first marriage or cohabitation and first childbirth have also changed, especially for highly-educated men. This is strongly connected with changes in labour market paths, but with gender differences. Not holding an insider position inhibits the assumption of family responsibilities for men. For women economic and job insecurity seem to have less influence on childbirth.

#### 36-4. THE IMPACT OF EDUCATION ON THE OCCURRENCE OF FIRST UNION AND FIRST BIRTH. A COMPARATIVE ANALYSIS BETWEEN MEXICO AND SPAIN

*Elsa Ortiz and Daniel Devolder*

*EMail: oravel@hotmail.com*

During the last decades there have been major changes in the patterns of transition to adulthood, characterized by low fertility and a delayed age at first union and at first child. Worldwide, these changes have taken place in parallel with a dramatic expansion of educational enrolment and attainment. In Spain most educated women usually postpone the formation of a family. On the other hand, we observe that, despite Mexico has also undergone a notable educational expansion; this is not accompanied by the same kind of delaying of events associated with the transition to adulthood. In Mexico first unions and first births still occur at young ages, even for the younger cohorts. It seems that raising a family while still being young is important for Mexican people and that it may even be also a factor in explaining why young person leave the education system. We propose to study the differences between Spain and Mexico in the relationships between the first union and the birth of a first child by level of education. We begin by a discussion of some methodological issues and the way to overcome them: most of past studies have tried to explain the timing of these events taking into account the educational attainment at the time of survey; however, this amounts to the explanation of current events (forming a union or having a first birth) with something that may happen in the future (the end of the main studies). We then present results of three kinds. First, we highlight the differences between Spain and Mexico in the formation of the first union and first maternity. Then, we study the relationships between the educational level and these events. Finally, we study the risk factors of the transition to first union and first maternity using Survival Analysis modelling

#### 36-5. TRENDS IN ECONOMIC INDEPENDENCE IN THE UNITED STATES:

1973-2007

*Maria Sironi and Frank Furstenberg*

*EMail: mari.sironi@gmail.com*

One of the milestones of adulthood is achieving economic independence. Without an adequate source of income, young people have difficulty leaving their childhood home, forming a relationship, or having children—or they do so at great peril. Using the National Longitudinal Surveys, this paper compares the labor market experiences of young adults aged 22–30 in 1973, 1987 and 2007, and their possible determinants. The results show that achieving economic independence is more difficult now than it was in the late 1980s and especially in the 1970s for both men and women, and even for older age groups (age 27-28). Moreover, from 1970s there has been a convergence in the determinants of the achievement of economic self-sufficiency between men and women, suggesting that the increase in gender parity, especially in education and labor market outcomes, is making their opportunities to be employed and to earn good wages more similar.

#### 37-1. ON THE SLOPE INFORMATION OF FERTILITY MEASURES

*P. C. Roger Cheng*

*EMail: paochib@mgt.ncu.edu.tw*

When cohort fertility continues to decrease (increase), most of its predictors tend to yield positively (negatively) biased estimates, indicating the importance of predicting turning points so that the bias can be corrected in an accurate direction. However, a direct appeal to the cohort fertility curve is shown possible but of little worth. This paper, there-

fore, turns to a simple but definite relationship between cohort fertility and Bongaarts and Feeney (1998)'s period adjusted measure, and then proposes a procedure of utilizing slope information in producing helpful signals suggesting whether and how to correct the bias. Empirical evidence from Canada, the U.S., and 23 European countries suggests the validity of this procedure.

### **37-2. A PERIOD TFR WITH COVARIATES**

*Gustavo De Santis, Sven Drefahl and Daniele Vignoli*

*Email: desantis@ds.unifi.it*

We propose a method for the study of fertility on cross-sectional survey data that explicitly aims at reconciling micro- and macro analysis: the group-specific fertility estimates that it produces are consistent with the period TFR for the entire population. Incidentally, this approach also avoids a few of the selection problems that frequently affect other applications (e.g. specific by birth order). First we estimate the probability of birth (of any order) in each subgroup (specific by age  $x$  and other characteristics  $c$ ), and then correct this estimate with a proper parameter  $k$ , so that the weighted and corrected sum of group-specific birth probabilities gives precisely the TFR. An application to the four waves of the Italian section of the EU-SILC (Community Statistics on Income and Living Condition), 2004-2007 is proposed.

### **37-3. FERTILITY PROJECTION IN IRAN: A NEW APPROACH TO MEASUREMENT OF FERTILITY**

*Meimanat Hosseini Chavoshi, Peter McDonald and Mohammad J. Abbasi-Shavazi*

*Email: Meimanat.Hosseini@anu.edu.au*

Iran reached replacement-level fertility by 2000, and currently a vast majority of urban regions are experiencing low or very low fertility. However, a few ethnically populated areas comprising a small proportion of population are still displaying higher fertility. Policy makers are concerned that this low fertility will lead to a negative population growth, and that regional fertility differentials will result to an imbalance in the composition of future population. Various scenarios have been proposed for the future of fertility, and the question is whether Iran's fertility will continue its declining pace, or whether there will be a rise in fertility proceeding with a stalling period. Conventional age-based measures are commonly used to project the future of population. This paper intends to apply a technique which considers quantum effects as well as the age structure of the population to forecast fertility, a method that has already been applied to the Australian data with the most accurate result. Except the recent sign of the slight postponement of the first birth in Iran, parity progressions and birth intervals for the second child onwards have almost been constant over the last decade. The stability of fertility patterns and levels allows us to include quantum effects to project age-specific fertility rate taking into account age at first and last birth, parity progression, and birth interval. Using the 2000 Iran DHS and the 2006 census, an experiment of fertility projection during 1995 and 2006 is carried out, and the results of our projections are compared with the results obtained from the own-children method for the same period. The result confirms that this technique provides a better projection of fertility as compared with the commonly used age-based method.

#### **37-4. FITTING AGE-SPECIFIC FERTILITY RATES BY A SKEW-SYMMETRIC PROBABILITY DENSITY FUNCTION**

*Stefano Mazzuco and Bruno Scarpa*

*E-Mail: mazzuco@stat.unipd.it*

Mixture probability density functions had recently been proposed to describe some fertility patterns characterized by a bi-modal shape. These mixture probability density functions appear to be adequate when the fertility pattern is actually bi-modal but less useful when the shape of age-specific fertility rates is unimodal. A further model is proposed based on skew-symmetric probability density functions. This model is both more parsimonious than mixture distributions and more flexible, showing a good fit with several shapes (bi-modal or unimodal) of fertility patterns.

#### **37-5. IMMIGRATION BIAS IN COHORT FERTILITY**

*Felix Roessger*

*E-Mail: roessger@demogr.mpg.de*

In this paper we examine the effects of immigration on the cohort total fertility rate (CTFR) as conventional measure for completed cohort fertility. As almost all conventional demographic measures it was designed for “closed” populations and can be consequently biased, if it is applied to an “open” population. We show that this bias arises from the fact that the immigrant population is not included in the population under exposure properly. Consequently, we propose a measure adapted for immigration, which treats migrants as if they always had been in the considered population. However, this new measure is restricted due to its high requirements on detailed fertility data. For this reason, a further iterative procedure is examined, which models the relevant process under certain assumptions but with less data requirements.

#### **38-1. SOFA SURFERS AND SHED DWELLERS: NEW LIVING ARRANGEMENTS AND HOUSEHOLD SURVEYS IN THE UK AND FRANCE**

*Ernestina E. Coast, Sara Randall, Alex Fanghanel, Eva Lelièvre and Sadio Ba-Gning*

*E-Mail: e.coast@lse.ac.uk*

Data collection practicalities and the need for meaningful data analysis require a social unit to be defined. The ‘household’ is almost universally used as this unit of survey enumeration. Despite apparent harmonisation, European countries have different interpretations of the definition of private household and there is a clear lack of harmonisation both between surveys and countries. This study aims understand the implications of harmonizing definitions of the ‘household’ for survey data to represent the realities of new and emergent living arrangements in Europe. We explore which new forms of living arrangements and households are captured and / or represented in household surveys and censuses in the UK and France. We use 2 research: in-depth semi-structured interviews with informants involved in the design and production of household surveys and censuses; and, case study households (n=60) in the UK and France, producing qualitative data on living arrangements. We find considerable variation in the extent to which understanding of household meshes with data collected. We identify population sub-groups that are likely to be poorly captured and represented by household surveys, including: people who live temporarily, often as a result of a critical change (eg:divorce), with others (“sofa surfers”); children who are cared for by multiple households; those living in private rented tenancy accommodation or in unofficial accommodation (eg: garden sheds); dual earner couples who live apart during the working week; retired couples living separately each one in their dwelling house; young adults who

still live at home with their parents; and, illegal migrants (without residence permit). We illustrate using detailed case studies drawn from our primary fieldwork. Our key informant interviews also point towards ways in which the increasing administration of household surveys using technology (eg: internet-based) might lead to further exclusion of some population sub-groups, or poor information being collected from them.

### **38-2. THE DEMOGRAPHY OF LIVING ALONE IN MID-LIFE: A TYPOLOGY OF SOLO-LIVING IN THE UNITED KINGDOM**

*Jane C. Falkingham, Dieter H. Demey, Ann M. Berrington and Maria Evandrou*  
*EMail: j.c.falkingham@soton.ac.uk*

Living alone in mid-life is on the rise in the United Kingdom, especially among men. The delay of family formation, increases in partnership dissolution rates and the rising incidence of childlessness are probably key factors in explaining the rise in living alone in mid-life over time. Demographic, economic and sociological theories have related these changes to the rise in women's economic independence and to ideational changes, such as individualisation and a stronger emphasis on self-actualisation. Although overlooked in the literature, the growing economic uncertainty facing a group of economically disadvantaged men is likely to be equally important. However, there has been scant attention for changes in the living arrangements of the middle-aged in the literature, reflecting a gap in our knowledge of this specific stage in the life course. The main aims of this study are therefore to examine the trajectories into living alone in mid-life and how these differ by gender and socio-economic status, as well as to develop a typology of those living alone. We first use data from the General Household Survey (GHS) for the years 1984-2009 to describe changes over time in living alone. We then use data from Understanding Society (USoc) to investigate the partnership history, kin availability and socio-economic status of middle-aged (age 35 to 64) men and women living alone. We examine the degree of heterogeneity in the population living alone by making a distinction between never and ever partnered men and women living on their own. In the final part of the analysis, we use Latent Class Analysis to construct a typology of those living alone based on partnership history, socio-economic status, gender and age.

### **38-3. LONG-TERM TRENDS OF MEN'S CO-RESIDENCE WITH CHILDREN IN ENGLAND AND WALES**

*Ursula Henz*  
*EMail: U.Henz@lse.ac.uk*

The past decade has seen a lively interest in the study of fatherhood. This interest was partly driven by concerns about an erosion of fatherhood in light of the increasing numbers of childless men and fathers with reduced or no contact with their children. These trends are also the basis for claims of a decreasing family involvement of men in the United States. This study is guided by the question whether Britain experiences similar long-term trends of men's family involvement. It examines age-specific shares of fathers living with their children for England and Wales by analyzing the National Statistics Longitudinal Study (LS) and the Labour-Force Survey (LFS). It presents period comparisons for ten-year intervals from 1971 to 2010 as well as cohort comparisons for ten-year birth cohorts from 1930-39 to 1970-79 and will examine variations in the observed patterns between different socio-demographic groups, i.e. by social class, education and ethnicity. All analyses are also carried out for women to see whether declining shares of adults living with their child is particular to men. Initial analyses show a decreasing family involvement of men (in the limited sense of co-residence) but not to the same degree as in the US in the same period.

Other interesting results are the relative homogeneity of men's fatherhood experience in young adult years compared to women, and the considerable level of fatherhood involvement of African Caribbean men. Initial findings from the LFS indicate that the negative trends have continued in the new millennium.

#### **38-4. HOW MANY PEOPLE ARE LIVING ALONE? HOW MANY ARE LIVING IN TWO DWELLINGS? THE CASE OF FRANCE**

*Sophie Pennec and Laurent Toulemon*

*EMail: pennec@ined.fr*

How many people are living alone? How many are living in two dwellings? The case of France In France, according to the last census, one person out of seven is living alone. Behind this result, sits diverse situations that are more or less well depicted by the data and are related to the numerous definitions/conventions used to define dwellings where people live and how the list of inhabitant of the dwelling is established. The comparison of results from census data and survey data allow a better description of the real situation of those persons that are considered as living alone in censuses. Most of them are always alone, but some are not always alone in all their households. We will look at the trends over time of population in 4 categories: living alone, in a couple, in institutions and those not living in any previous categories with a particular focus on those living alone and those in the latter category. In this group we will disentangle the one-parent families, the "false out of family person" i.e. those considered by census rules as out of the family but actually being a member (adult children, old parent...), those living in a non-relatives household (house-sharing) as they can be considered as a form of living alone. We will look at the trends by age and sex and using some socio-economic variables such as urban/country and level of education. For this paper, we used French census data from the IPUMS international database 1962-2006 and different French statistical office survey data (labour force survey, household surveys, French SILC panel data).

#### **38-5. THE HETEROGENEITY OF FAMILY FORMS IN FRANCE AND SPAIN**

*Béatrice Valdes*

*EMail: valdesbeatrice@hotmail.fr*

This study confirms the operational value of IECM census samples for the analysis of patterns of cohabitation of adults in French and Spanish regions, provided always first to ensure comparability of data. This work has helped to highlight spatial heterogeneity of family forms, with not only an opposition between France and Spain, but also subnational disparities. It showed a continuity beyond the border patent in cohabitation of people over 65 years, resulting in a permanent traditional patterns of cohabitation in Spain and southern regions of France. Disparities in the incidence of cohabitation of young adults are weaker, and correspond to a new model. We also try to identify explanatory factors for such heterogeneity by performing a multivariate analysis. These census sample data do not enable us to obtain results at a level smaller than the regional level for France. By comparing these results with those obtained from data cantonal French census of 2006, available on the website of INSEE (French national institute of statistics and economic studies), we can detect additional heterogeneity of family forms in the Aquitaine region border. This heterogeneity is masked by the IECM census sample at the regional level, but can be revealed through extensive census data at cantonal level provided by the INSEE.

### 39-1. ANALYSIS OF FACTORS UNDERLYING PATTERNS OF ASYLUM SEEKING

*Alexandros Bitoulas and David Thorogood*

*EMail: Alexandros.bitoulas@ec.europa.eu*

European statistical legislation that was adopted in 2007 established a core set of migration-related statistical data that national authorities in the European Union Member States are obliged to send to Eurostat. These data include amongst others, migration flows, foreign population stocks, acquisition of citizenship, asylum applications and decisions and residence permits issued to non-EU citizens. The increased availability and level of harmonisation of data following the implementation of this legislation means that there are new options for data analysis and modelling. This paper will present the results of ongoing work at Eurostat to use statistical techniques to better understand and explain patterns seen in the data. Initially, this work has focussed on the monthly data on asylum applications, although this may be extended to other migration datasets and may include an analysis of the relationships between different datasets – for example, looking at the similarities and patterns seen in data on asylum applications and persons seeking to migrate for labour market reasons. This paper analyses the impact of various socio-economic, cultural, historical and geographical factors (including the relative economic situation of origin and destination countries, presence of a common language and historical ties, geographical proximity, political stability) on asylum seekers' choice of destination. Past literature provides information on the effects of these factors on overall migration flows. It is unclear to what extent these factors that are known to influence general migration also impact on asylum seeking. The decision process and underlying factors that result in the choice of destination for an asylum seeker are likely to differ from those of a labour or student migrant. We use mainly regression analysis to quantify the effects of these factors, taking advantage of the well harmonised and largely complete monthly asylum data now available on the Eurostat public dissemination database.

### 39-2. EXPLAINING CHILDREN MIGRATION PATTERNS TO FRANCE AND SPAIN. METHODOLOGICAL CHALLENGES FOR CROSS-NATIONAL RESEARCH

*Amparo Gonzalez-Ferrer and Tatiana Eremenko*

*EMail: amparo.gonzalez@cchs.csic.es*

Children make the largest part of family-linked migration to developed countries. However, very little is known about when and why their parents decide to bring them in or not. The selection process by which some children join their parents at destination while others are left behind is the focus of this paper. Utilizing two nationally representative surveys of immigrants in France (TéO 2009) and Spain (ENI 2007), we examine rates and timing of their foreign-born children's migration. The gender of the pioneer parent and the child, number and ages of siblings and ethnic origin appear important in accounting for the observed variations. However, even among similar ethnic groups, cross-national differences remain larger than expected, which suggests some role of immigration policies but also the difficulty of comparing the behaviour of migrants living in countries at different stages of their migration experience.



### 39-3. WHO WANTS TO GO TO EUROPE? EVIDENCE FROM MOROCCO, UKRAINE, AND TURKEY

*Ahmet Icduygu and Deniz Sert*  
E-Mail: *aicduygu@ku.edu.tr*

In the past decade, there has been a rising concern among policy makers and scholars about the likelihood of migration flows to Europe. Studies focusing on the areas neighbouring Europe and/or having migratory networks with the continent are particularly essential to estimate the volume of flows and the profile of potential migrants. Using the FP7 EUM-AGINE data which consists of 6000 interviews based on regionally representative sample conducted in Morocco, Ukraine, and Turkey, this study aims to investigate dynamics and mechanisms behind the aspirations of people to migrate to Europe. By examining basic factors such as age, gender, urban/rural background, education level and occupation, family characteristics, and previous migration experiences, the profile of those who wish to migrate to Europe from Morocco, Ukraine, and Turkey will be investigated and compared. By applying bivariate and multivariate analysis, the impacts of individual characteristics of people and the structural factors that these people live in on the aspiration to move will be elaborated. This paper will argue that as far as the determinants of the question of “to migrate or not” are concerned, it is important to understand the continuing interplay of the following three elements: (1) individual migrant’s characteristics, perceptions, interpretations, and actions, (2) individual migrant’s more immediate personal-social environment such as household, family, and (3) structural (social, economic, political, demographic) settings in migration systems.

### 39-4. INTEGRATED MODELLING OF EUROPEAN MIGRATION: A FIRST LOOK AT THE FINAL RESULTS BY AGE AND SEX

*James Raymer, Jonathan J. Forster, Peter W.F. Smith, Jakub Bijak and Arkadiusz Wisniowski*  
E-Mail: *raymer@soton.ac.uk*

In this presentation, we present the final results from the Integrated Modelling of European Migration (IMEM) project. This two-year project is funded by NORFACE and brings together three international teams specialising in migration data, uncertainty and modelling. We apply a Bayesian model to harmonise and correct for the inadequacies in the available data and to estimate the completely missing flows. Recent age- and sex-specific international migration flows amongst countries in the European Union (EU) and European Free Trade Association (EFTA) are estimated by using data provided by Eurostat, covariate information and expert judgements. The result is a synthetic data base with measures of uncertainty for international migration flows and other model parameters.

### 40-1. THE EFFECT OF UNEMPLOYMENT ON FERTILITY

*Signe Hald Andersen and Berkay Ozcan*  
E-Mail: *sha@rff.dk*

We analyze the causal effect of unemployment on fertility. Neoclassical theory of fertility has ambiguous (both positive and negative) predictions regarding the effect of unemployment for women. Additionally, existing empirical research shows contradictory results and makes a weak case for exogeneity of unemployment to fertility behavior. We suggest that (unexpected) firm closures constitute an exogenous source of unemployment and adopt it as an instrument to estimate husbands’ and wives’ fertility response, using a unique administrative panel data from Denmark, which includes all residents in Denmark between 1982 and 2006. It contains monthly information about employment, relationship

and a very-detailed fertility history -including stillbirths and miscarriages- of individuals as well as information about the firms that they work in. We estimate our models separately for men and women. Our preliminary results show that unemployment as a result of a firm closure negatively affects both women's and men's completed fertility and positively women's timing of the first birth. Men do not appear to delay timing of the first birth due to unemployment.

#### **40-2. FERTILITY PREFERENCES OF EMPLOYED MOTHERS IN ITALY: DOES THE CHOICE OF PUBLIC VERSUS PRIVATE SECTOR MATTER IN SHAPING THE TOTAL DEMAND FOR CHILDREN?**

*Laura Cavalli*

*EMail: laura.cavalli@univr.it*

This work aims at understanding whether, and the extent to which, the intention of having other children is influenced by aspects related to the employment sector chosen by mothers who already have one child less than 2 years old. Using Italian data from the Birth Sample Survey conducted by the Italian National Statistical Institute (ISTAT) in 2005, this work models new mothers' preferences for family formation and for the sector of employment, taking into account the potential endogeneity of the latter. Working in the public sector, which benefits from stronger employment protection, tends to influence the desired and the realized fertility of working mothers. This could be due to the existence of a lower level of wage discrimination compared to the private sector, to the higher level of job security and to the existence of family friendly policies. However, the choice of the working sector could be endogenous. In fact, once the selection effect is taken into account and the choice of working sector and the desired fertility are modelled together, the correlation among unobservable women's characteristics affecting the two choices is found to be negative: women who desire more children seem to be less likely to self-select into the public sector. This last finding could be the result of more productive women's working strategies: given that they are those more work oriented (and less family-oriented), they tend to enter into the public sector, a less gender discriminated sector.

#### **40-3. WOMEN'S EMPLOYMENT FLUCTUATIONS IN IRAN AND ITS DEVIATIONS FROM THE WORLD TRENDS**

*Hossein Ghodrati and Shafieh Ghodrati*

*EMail: hosseineghodrati@gmail.com*

This study investigates women's employment trends in Iran between 1956 and 2006. Data from six censuses has been analyzed using decomposition technique of mathematical demography. Results show that in spite of some changes in women's participation in labor force, the employment rate is still very low. Another feature of women's participation in labor force is transformations in age patterns of employment so that in three last decades women's participation in labor force has decreased in all age groups. Except 1996, a great number of employed women did not return to work after marriage and childbearing. Using decomposition method for crude activity rate of women, we conclude that most of changes in crude activity rate are due to changing in age specific activity rates and age composition has low effects. Along with macro level factors such as social and economic problems, other factors like fertility decline, rise of life expenditure and higher education had great impact on women's employment rates.

#### 40-4. THE EFFECTS OF A NEW CHILD CARE SUBSIDY ON COUPLES' LABOUR SUPPLY IN AUSTRALIA: AN EMPIRICAL ASSESSMENT

*Ross Guest and Nick Parr*

*EMail: r.guest@griffith.edu.au*

In the mid-2000s the Australian Government implemented a series of changes to family policies, most notably the introduction of a universal, flat-rate at birth payment and an increased subsidisation of child care. This paper examines the effect on couples' labour supply of these policies using two complimentary empirical approaches: simulations of a dynamic utility maximisation model of a representative couple, and empirical estimation using longitudinal survey data. The results suggest that the payment of a Child Care Rebate of 50% of out-of-pocket costs has produced a modest increase in couples' combined hours worked. The increase in couples' hours worked which has resulted from the increased subsidisation of child care is due to increased hours worked by the wives. The effect of this regressive child care subsidy has been greater for couples in which the husband is highly educated. The introduction of the Baby Bonus and the concurrent changes to family benefits has had an insignificant effect on labour supply.

#### 40-5. BIRTH-RELATED EMPLOYMENT INTERRUPTIONS AMONG MOTHERS IN NORWAY. TRENDS AND VARIATION

*Ragni Hege Kitterød and Marit Rønsen*

*EMail: rhk@ssb.no*

In Norway, like in the other Scandinavian countries, the dual-earner/equal-sharing family model with two full-time earners is an important political ambition. However, high part-time rates and extended employment interruption following the birth of a child suggest a strong preference for family time and leisure among many women. Since lengthy employment interruption may have negative consequences both at the individual level and for society at large, it is important to disentangle the factors that promote a faster return to the labour market after child birth. While women's birth-related career interruptions have been the topic of much research at the international level in the last decades, there is a great need for updated analyses in Norway, where the most recent analyses cover the 1970s and 1980s. In this paper we look at mothers' career breaks following child birth from the 1990s and till the present, based on the panel in the Norwegian Labour Force Surveys. Utilising a multivariate hazard rate model, we explore possible changes in the length of mothers' employment interruptions, and look at variation across groups depending on individual and household characteristics. Furthermore, we investigate the role of business cycles and family-policy expansion, and explore whether mothers work full time or part time when they return to work following the birth of a child. Several family-policy reforms that may affect women's employment decision have been implemented in the last decades, but the possible effects are not easily predictable. Regarding differences between groups of women we are particularly interested in the effect of educational attainment since a family model with two full-time working parents has less support among low educated than highly educated parents. We shall employ a competing risk model where the career interruption has three possible outcomes: a full-time job, a part-time job or no employment entry.

#### **41-1. STRUCTURE OR CULTURE, PUSH OR PULL? IMMIGRANT WOMEN AND ENTREPRENEURSHIP WITHIN THE SWEDISH HEALTH CARE SECTOR, 2002-2006**

*Martin Korpi, Charlotta Hedberg and Katarina Pettersson*  
*EMail: martin.korpi@bhs.se*

This paper investigates motives for entrepreneurship in the health care sector in Sweden from an ethnic and a gender perspective. Based on a longitudinal database, the paper adopts a logistic regression model to investigate whether start-up motives are structurally or culturally dominated. The main finding is that, while no structural disadvantage effect is found in general, both income and unemployment rates are comparatively unfavorable for women. No additional effect is found when adding country of birth. Thus, we conclude that structural disadvantage motives, based on gender rather than ethnicity, dominate over cultural motives for entrepreneurship.

#### **41-2. FACTORS SHAPING WORKPLACE ETHNIC SEGREGATION**

*Tiit Tammaru*  
*EMail: tiit.tammaru@ut.ee*

In addition to neighbourhoods of residence, family and places of work play important roles in producing and reproducing ethnic segregation. Therefore, recent research on ethnic segregation and contact is increasingly turning its attention from residential areas towards other important domains of daily interethnic contact. The key innovation of this paper is to clarify the role of immigrants' previous exposure to natives in the residence, workplace and family domains in immigrant exposure to natives in their current workplace. The study is based on Swedish population register data. The results show that at the macro level, workplace neighbourhood segregation is lower than residential neighbourhood segregation. Our micro-level analysis further shows that high levels of residential exposure of immigrants to natives is associated with lower levels of ethnic segregation at the level of workplace establishments as well.

#### **41-3. THE EFFECTS OF GENDER AND ORIGIN ON OVER QUALIFICATION RISK**

*Catherine L. Thorkelson and Urban Lindgren*  
*EMail: cthorkel@princeton.edu*

This study examines the extent and determinants of overqualification in Sweden, with emphasis on the effects of gender and national origin. Based on longitudinal register data for individuals employed in 2003 and 2007, we test the role of country-specific human capital in explaining overqualification. Using binary logistic regression techniques we find that individuals born outside of Sweden have much higher risk of overqualification, especially those from Eastern Europe, Africa, Asia and Latin America, controlling for human capital differences. We find a higher risk of overqualification for women within both native- and foreign-born groups, but also a higher probability of improving job match over the period 2003 to 2007. However, there is no increased probability of improving job match among non-Western immigrants, indicating that their disadvantaged position in the Swedish labor market improves little over the period studied.

#### **41-4. IMMIGRANTS AND AUTOCHTHONOUS IN THE ITALIAN LABOUR MARKET: A COMPARATIVE STUDY**

*Nicola Tedesco, Luisa Salaris, Giuseppe Gabrielli and Anna Paterno*  
*EMail: tedesco@unica.it*

In the last decades, immigration from developing countries and central-east Europe to Italy is continuously growing. This trend represents an important element of novelty not only in demography, but also in the national socio-economic contest. In particular, the increasing presence of immigrants in the Italian labour market shows to be related to the persistence of relevant structural deficit in the local production system. The foreign component seems to be characterized by three particular aspects. The first refers to a high level of “over-skilled employment”, that results to be higher among foreigners than among natives. The second aspect deals with occupational segregation of immigrants workers, that has stressed the existing segmentation of local labour markets in the country. The third aspect is constituted by underemployment. These aspects are mainly based on gender, education and area of residence. Particularly, legal status (regular or irregular staying) and nationality are additional elements of discrimination to the access of migrants to the labour market and the type of occupation covered. Accordingly, based on the analysis of Istat data on labour forces (2010), this contribution aims to investigate the characteristics of the working insertion of immigrants in the different local segments of Italian labour market, focusing the attention on possible factors that distinguish various nationality of immigrants present across the national territory. Parallel, the research compares the situation of immigrants to that of Italians, in order to identify possible situations of underemployment, over-skilled employment and segregation. The main variables used for analysis are age, gender, area of origin, geographical area of residence, occupational condition, sector of activity, professional level, educational level, year of residence in Italy. Situations of segregation, underemployment and over-skilled employment are measured by means of indexes and multivariate analysis at micro and macro level.

#### **41-5. EU LABOUR MARKETS FROM BOOM TO RECESSION: ARE FOREIGN WORKERS MORE EXCLUDED OR BETTER ADAPTED?**

*Fernando Gil-Alonso and Elena Vidal-Coso*  
*EMail: fgil@ub.edu*

The paper's aim is to use Eurostat's European Union Labour Force Survey (EU-LFS) data to analyse, under an EU cross-country comparative perspective, foreigner's labour market insertion in Europe during two contrasting and successive periods. On the one hand, the economic expansion period, focusing on foreigners' insertion in their economic sectors and therefore comparing these patterns to those of local workers. On the other, the impact of 2008 recession on these previous patterns. Indeed, between 1995 and 2007, the European Union experienced positive migratory growth; however, inflow size was extremely diverse, the highest relative increases being at Southern EU countries and Ireland. There, this massive arrival of foreign immigrants seemed to complement educational, social and labour promotion of the autochthonous (especially female) workforce. This upwards mobility would, in turn, have attracted foreign workers who, in segmented or dual labour markets, fill the vacant jobs in low-paid, highly flexible sectors that national workers do not want, or are no longer able, to cover. According to this hypothesis, which we intend to verify in the paper's first section, each of the host societies' specific socio-demographic and labour market characteristics –and not “replacement migration” triggered by decreasing size of birth cohorts entering the labour market– would explain inflow differences

among EU countries. From 2008 onwards, recession has however changed previous trends, weakening local workers' promotion, decreasing foreigners' job opportunities, and raising both populations' unemployment. The second section focuses on this recent period, where, following the 'segmented labour market' logics, we do not only intend to assess the crisis impact on each of the Member States' population by sex and nationality, but also to study how autochthonous people and foreigners have been affected –either by being expelled from the labour market, by weakening their working conditions, or by redirecting them to specific occupational sectors.

#### **42-1. STUDENT, SPOUSE, PARENT? A WORLDWIDE TEST OF THE ROLE INCOMPATIBILITY HYPOTHESIS AMONG ADOLESCENTS AND YOUNG ADULTS**

*Albert Esteve, Timothy L. M. Riffe, Jeroen J. A. Spijker and Joan Garcia Roman*  
*Email: aesteve@ced.uab.es*

This paper examines the role-compatibility hypothesis behind the effects of education on marriage and childbearing worldwide. Data come from more than 50 IPUMS-International census microdata samples and over 70 DHS samples from the year 2000 or thereabouts. We use information on current school attendance and whether or not an individual is in union or has had a child, concentrating on the ages 12-24 where the role incompatibility hypothesis is most plausible. The lower age limit is placed near the end of primary education in many of the countries and where many girls in (very) early marriage cultures start to marry and may even have children. The upper limit corresponds to the average age where tertiary education ends, not including postgraduate studies. The objective is threefold, i.e. to examine 1) the consistency of the role incompatibility hypothesis between countries among male and female adolescents and young adults. 2) how the degree of exclusivity of education and marriage and/or parenting roles varies between countries depending on aggregate levels of union formation and childbearing at relatively young ages; and 3) how much of the cross-national variability in union formation at these ages is due to country differences in school enrollment/attendance rates. Preliminary results show that for both males and females and for all ages those in school are on average more single and childless than those not in school. In addition, between-country variation for both singlehood and childlessness is much greater for those outside of school than for those in school, at least until around age 21. This is plausible given that those having finished school are still heterogeneous with respect to educational attainment and other characteristics whose distributions could vary across countries. Results thus suggest that as age increase, the role incompatibility weakens and more so for women than for men.

#### **42-2. SOCIAL AND SCHOOL DETERMINANTS OF EDUCATIONAL ACHIEVEMENT IN BRAZIL, 2007**

*Jose Francisco Soares, Raquel Guimaraes, Izabel Fonseca and Raquel Alvares*  
*Email: francisco-soares@ufmg.br*

This study aims to assess the determinants of 4th and 8th grade public school students' educational achievement in Brazil. We employ hierarchical linear regression models to evaluate the effect of personal attributes, socioeconomic factors and school and teachers characteristics on the Reading and Math proficiency. We use microdata from Prova Brasil 2007, which evaluates the performance of all Brazilian public schools' students in 4th and 8th grade. Our evidence shows that family characteristics and peer effects, expressed by the school socioeconomic level and the proportion of lagged students, had presented a significant impact on the student's proficiency. Finally, the characteristics of schools, teachers and principals have had also a positive effect on the educational achievement, but this impact on students' score is small compared to personal, family and peer effects.

### 42-3. SKILL-BIASED TECHNOLOGICAL CHANGE IN BRAZIL: IMPLICATIONS ON OCCUPATION ALLOCATION AND ON THE RELATIVE WAGE DISTRIBUTION BY GENDER

Ana Hermeto

EMail: [ahermeto@cedeplar.ufmg.br](mailto:ahermeto@cedeplar.ufmg.br)

The aim of the paper is to analyze and decompose changes in earnings relative distribution between men and women of different cohorts in Brazil, using the relative distribution framework. This methodology was proposed by Handcock and Morris (1999), considering non-parametrical tools which allow an exploratory analysis that is independent of parametric assumptions on the mathematical form of the response-variable probabilities. We use density estimates of the kernel probability for each sex and cohort and decompositions of the relative distribution to get substantive evidences for gender differentials and relative mobility in Brazil since the 1980's. Further, gender wage differentials in Brazil are estimated using parametric methodologies, traditional mincerian regressions and quantile regressions. The hypothesis is that skill biased technological changes in the myriad of occupations led to an increased demand for workers with higher educational levels, which has been not fully translated to a polarization in the labor market, due to the education-occupation mismatch in Brazil. We use microdata from the Brazilian Household Sample Survey (PNAD), from 1981 to 2011. A pseudo-panel of these repeated cross-sections was constructed, allowing to follow cohorts over time, and to decompose the potential sources of gender wage inequality in the within and between-occupations components.

### 42-4. EDUCATIONAL EXPANSION IN LATIN AMERICAN COUNTRIES: HAS EDUCATIONAL ATTAINMENT INEQUALITY NARROWED?

Clarissa G. Rodrigues, Rachel Durham and Bilal Barakat

EMail: [cguimara@wu.ac.at](mailto:cguimara@wu.ac.at)

Over recent decades, countries in Latin America have made a great deal of progress with respect to educational expansion, with the primary aim of reducing educational inequality. However, equitable distribution of educational attainment in the population does not necessarily follow growth of educational opportunity. Overall reductions in inequality will depend upon the extent to which certain segments of the population benefit from increases in opportunity. In this paper, we explore whether educational policies aimed at educational expansion also had a strong impact on the reduction of inequality between groups, defined by mother's education. We employ the IPUMS micro data census samples from the 1970s, 1980s, 1990s, and 2000s for five Latin American Countries: Argentina, Brazil, Chile, Colombia and Venezuela. To measure change in inequality over time and across groups, we propose the use of Kullback-Leibler divergence. Then, differences between two distributions – reference and comparison – are synthesized via a single index. We use as reference the distribution of educational attainment among relatively advantaged students aged 8-20: those whose mothers who completed secondary education or more. This distribution is compared to: 1) the attainment distribution of those children aged 8-20 whose mothers completed primary only; 2) the attainment distribution of those children aged 8-20 whose mothers completed less than primary; and 3) the attainment distribution of those children aged 8-20 without information about mother's education (e.g., orphans or those of extreme economic disadvantage). Our findings bring attention to a regular regional trend driven by a reduction of educational inequality over time in all countries considered, for both boys and girls, and especially for groups with the lowest levels of education. Country-specific policy-related reasons for changes in inequalities will be discussed.

#### **43-2. RELIGION, SOCIO-ECONOMIC STATUS AND FERTILITY TRANSITION: RESULTS OF A MICRO-LEVEL STUDY FROM HUNGARY, 1820–1939**

*Peter Öri and Levente Pakot*

*E-Mail: ori@demografia.hu*

Hungarian research on historical demography has pointed out considerable local differences both in the level of pre-industrial fertility and the timing and measure of fertility decline in the 19th century. At the same time, the fertility behaviour of different denominational groups also differed considerably. The differences appear to be significant at macro and micro level alike. It has not been clarified so far (and at macro level it does not seem possible) whether locality (through differing social and economic conditions) or denominational composition (through the existing religious norms) or the combination of those factors influenced the level and changes of fertility in the 19th century. In Hungary the lacks of our knowledge can be partly related to the prevailing macro perspective in historical demographic research. Recent analysis is based on the family reconstitution data of three communities from the territory of historic Hungary: on those of a western Hungarian Roman Catholic – Lutheran group of villages, on those of a central Roman Catholic – Calvinist community and on those of two Transylvanian Roman Catholic villages from Eastern Hungary (on the territory of Romania since WW I). The analysis compares the fertility patterns of three localities differing from one another in terms of geographic, socio-economic and cultural terms. It investigates the determinants of fertility level and changes both in pre-transitional and transitional period. It also focuses on the analysis of fertility differences between socio-professional and denominational groups. As for fertility decrease, it tries to explore whether the diminishing level of fertility was caused by prolonged birth intervals or can be linked to parity specific stopping behaviour, and the possible geographic, socio-professional and religious differences are considered also in this case.

#### **43-3. EAST-WEST FAMILIAL DIVIDE IN EUROPE: PERSISTENCE OF THE PAST, OR PERSISTENCE OF PERSPECTIVE?**

*Mikolaj Szoltysek, Siegfried Gruber and Peter Öri*

*E-Mail: Szoltysek@demogr.mpg.de*

J. Hajnal's regionalization of marital and familial behavior in historic Europe turned out to have been most long-lived out of various attempts to brand major areas of Europe as having a particular type of family system. Demographers usually take the latter's bipolar division of Europe at its face value and often too hastily use it as a tool to explain contemporary European-wide demographic differentials. We argue that using Hajnal's dichotomous model to explain current demographic variation is misleading and lead to the dead end in the construction of meaningful explanations of European diversity. Drawing on an unprecedented collection of historical microdata from Eastern Europe for the period 18th to early 20th century this paper identifies manifold obstacles to the notion of 'persistence of the past', and suggests more satisfactory ways of using the past to understand the present in demographic thinking.

#### **43-4. THE POPULATION HISTORY OF KAZAKHSTAN**

*Fariza A. Tolesh*

*E-Mail: toleshfariza@hotmail.com*

The Republic of Kazakhstan located at the junction of Europe and Asia is the world's ninth-largest country with only 16,5 (KAS, 2011) million population of more than 100 nationalities. This paper provides an overview of the population history of Kazakhstan,



the way in which the population has changed over the centuries. It explores stages of demographic change and the reasons of the ethnic diversity of the people living in the country. The history of Kazakhstani population is not easy to explain due to the scarcity and quality of data available, particularly before 1897 (the first Russian Imperial Census) and also owing to nomadic lifestyle there were no parish registers or historic tax records like in many European countries. The most prominent event in demographic history of the country was growth of population number from 4 million in the beginning of the 20th century to current more than 16 million. Generally, a population can change in size via two main mechanisms: natural change or migration. Historically, migration had a profound effect on size, structure and ethnic composition of the population in Kazakhstan. As a result Kazakhstan became home for many nationalities with different demographic behaviour and patterns, which will certainly determine future trends and tendencies as well as present.

#### **43-5. PRE-TRANSITIONAL MARITAL FERTILITY IN RUSSIAN PEASANT POPULATION: A CASE OF VYKHINO ESTATE, REGION OF MOSCOW**

*Irina Troitskaia and Alexandre Avdeev*

*EMail: itro@econ.msu.ru*

The authors make, for the first time in Russian historical demographic studies, the estimation of age-specific fertility in female birth and marriage cohorts in Russian peasant population in the 19th century on the basis of individual data. The use of the data collected from the parish registers allowed to construct more than 1400 complete reproductive histories of women married in Vykhino estate between 1815 and 1890. Russian population in the 19th century is supposed to be a natural fertility population. Demographic transition in Russia is usually dated with the end of the 19th century. Comparison of observed age-specific fertility with the standard patterns of natural fertility will allow estimating the extent of a deliberate birth control in different generations of Russian population, if any. The authors also estimate the effect of age at marriage and marriage duration on fertility.

#### **44-1. INTERNAL MIGRATION AND SOCIO-ECONOMIC CHANGES IN RURAL CHINA**

*Sandra Constantin*

*EMail: sandra.constantin@unige.ch*

Since 1978 the reforms and the relative liberalization of the economy (????, gaige kaifang) have given way to new individual ambitions in Chinese society. Despite structural constraints to population geographical mobility, internal migration has reached unprecedented levels in modern China. Officially, more than 20% of the rural population, nearly 220 million « peasants », live intermittently between town and countryside (National Bureau of Statistics of China, 2010) doing work that their original status does not entitle them to do. This social mobility is still strictly controlled by the hukou system. A resident permit established in 1955 by the Central government in order to divide the population into two categories: urban “citizens” and rural “citizens” (Kam Wing Chan, 1999 and 2008 and Dorothy Solinger, 1999 and 2006). This communication proposal is based on a qualitative field research conducted in 2010 in Danian (??), a village located in north of Guangxi (??) province. In this communication I will adopt an approach « from the bottom » to analyse the effects of macro-socioeconomic changes coming from the State (the reforms and the relative liberalization of the economy) on the life course of rural citizens in China (micro). I will first show that migration has become the most popular means for individuals, family groups and especially for women, in rural areas in general and in Danian in particular, to increase their revenue and achieve their objectives inside the existing social structures and

the institutional framework in which they develop (Giele Janet and Glen H. Eder Jr., 1998). Then, I will illustrate through the Danian village case study the role played by migration in socio-economic changes and development of rural areas in contemporary China.

#### **44-2. VILLAGE POLITICAL ECONOMY, LAND TENURE INSECURITY AND THE RURAL TO URBAN MIGRATION DECISION: EVIDENCE FROM CHINA**

*John T. Giles and Ren Mu*

*EMail: jgiles@worldbank.org*

This paper investigates the impact of land tenure insecurity on farmers' labor migration decisions in rural China. Crucial for our identification is that the heterogeneity of patrilineal clans within a village is associated with the cost of reallocating land. We show that the probability of a village-wide reallocation is a function of exogenously determined election timing interacted with the share of households in a village belonging to the largest lineage group in the first year of a panel survey. This interaction is used to identify the effect of land tenure insecurity on migration decisions. We find that in response to a higher probability of village-wide land reallocation, farmers reduce their migration probability by 2.1%, which accounts for 14% of the annual migration rate during this period. This finding attests to the importance of secure property rights in facilitating labor market integration and urbanization in general.

#### **44-3. SPECIFIC ASPECTS AND DYNAMICS OF INTERNAL MIGRATION IN RUSSIA**

*Marina N. Khramova*

*EMail: mnkhramova@hse.ru*

For many decades migration in Russia played significant role in development of the country, especially of its Siberian and Far East territories. In last 20 years, the directional flows of population underwent considerable changes, as by virtue of the changing geopolitical situation, as for a number of social and economic reasons. The predominant component of the migratory movements is an internal migration, which accounts for 80% of all migration in Russia. The character and scale of these migratory flows varies significantly among regions. By the early 2000's, today's picture of migratory exchange between regions in Russia was formed. Nearly all Siberia and all Russian Far East lose their population in migratory exchange with regions of Central, North-Western, and Urals Federal Districts. The migration activity of Russians significantly decreased during the last decade. While in 2000 regional and interregional migration flows were at 2.3 million people a year, by 2010 this figure has decreased to 1.7 million. On average, the shortening of a distance between departure and arrival regions could be defined as well-established trend. The exception is Far East Federal District, where migration to Central Federal District accounts for more than 30% of all interregional movements. The sex-age structure of migration underwent a transformation during the last two decades: a characteristic component is a rise in average age of migrants with the predominance of women among them (53% – 54% on average, mostly through the women of retirement ages). Current migration situation in Russia has a major impact on the country development. The characteristic features of migration in Russia are: geographic maldistribution of population, the working-age population outflow from Siberian and Far Eastern regions to the central parts of Russia, an increasing role of international migration, including the labour one.

#### 44-4. THE CHANGING PATTERN OF INTERNAL MIGRATION IN INDIA: ISSUES AND CHALLENGES

*Sandhya Rani Mahapatro*

*E-Mail: sandhyamahapatro@gmail.com*

This paper is an attempt to understand the emerging migration patterns in India and issues underlying it. With globalisation, urbanisation and accompanying changes in socio-economic conditions, migrants are attracted to urban areas in recent times. The emerging migration pattern depicts confinement of migrants in lower socio-economic class in Urban India in response to the macro economic reforms. The latest NSS data (2007/08) on migration reveals a gloomy and divergent picture of recent migrants who have migrated prior to five year. Inter-state migration among males to urban area shows precedence growth reflecting migration of people from lower socio-economic class. The negative inter relationship between per capita income and inter state migration rate further confirms it. A steady increase of urban migrants in lower economic class indicating migration is dominated by poorer sections. This finding is completely different from the last NSS round where a direct relation between economic status of the individual and inclination to migration has been noticed. The reason for such divergent pattern of migration within a period of 10 years really needs to be investigated. Higher migration of lower social groups takes place to urban area compared to earlier period. All these variations in migration pattern are attributed to rural-urban disparities in socio-economic development and increasing urbanization. Given the current development and growth of urbanization, increasing regional disparities, it is likely that migration to urban area will accentuate more in future due to the changing nature of the economy. Hence, an enquiry into the changing pattern of migration is critical to explore the emerging issues, identify the challenges and main precedence required at policy level for urban development. At policy level the major challenge is to formulate migration policies which must be linked with employment and social services, to enhance the well-being of the migrant living in urban area.

#### 44-5. COHORT EFFECT OR STRUCTURAL EFFECT: TRIPLE DISADVANTAGES OF YOUNG RURAL MIGRANTS IN ECONOMIC INTEGRATION INTO THE HOST SOCIETY IN CHINA

*Juhua Yang*

*E-Mail: Juhua.Yang00@gmail.com*

Drawing on a new typology that distinguishes hukou, migration status, and age cohort, and utilizing nationally representative data, this paper explores the associates of socio-economic integration of young rural migrants in the host society. Multilevel model results indicate that rural migrants and urban-urban migrants achieved less than local urbanites, suggesting an effect of locations of hukou; rural migrants achieved less than both urban-urban migrants and local urbanites, implying an effect of types of hukou, and young rural migrants achieved the least, suggesting an effect of types and locations of hukou, and age. Evidently, young rural migrants are the most vulnerable population with triple disadvantages. Such phenomena challenge the notion that marketization necessarily promotes rights and legal equality in a linear fashion, and the potentially positive impact of migration on personal development might be compromised by institutional constraints (e.g., hukou) that exclude rural-ers and outsiders, particularly the youths.

#### 45-1. LIFE SATISFACTION OF THE ELDERLY IN POLAND – THE PANEL DATA EVIDENCE

*Janina Jozwiak, Anita Abramowska-Kmon and Irena E. Kotowska*  
E-Mail: [ninaj@sgh.waw.pl](mailto:ninaj@sgh.waw.pl)

The main aim of the paper is to analyse life satisfaction of the elderly (aged 65 or more) in Poland and its determinants. The data used come from the subsequent waves of the panel survey “Social Diagnosis – living conditions and quality of life of Poles”, carried out in Poland since 2000. The Social Diagnosis Survey includes data on the economic (labour market status, income, material situation, etc.) as well as non-economic aspects (psychological well-being, lifestyle, health care, social contact, participation in culture, use of modern technologies of communication, etc.) of well-being of household members. Life satisfaction is evaluated on the following question: “Taken all together, how would you say things are these days? Would you say that you are....?” (possible answers: unhappy, not too happy, rather happy, very happy) and defines the dependent variable in the random-effects ordered probit model. Consistently with suggestions by studies in the field, the model includes not only the demographic characteristics of respondents (sex, age, marital status, place of residence, education, health), but also household living arrangements and economic variables (household income per capita, economic activity). Moreover, subjective evaluation of health and the household income situation as well as some information on social activity and religiosity are taken into account. Generally, our findings are in line with the results presented in the literature. Older Poles living with their partners declare higher life satisfaction than those without partner, even if they live with other people. Disability has a negative impact on happiness both in subjective and objective terms. Similarly, the higher income and self-evaluation of the household welfare increase people’s satisfaction with their lives. Also more religious people are more satisfied like those with the higher levels of education.

#### 45-2. EDUCATION IN SUB-SAHARAN AFRICA: A NEW LOOK AT THE EFFECTS OF THE NUMBER OF SIBLINGS

*Øystein Kravdal, Ivy A. Kodzi and Wendy Sigle-Rushton*  
E-Mail: [okravdal@econ.uio.no](mailto:okravdal@econ.uio.no)

Studies examining the link between the number of siblings and children’s education in Africa have given mixed results. Moreover, the potential for unobserved heterogeneity bias raises questions about how best to interpret any observed association. Using DHS data from 26 countries in sub-Saharan Africa and a multilevel multiprocess model that controls for time-invariant unobserved mother-level characteristics, we find indications that younger siblings increase the likelihood of entering primary school. However, once a child is enrolled, the number of pre-school aged siblings is negatively related to educational progression. The number of siblings older than 15 increases the chance of primary school entry and completion, but has no effect on subsequent transitions. There are also some positive effects of the number of siblings aged 6-15. On the whole, the number of siblings is not an important determinant of children’s education. The results underscore the need to develop detailed measures of sibling groups which capture age variations in school participation and potential contributions to production.

### **45-3. PROJECTING FUTURE HAPPY LIFE EXPECTANCY BY LEVEL OF EDUCATION FOR COUNTRIES AROUND THE WORLD**

*Wolfgang Lutz and Erich Striessnig*

*EMail: lutz@iiasa.ac.at*

Based on the World Value Survey we present cross-country comparisons of “Happy Life Expectancy (HLE)” by an improved demographic life table method. This indicator gives the average number of years a person lives in a state of happiness. It also has the advantage that it can be calculated for different sub-populations independently. Here we will apply it to the populations as stratified by the level of educational attainment, which allows us to study HLE differentials by level of education which combines the survival advantage of more educated people with their typical higher level of happiness. Moreover, recently methods have been developed to project over several decades the populations of all countries in the world by age, sex and level of education while considering differential fertility and mortality. This allows us to calculate different scenarios about HLE.

### **45-4. A GLOBAL COMPARISON OF THE RELATION BETWEEN OLDER ADULTS’ EDUCATION AND COGNITIVE FUNCTIONING**

*Daniela Weber*

*EMail: weberd@iiasa.ac.at*

Population aging is associated with age-related cognitive decline. While education is positively associated with cognitive function, it may represent a potential mechanism through which the burden of low cognition at older ages could be reduced. Recent studies using IV-techniques, MRI scans and twin study comparisons have suggested that the relation is partly causal and not only a matter of selection into education. Earlier investigations have, however, been constrained by being based on regional, national or small-scale surveys. Here we are able to analyze the relation between cognitive functioning and education using standardized cognitive measures of a slight majority of the world’s population aged 50+ due to nationally representative surveys. Studying those born between 1925 and 1964 across Africa, Asia, Europe, and the US, we find that a positive education-cognition relation holds for all countries, in spite of having highly different characteristics with respect to cognitive health, demography and the level of economic development. We study the association between education and cognition across countries that are poorer and richer and also analyze age and sex differentials across these countries. Furthermore, we investigate whether the education-cognition association holds for countries with different levels of educational distribution.

### **46-1. UNHEALTHY PARENTS AND DELAYED MATRICULATION FROM COLLEGE: AN IMPORTANT TWIST ON THE EDUCATION-HEALTH ASSOCIATION**

*Ross Macmillan, Kari Alexander, Richard Miech, Michael J. Shanahan and Jason D.*

*Boardman*

*EMail: ross.macmillan@unibocconi.it*

In this paper we explore the links between parental health and the subsequent educational attainment of their children when they are adults. We use four waves of data from the National Longitudinal Study of Adolescent Health (n=13,556) to examine the influence of parental health when respondents were adolescents (1995) on the likelihood that the respondents will have graduated from college by their late 20s (2008). We also examine four mechanisms that may explain this association. College matriculation rates were 11.6% and 41.4% for those whose parents listed their as “Poor” or “Excellent” respectively (base-

line OR = 1.53). Statistical controls for socioeconomic factors shared by parents and children accounted for the bulk of this association but we continue to see a residual effect of parental health on the educational attainment of their children despite adjusting for the health status of the respondent, parental education and income, community socioeconomic status, health behaviors of parents and respondents, as well as parental time investment. These findings provide a unique perspective on discussions involving causation and selection models of health and socioeconomic status. The intergenerational transmission of both education and health highlights the complexity and demonstrates the significance of this association.

#### **46-2. THE EFFECT OF EDUCATION, ADULT HEALTH AND DISABILITY IN PAKISTAN: A SUB-NATIONAL PERSPECTIVE**

*Samir KC and M. Asif Wazir*

*EMail: kc@iiasa.ac.at*

The recent evidence shows that strong relationship between formal education and adult health exist, higher level of education is associated with lower level of mortality and disability. It is the first attempt to study relationship of education and adult health in Pakistan at provincial level, using sample data from World health survey. At national level, we find that education is negatively correlated with disability in both younger and older adults. Using the provincial level education-based differentials (Multi-state technique), we project the level of disability from 2010- 2060 to estimate the health and human capital benefits obtained from investment in education. By considering the education in the projection, we find that, lower prevalence of disability in future and those scenarios with better education attainment lead to lower prevalence. It is evident that, the projections of adult health have illustrated the importance of including the education/health relationship in any human capital development planning.

#### **46-3. THE EFFECT OF EDUCATION AND THE POSTPONEMENT OF THE ONSET OF HEALTH LIMITATIONS ON THE NUMBER OF PEOPLE SUFFERING FROM HEALTH IMPAIRMENTS IN AUSTRIA, 2006 TO 2051**

*Elke Loichinger*

*EMail: elke.loichinger@wu.ac.at*

Many existing estimates of the future number of people with specified health conditions (e.g. self-reported severe ill-health or not being able to perform certain ADLs) are done using a method that Batljan et al. call 'simple demographic extrapolation' (Batljan, Lagergren et al. 2009). This means that current prevalence rates of ill-health by age (and possibly sex) are multiplied with the respective future population numbers. This approach is based on the assumption that current rates of ill-health will prevail into the future and that only the composition of the population by age and sex will change. Since all developed countries are going to see an increase in the absolute number of their elder population, this approach inevitably leads to a projected increase in the number of people with ill-health. This analysis goes beyond this wide-spread approach and considers educational attainment besides age and sex. The result shows that adding information about the prevalence of health limitations by highest level of educational attainment to projections of populations' future health leads to significantly different results compared to the analysis that does not include this factor. In addition, the effect of different assumptions about the future development of age-, sex- and education-specific patterns of health impairments on the total number of people who will suffer from them is being analyzed. The data source for calculations of age-, sex- and education-specific rates of health limitations is the latest national health survey,

which was conducted in 2006 and 2007. The definition of impairment used for the present analysis is to what extent someone reports a health problem that has been hampering him or her in the execution of daily activities for 6 months or longer. Only those who reported being severely limited are labeled as having a health impairment.

#### **46-4. THE DIRECT EFFECT OF EDUCATION ON MORTALITY: INSIGHTS FROM THE CLOISTER STUDY**

*Marc Luy, Christian Wegner-Siegmundt and Paola Di Giulio*

*EMail: mail@marcluy.eu*

Education is an element of a complex network that links many factors related to socioeconomic status (SES) with health and mortality. As a consequence of this complex interaction of different factors it is unclear whether and to which extent education per se has a direct effect on individuals' survival chances or whether education is rather a proxy for other characteristics of SES and their impact on longevity. To gain further insights into this still open question we analyze the correlation between education and longevity in a cohort of Catholic nuns and monks from Western Germany in comparison to the corresponding general population. This natural experiment allows us to examine the education-mortality-relationship in a population of women and men where education does not cause any differences with regard to other typical SES characteristics such as income, assets, housing and partnership. We merged the data of the German Life Expectancy Survey (LES) with the corresponding data for female and male order members from 12 religious communities. Our study sample included all 8,477 individuals of the births cohorts 1914-1952 who were alive at the beginning of 1984 and followed their survival until 1998. We analyzed the impact of education on the survival of the cloistered and the general population by running Cox proportional hazard regression models first separately for nuns, monks and women and men of the general population and then for the female and male populations combined. We found that mortality differences by education among female and male order members (1) are smaller than among women and men of the general population and (2) are not statistically significant. Thus, in our experimental setting we cannot confirm the existence of a direct effect of education and its determinants on mortality.

#### **46-5. MATERNAL EDUCATION REDUCES SEX-DIFFERENTIALS IN UNDER-FIVE MORTALITY IN SOUTHERN ASIA AND SUB-SAHARAN AFRICA**

*Christiaan W. S. Monden and Jeroen Smits*

*EMail: christiaan.monden@nuffield.ox.ac.uk*

Background: The sex-differential in under-five mortality varies considerably across and within societies. Maternal education has been linked to lower sex-differentials, but the evidence is mixed. We examined how the sex-differential in under-five mortality varies by maternal education at the individual level and context level in Southern Asia and Sub-Saharan Africa. Methods: We employ recent Demographic and Health Surveys from 31 Sub-Saharan African and 4 Southern Asia countries. Male:Female mortality ratios were determined using information on 49,626 deaths among 521,541 under-five children. We estimate Male:Female mortality ratios by maternal education and average female education at the context level while controlling for household characteristics. Results: Both regions show a clear pattern of gender bias by maternal education. In Sub-Saharan Africa, the M:F ratio for under-five mortality is 1.07 (95%CI 1.03-1.10) among non-educated women, 1.11 (1.07-1.16) among women with some primary education and 1.21 (1.14-1.29) among women with some secondary or more education. For Southern Asia the ratio are 0.84 (0.79-0.89), 1.03 (0.92-1.15) and 1.06 (0.96-1.17) respectively. The M:F child mortal-

ity ratio is significantly more biased against girls among non-educated mothers. Context level female education is not associated with the sex-differential. Conclusions: Even in regions with excess male mortality, mortality chances are positively biased in favour of boys. This gender bias is most clearly visible among children with an uneducated mother. Girls benefit in absolute and relative terms girls from having a more educated mother.

#### **47-1. INDIVIDUAL AUTONOMY AND TIMING OF CHILDBEARING: A CROSS-EUROPEAN COMPARISON**

*Arieke J. Rijken and Francesco C. Billari*

*EMail: arieken@nscr.nl*

A central notion of the Second Demographic Transition theory is that the increasing importance of individual autonomy and self-fulfillment lead to postponement of childbearing. Yet, empirical investigations of this notion are scarce. We investigate this issue in a cross-national perspective; assuming that the association between people's 'need for autonomy' and their ideal as well as actual timing of childbearing depends on the welfare context. The more parents' freedom is reduced by having children, the stronger this association is expected to be. In countries where the state reduces the negative consequences of having children through support for parents, we expect this association to be weaker or non-existent; in such a context having children interferes less with pursuing goals such as hedonism and self-direction. Therefore, the effects of values concerning individual autonomy on the timing of childbearing are probably weaker and there is less need to adjust one's values after childbearing. Multilevel analyses are conducted using Wave 3 of the European Social Survey (2006), with consists of 47,000 respondents nested in 25 countries. 'Need for autonomy' is measured with items from Schwartz' human value scale referring to self-direction, stimulation and hedonism. At the country level, we operationalize the welfare context as the social expenditures on families and children as percentage of the GDP. Our dependent variables are ideal age for becoming a parent and actual age at first childbirth. Analyses conducted sofar confirm our hypothesis that the higher the social expenditures on families and children, the weaker the association between people's 'need for autonomy' and their ideal age for becoming a parent. Gender differences are also discussed.

#### **47-2. SECULARS IN A RELIGIOUS SOCIETY: FERTILITY OF JEWS IN ISRAEL**

*Barbara S. Okun*

*EMail: barbarasokun@yahoo.com*

Israel is a rare example of a modern, affluent democracy in which there is extensive overlap between civil and religious authorities, and in which the majority of the adult population characterizes itself as traditional or religious. Israel thus presents a fascinating case study of the role of religion and religiosity in demographic processes; in this paper, we examine the family demographic behavior of seculars within this religious society. We document that in many respects, this group, like most affluent national populations in Europe, N. America, Oceania and parts of Asia, exhibits patterns of behavior that are consistent with the Second Demographic Transition (SDT). However, we also demonstrate that native-born secular Jews have consistently maintained unusually high levels of fertility relative to these national populations, with the most recent data available suggesting that cohort and period fertility is at or above replacement-level. Strikingly, among native-born seculars with completed fertility, one-child families are very rare and three-child families are the mode; these are two characteristics which distinguish the 1960s birth cohorts of native-born secular Jews from analogous groups in the U.S. and all European countries considered. We suggest that two interrelated factors may be the proximate causes of the unusual



parity distribution among native-born secular Jews with completed fertility: (1) high ideal family sizes and (2) low (albeit increasing) levels of marital dissolution and non-marriage. We suggest that the high ideal family size and the related centrality of marriage among seculars in Israel may be understood through a triple nexus of effects involving religion, familism and nationalism (Inglehart and Wezle 2005), values which conflict with those associated with the low fertility common to SDT populations (Lesthaeghe 2010). In light of this discussion, we explore possible changes in the future fertility of native-born secular Jews in Israel.

### 47-3. SUB-REGIONAL PATHS OF FERTILITY IN SPAIN

*Alessandra Carioli and Leo van Wissen*

*Email: carioli@nidi.nl*

This article describes the evolution of fertility in fifty Spanish provinces, *provincias*, over the last seventy years, from 1940 up to the present day. Regional characteristics of Spain offer an ideal ground to analyse regional paths of fertility behaviour, as it possesses distinctive regional and provincial characteristics both on the cultural and political level, which reflect differential fertility behaviour throughout the decades. Fertility transition toward lowest-low fertility levels has been highly heterogeneous across the country reflecting cultural differences (e.g. Catalonia started the decline in fertility much earlier than other regions), migration paths (e.g. out-migration from Galicia, urbanization of Madrid and Barcelona) and economic development (e.g. lagging South with high unemployment rates). In addition, Spain entered the Second Demographic Transition late and with considerable regional variability reaching in little time lowest low levels of fertility. The aim of this article is to explain paths of fertility across fifty Spanish provinces over the last forty years with respect to provincial variation of total fertility rate, while the explanatory variables are associated to fertility related behaviour, migration and economic indicators. In this paper, we will test the hypothesis of regional convergence towards a common Spanish path of fertility tempo and quantum and we use means of formal demography to describe provincial differentials and spatial analysis to investigate the spatial dependence and heterogeneity of such paths. The Instituto Nacional de Estadística, INE, supplies an extensive database with detailed information at NUTS3 level, in the 2003 coding, provinces (47), islands (3) on births, parity, nuptiality and other fertility related measures, which constitutes the base for further personal elaboration of data considered for the analysis.

### 47-4. PARTNERSHIP FORMATION AND FIRST HOME-LEAVING IN EUROPE: A MULTILEVEL COMPETING RISK ANALYSIS

*Livia Murinkó*

*Email: murinko@demografia.hu*

Leaving the parental home and establishing the first cohabiting union are major life course events during young adulthood, and partnership formation is an important route out of the parental home. Previous research suggests that more and more young people may leave the parental home for reasons of schooling, employment or simply to live independently in Northern (and to some extent in Western) Europe. However, this process may be less apparent in Southern, Central and Eastern Europe where the two events are more closely linked and/or the co-residence of parents and their partnered adult children also exists. The aim of the paper is to look at the relationship between first home-leaving and partnership formation during young adulthood in 25 European countries with the help of data from the 3rd wave of the European Social Survey (2006). We aim to compare countries with different home-leaving patterns. Home-leaving of respondents born between 1930 and 1979 and

between ages 15 and 35 is analysed. We perform multilevel discrete-time competing risk event history analysis, where home-leaving for partnership reasons (the two events took place in the same calendar year) and home-leaving for other reasons are the two competing events. We control for GDP (on the country-level), age, cohort, family background, education, fertility and employment history (on the individual-level) and separate analyses are presented for women and men. Preliminary results indicate that the relationship between partnership formation and first nest-leaving varies considerably across countries and country groups in Europe. Countries with higher-than-average home-leaving hazard tend to have a weaker relationship between union formation and home-leaving. The effect of union formation is the highest in Southern Europe, followed by the post-communist countries and Western Europe and it is the lowest in Scandinavia. We found only partial support for the increasing de-coupling of union formation and home-leaving.

#### **48-1. THE QUIESCENT PHASE IN HUMAN MORTALITY: WHEN DO POPULATIONS START TO AGE?**

*Michal Engelman, Ravi Varadhan and Christopher L. Seplaki*

*EMail: mengelman@uchicago.edu*

Demographic studies of mortality hazards tend to emphasize the two ends of the lifespan, focusing on the declining pattern of child mortality or the increasing trajectory of deaths at older ages. We call attention to the relatively quiescent phase in between, representing the ages when we are least vulnerable to the force of mortality. Using nonlinear fitting methods and data for female and male cohorts born 1800-1919, we estimate the parameters of the Siler model – which describes the mortality hazard across the full age spectrum. We then calculate inflection points in the Siler curve and characterize the start of the quiescent phase (representing the end of childhood vulnerability) and its end (the age when the hazard begins its exponential rise). As mortality hazards declined over time, the quiescent phase has gotten longer, with an earlier beginning in early childhood and a later end at the conclusion of the reproductive years. This analysis provides new insight into the dynamics of human development and implications for studies of individual and population aging.

#### **48-2. PARENTAL AGE AT BIRTH AND LONGEVITY OF OFFSPRING IN CENTENARIAN FAMILIES: THE ROLE OF BIOLOGY, SOCIAL INTERACTION AND CULTURE**

*Valérie Jarry, Alain Gagnon and Robert R. Bourbeau*

*EMail: valerie.jarry@umontreal.ca*

Previous studies showed that siblings of centenarians experienced a survival advantage compared to their birth cohort, revealing that surviving to very old ages is modulated by a familial component, whether genetic or environmental. However, mortality differences remain between siblings, reflecting differences in individual non-shared characteristics. In this study we determined the extent to which parental age at child's birth and seasonality have an impact on longevity of the child and on survival to age 100. We used an event-history database that links ages at death of 800 validated centenarians and their siblings to their childhood characteristics gathered from the 1901 and 1911 Canadian census records. The following variables were explored and included in the models: sex, birth order, family size, paternal age at the child's birth, maternal age at the child's birth, and the season of birth. We used fixed-effects models to capture the underlying family level heterogeneity that could affect the survival of children. Our results show that, while paternal age at child's birth does not seem to play, children born to mothers between 25 and 29 years of age had more than twice the chances to survive to age 100 compared to their brothers and sisters born to 40-year-old-and-older mothers.

### 48-3. MORTALITY CONFIDENCE INTERVALS FOR SMALL AREAS: A MEASURE OF THE PREDICTION GOODNESS

*Federico López, José Luis Gutierrez de Mesa and Luis Rivera Galicia*

*E-Mail: federico.lopez.carrion@ine.es*

With prediction, error measurement is a primary goal of data analysis. There is no exception for mortality projections. In this paper we develop a method to determine the confidence interval for mortality rates in small areas, whose population is much more exposed to random risks than the National population as a whole, much more stable in time for each age. The main result is a predictable confidence interval for the province death risk as a function of the National death risk. We specify a model for the death risk of a province as a sum of the National death risk plus an error term normally distributed whose variance depends on the National value and two predictable parameters. We apply the model to the Spanish particular case and observe an exponential relationship between Spain's death risk and the estimated variance. The logarithm of the estimated variance is linear in terms of the logarithm of Spain's death risk.

### 48-4. MORTALITY CROSSOVERS: A SIMPLE MODEL TO DISENTANGLE "REAL" EFFECTS FROM COMPOSITIONAL EFFECTS

*Roland Rau*

*E-Mail: roland.rau@uni-rostock.de*

Empirical studies often find that differences in mortality by socioeconomic status tend to converge and even cross-over with increasing age. Does this imply that risks are also converging on the individual level? Not necessarily. The decreasing gap can be also explained by compositional changes: people who are frailer than others tend to die younger, resulting in a selected healthier sub-population with an observed leveling-off in the observed mortality at higher ages. We present here a simple model that allows to disentangle direct effects from compositional effects. The model assumes that individuals in two groups are subject to a Gompertz mortality schedule and that the hazards of the two groups are proportional to each other. Individuals within the two groups differ in their frailty, which is assumed to be Gamma-distributed. We show that a simple mathematical expression allows us to estimate at what age the two hazards would converge if only compositional effects were present. If the observed crossover age is earlier, we can postulate that hazards do actually converge on the individual level. If the two trajectories have not yet converged at the estimated age, we hypothesize that individuals hazards are diverging with increasing age. Our model is not restricted to analyze only converging socioeconomic mortality differentials. It can be employed whenever two groups exist whose observed mortality hazards converge or crossover (e.g. smokers and non-smokers).

### 48-5. LIFESPAN VARIATION FOR COHORTS IS DECLINING

*Alyson A. van Raalte and Mikko Myrskylä*

*E-Mail: vanraalte@demogr.mpg.de*

Lifespan variation is a fundamental dimension of inequality. However, little is known about lifespan variation for real cohorts – the majority of research has focused on the period perspective. We use the Human Mortality Database data to compare adult (ages 30+) lifespan variation for cohorts and periods. Under declining mortality, death rates at adult ages are lower in the cohort perspective. This compresses the lifespan distribution at young ages, decreasing the variation. However, increased old-age survival stretches the right tail of the distribution, increasing variation. We contrast the trends in cohort and

period lifespan variation and investigate the age patterns driving the trends. We extend the range of observations by forecasting the mortality of partially observed cohorts. We find that adult cohort lifespan variation is steadily declining, in contrast to the stagnation observed in period perspective.

#### **49-1. GENDER EQUALITY IN FAMILIES AND CHILDBEARING IN FINLAND**

*Anneli Miettinen, Anna Rotkirch and Lassi Lainiala*

*EMail: anneli.miettinen@vaestoliitto.fi*

While women's stronger position in the labour market and education tends to diminish fertility, it is expected that more gender egalitarian relationships within the family will have the opposite effect. Previous research on gender equality and fertility is inconclusive as both egalitarian and traditional families are found both to intend and to have more children. Evidence from the Nordic countries suggests that when men are more willing to provide child care, couples are more likely to have a next child. It is not clear, whether this is related to more egalitarian relationships in the family, sharing of certain tasks, or to selection processes. The Time Use Study 2000 in Finland provides a unique opportunity to examine how various aspects of gender equality in families predicts subsequent childbearing. TUS2000 uses time diary method to collect data on daily activities of all family members. Diaries provide reliable and extensive information on division of tasks between partners. We combine TUS2000 data with data on births and union formation/dissolution from population registers until 2010, and use logistic regression models to examine the division of labour between partners and its influence on couples' childbearing. TUS2000 data includes also information on SES, income, employment and education of both spouses. We expect that the transition to a next child is faster among couples who share household tasks more equally. We also expect the impact to be parity specific and modified by education and income. Among women, for example, education increases the expectations of a more equal sharing, and decreases the likelihood of reducing time in paid work. Consequently, highly educated women may benefit more from equal division of tasks. Of special interest will be to identify which dimensions of gender equality (attachment to paid work, resources, or sharing of certain tasks) contribute to childbearing.

#### **49-2. EXAMINING FERTILITY FROM A COUPLE-PERSPECTIVE: DO RELATIVE RESOURCES MATTER FOR FIRST AND SECOND BIRTHS?**

*Natalie Nitsche*

*EMail: natalie.nitsche@yale.edu*

McDonald (2000) has suggested that socio-economic gender equity within couples is a crucial component in women's fertility decisions and that it's investigation will contribute to understanding low fertility in the Western world today. Empirically, however, little is known about how couple dynamics are influencing fertility outcomes. This paper examines if gender equity, measured as relative levels of income, education, work hours, and occupational status, affects the transition to first and second births in the US and Germany. While studies have investigated the effect of the gendered division of household labor on birth transitions, I argue that it is problematic as an indicator of intra-couple gender equity because research has shown that the division of household labor is itself an outcome of relative resources in couples. Using the NLSY79, the NSFH, the German Socio-Economic Panel (GSOEP), and the German Family Survey, this paper will use event history and fixed-effects models to understand how relative resources, absolute resources, and their interaction affect the timing and likelihood of first and second births in couples.

### 49-3. GENDER EQUALITY AND FERTILITY TRANSITIONS IN AFRICA

*Clifford O. Odimegwu and Sunday Adedini*

*EMail: Clifford.Odimegwu@wits.ac.za*

What role has gender equality played in fertility transitions in Africa? This study seeks to address this and other questions with a focus on the fertility levels of two selected countries in Africa. Using Demographic and Health Survey datasets of Nigeria and Kenya, the study examines the relationship between the current level of gender systems and fertility transitions in Africa. The prospects for future fertility decline in the continent are also discussed. In order to capture the present level of gender system and as it influences fertility transition in Africa, we undertake analysis of datasets of two countries which are at different levels of fertility transition. Analysis is restricted to women of childbearing age. The outcome variables in this study are fertility intention and children ever born (CEB). The selected explanatory variables are socio-economic characteristics, and demographic characteristics. Other important explanatory variables are sex preference, women perceptions about wife-beating and a number of women autonomy variables. Three levels of analysis – univariate, bivariate and multivariate are undertaken. The results indicate that less than 1 in 5 women could make contraceptives decisions in Nigeria as against 25.8% in Kenya. Analysis of women autonomy characteristics also shows that more than two-thirds of women (in both countries) still held the perception of being their husband's property. Also, husbands still dominate decision-making process on the number of children to have ( $p < 0.05$ ). Hence, higher fertility levels are expected in the near future in both Nigeria and Kenya, with Nigeria fertility levels higher than that of Kenya. Both Kenya and Nigeria data also indicate a significant relationship between fertility intention and such characteristics as: educational attainment, place of residence and current working status ( $P < 0.05$ ). In terms of gender equality, findings showed that Kenya is a more egalitarian country than Nigeria.

### 49-4. NORMATIVE AND ALLOCATION ROLE STRAIN: ROLE INCOMPATIBILITY, OUTSOURCING, AND THE TRANSITION TO A SECOND BIRTH IN EASTERN AND WESTERN GERMANY

*Liat Raz-Yurovich*

*EMail: raz@demogr.mpg.de*

The challenges women face in reconciling their work and family responsibilities are at the heart of current explanations concerning the low fertility levels in developed countries. This study examines the role of the outsourcing of household labor and of childcare responsibilities in reducing the incompatibility of women's roles and in increasing fertility in the two different institutional and normative contexts of Eastern and Western Germany. Using the German Socio-Economic Panel, we analyzed whether Eastern and Western German women who outsourced childcare responsibilities to formal and informal care providers in the first and in the third years after the first birth were at higher risk of having a second child. Drawing on Goode's role strain theory, we suggest that the incompatibility of women's roles is affected not only by allocation role strain, but also by normative role strain. Our results indicate that the outsourcing of childcare to formal providers and to grandparents reduces, rather than increases, the propensity to have a second child among Western German women, due to normative role strain. Moreover, whether the partner does or does not help with childcare is found to affect the odds of having a second child only among Eastern German women. We also find a significant positive effect of the outsourcing of housework on the transition to a second birth.

#### 49-5. GENDER EQUALITY AND FERTILITY

*Agnese Vitali, Arnstein Aassve and Trude Lappegård*

*EMail: agnese.vitali@unibocconi.it*

In this paper we test to what extent gender equality leads to a change, and in particular an increase, in fertility. We explore a hypothesis that as we move towards more gender egalitarian societies gender equality might become a pre-requisite for increased fertility. We focus on Norway, a country that score high on gender equality indexes, and have relatively high fertility. We make use of data from 430 municipalities, during 2000-2008, including information about fertility levels and a rather detailed description of gender equality. We start by running a very simple regression to document the correlation between the gender equality index and fertility rates. As the index is problematic for interpretation we use the components from the index at a detailed level to tell us more about the mechanism underlying it.

#### 50-1. TOO POOR TO MARRY? A CROSS-NATIONAL COMPARISON OF THE SES GRADIENT IN NON-MARRIAGE

*Catherine T. Kenney and Joshua R. Goldstein*

*EMail: ckenney@bgsu.edu*

In the United States, several recent studies find a negative educational gradient in non-marriage—those with more education are actually more, rather than less, likely ever to marry. Observations about Northwestern Europe, which contributed to the development of Second Demographic Transition theory, suggest the opposite: In at least some countries, the most-educated are more likely to embrace alternatives to marriage, such as long-term cohabitation. In this paper, we seek answers to the following questions: Which pattern of association is more common? How does the existence of a positive or negative educational gradient in non-marriage, or the steepness of the gradient, vary with the characteristics of the society? Is the main divide in behavior between the most- (or least-) disadvantaged members of the society and everyone else, or are there differences between each gradation of social status? How does non-marriage diffuse over time? The answers to these questions matter because non-marriage has implications for a wide variety of sociologically important issues, from kinship to consumption. Using data from the IPUMS-International for 32 countries, augmented for 9 European countries by data from the Generations and Gender Surveys and the Harmonized Histories data, we examine the association between non-marriage and education for women for whom non-marriage appears most likely to be an alternative, rather than a precursor, to marriage: those who are age 35-44, never-married, and living with a partner and children. We find, first, that the negative educational gradient in non-marriage seen in the United States appears to be common, while a pattern of higher non-marriage among the most-educated is relatively rare. In addition, the negative gradient, where it appears, is remarkably consistent across educational levels. Finally, we see no evidence for the emancipation theories' prediction that the diffusion of non-marriage through societies will occur from the "top down".

## **50-2. STRUCTURAL AND CULTURAL SYNERGISMS IN SUCCESSIVE BEHAVIORAL INNOVATIONS: A COMPARATIVE ANALYSIS OF TWO DEMOGRAPHIC TRANSITIONS IN THE REGIONS OF SPAIN AND BELGIUM, 1880-2010**

*Ron J. Lesthaeghe and Antonio López-Gay*

*EMail: RLesthaeghe@yahoo.com*

The paper presents a long term spatial analysis of fertility and family formation patterns from the “First” to the “Second demographic transition” (FDT and SDT) in Spanish provinces and Belgian arrondissements. Use is made of structural and cultural determinants that attempt to operationalize the Coale preconditions for demographic innovations (Ready, Willing & Able or RWA- framework). The following issues are addressed: historical continuities and discontinuities, the disjunction of the postponement and the non-conformist components of the SDT, and the role of regional subcultures in the creation of spatial demographic heterogeneity. The comparison of the two countries illustrate that the RWA-framework remains as powerful a tool for understanding the SDT as it was for the historical FDT.

## **50-3. REVISITING THE SECOND DEMOGRAPHIC TRANSITION ACROSS EUROPE AND THE UNITED STATES: EXAMINING PATTERNS OF NEW FAMILY BEHAVIORS BY EDUCATION**

*Brienna Perelli-Harris and Karel Neels*

*EMail: B.G.Perelli-Harris@soton.ac.uk*

The Second Demographic Transition posits that shifts in values have led to the postponement of marriage and childbearing, increases in cohabitation and increases in childbearing within cohabitation. It is not clear, however, that all of these behaviors are practiced equally by all strata of society. Here we employ harmonized union and reproductive histories from the United States and 14 countries in Europe to examine how family formation behaviors are practiced by different educational groups. We first examine how the proportion of women ever experiencing an event differs by education. We focus on ever having experienced 1) any union; 2) marriage, among those in a cohabiting union; 3) cohabitation, among those ever in a union; and 4) a birth in a cohabiting union, among those having had a birth. We then use hazard models to explore the educational gradient of 1) entrance into first co-residential union; 2) entrance into marriage for those in cohabiting unions; 3) first birth in any union; and 4) first birth for those in a cohabiting union. First results suggest that in France, Norway, and Austria, although the more highly educated frequently enter unmarried cohabitation, they are less likely than the lower educated to stay in unmarried cohabitation when having children. Our next steps will be to apply hazard models to provide information on the timing of behaviors, which is important for understanding the role of postponement. In addition, we will expand the number of countries analyzed to explore how the educational gradient of these new behaviors may or may not be similar across countries.

## **50-4. VARYING EDUCATIONAL DIFFERENCE IN DIVORCE RISKS IN EASTERN EUROPE: EVIDENCE FROM THE GGS COUNTRIES**

*Allan Puur, Leen Rahnu, Ausra Maslauskaitė and Vlada Stankuniene*

*EMail: allanpuur@hotmail.ee*

From the 1960s divorce rates have risen dramatically in all countries of Europe and doubled or tripled in most of them. Countries of Eastern Europe have belonged to trendsetters in this „divorce revolution“, top-ranking rates of union dissolution have been manifest

in the region ever since the 1960s and early 1970s. Against that background, however, there are relatively few studies that have addressed the trends and differentials in divorce in the countries of Eastern Europe in comparative perspective. In the present analysis, we investigate the educational gradient in divorce in seven countries of the region: Bulgaria, East-Germany, Estonia, Hungary, Lithuania, Romania and Russia. We hypothesise that educational gradient in divorce varies across countries of the region. Following the ideas of W.J.Goode, we assumed the educational gradient to be more positive in the countries that are less advanced in the Second Demographic Transition (SDT), and less positive or neutral in countries in which the features of the SDT are more pronounced. The data for the study come from national surveys carried out in the framework of the Generations and Gender Programme. To examine the relationship between divorce and education, the proportional hazard event history models were fitted. Consistent with the expectation, we report noticeable variation in divorce risks between the countries included in the analysis. In general, the results lend support to our hypothesis that countries which have progressed farther in the Second Demographic Transition tend to exhibit reduced contrast in divorce risks between population groups with high and low educational attainment.

#### **51-1. SPOUSE SELECTION AND MARRIAGE PROCESSES IN A TRANSNATIONAL SETTING: RESULTS FROM A LONGITUDINAL QUALITATIVE STUDY**

*Can Aybek, Ilknur Yuksel, Gaby Strassburger and Ismet Koc*

*EMail: can.aybek@destatis.de*

Studies investigating the marriage patterns of immigrants in Germany point out that with regard to immigrants from Turkey the vast majority of the concluded marriages are intra-ethnic, and an important share of these marriages are apparently at the same time transnational. Quantitative as well as qualitative studies that have been conducted on this subject focus on the perceptions and preferences of the spouses residing in Germany. In order to understand the characteristics of the partnership formation and the marriage migration processes better, the perceptions of both spouses have to be taken into consideration. This aim is at the core of our study entitled “Marriage Migration from Turkey to Germany – A Qualitative Longitudinal and Dyadic Perspective”. We conducted in-depth interviews with spouses who were at the time of the first interview living in Turkey and respectively resided in Germany. The interviews were done with both females and males and included biographical narratives as well as instant narrations about ongoing experiences at different time points. As a consequence, we have first-hand reports of individuals who were engaged in a transnational partnership and reported about issues such as how their relation started, which factors affected the decision to conclude a marriage with a person living in another country, etc. This study tries to map out how the spouse selection and marriage processes are evolving in the case of transnational marriages. Obviously gender specific issues are of central importance to our analyses. The analysis of the interviews not only allowed us delineate characteristics that are specific to relationships on distance, but also contributed to a better understanding of spouse selection and partnership formation processes in a transnational context.

#### **51-2. BINATIONAL INTRA-EUROPEAN MARRIAGES: THE CASE OF SWEDEN**

*Karen Haandrikman*

*EMail: karen.haandrikman@humangeo.su.se*

Sweden joined the EU in 1995, in a period when large numbers of relatives of previous labour migrants together with refugees entered the country. The country has been known for its liberal attitude towards migrants, and migrants have almost equal rights compared



to natives, even when they do not have Swedish citizenship. This paper focuses on euromarriages, or marriages between natives and migrants from other EU countries. The paper will outline recent trends in binational marriages, specified by country of origin and gender. Register data on the whole Swedish population is used for the analysis. From the beginning of the 1990s to the end of the 2000s, the share of binational marriages has increased from 14 to 20 percent. However, the share of binational euromarriages has been stable over time, while binational marriages with partners from outside Europe have increased. Patterns of euromarriages are highly gender-specific. While Finland is the most important country of origin for mixed marriages for both Swedish men and women, men increasingly marry Eastern European women, while Swedish women tend to prefer Western European men. Mapping the geographical patterns of border marriages shows different clustering patterns for migrants from the Nordic countries. Multivariate analyses will indicate which characteristics distinguish partners in an euromarriage from those in native-native marriages and marriages between natives and partners from outside of Europe.

### **51-3. MIXING AND MATCHING ON THE MARRIAGE MARKET: DETERMINANTS OF MIXED MARRIAGES OF EUROPEAN AND NON-EUROPEAN MIGRANTS IN BELGIUM**

*Suzana M. Koelet and Helga A. G. de Valk*  
*E-Mail: skoelet@vub.ac.be*

Most of the research on intermarriage in Europe concentrates on studying marriage behavior from lower educated, mostly non-European labor migration. Free movement and mobility in an integrating European Union has however created a very different type of intra-European migration that is often not accounted for. We use 2001 Belgian Census data and apply multinomial logistic regression analysis to explore the differences in odds for Europeans and non-Europeans in Belgium to marry either uni-nationally or bi-nationally. In the case of bi-national marriages a further distinction is made between marriages to a native partner, a European partner or a non-European partner. The direct comparison between Europeans and non-Europeans in the analysis allows us to test the generality of findings of traditional intermarriage research for the specific group of European migrants. European and non-European bi-national marriages are identified based on country of birth of the partners, a discriminator used by preference in intermarriage research. First results show amongst other how the odds to marry a native partner for a European living in Belgium do not unequivocally rise with education, as in the case of non-European migrants. The relation between education and intermarriage describes rather an inverted U-shape with low intermarriage rates at both ends of the educational ladder. Another interesting conclusion is that a typical determinant of intermarriage like group size of the own nationality group in the host country, is less important for the partner choice of European partners than for non-European partners. Europeans on the other hand are more likely to be influenced by the educational imbalance in their own origin group while making partner choices.

### **51-4. INTERMARRIAGE AND DIVORCE IN GERMANY: TESTING COMPETING HYPOTHESES**

*Nadja Milewski and Hill Kulu*  
*E-Mail: nadja.milewski@uni-rostock.de*

The aim of this study is to investigate the effect of native-immigrant intermarriage on divorce in Germany. Most studies on this subject have been conducted in the U.S.; there are only handful studies executed in Europe with a focus on marriages of post-war 'labour migrants', which is still the dominant migrant group particularly in Northern and West-

ern Europe. We include in our analysis five main 'labour migrant' groups in Germany. We apply event-history techniques to a rich longitudinal data-set, the data from the German Socioeconomic Panel (GSOEP). The data allow us to control for many individual and couple characteristics when investigating the effect of migrant-native marriages on divorce including the individual values. The focus is on marriages between German-born persons ('natives') and foreign-born individuals ('immigrants') from the countries as follows: Italy, Spain, Greece, the former Yugoslavia and Turkey. We compare the divorce risk of about 1,500 immigrant women to that of about 4,700 non-migrants and find overall lower divorce risks for immigrants than non-migrants. Marriages between German-born individuals and immigrants have a higher likelihood of divorce than marriages between two German-born individuals or between two immigrants from the same country.

#### **52-1. PROVIDING INFORMAL CARE TO OLDER PEOPLE: A COMPARISON OF SPOUSES, CHILDREN AND OTHER TYPES OF RELATIONSHIPS**

*Marjolein I. Broese van Groenou and Alice De Boer*

*EMail: m.i.broesevangroenou@uu.nl*

Spouses and adult children are the most important caregivers to older adults, but the number of other kin and non-kin caregivers is increasing. The three types of caregivers (spouses, children and others) differ considerably in intensity of care provision, motivation, and context of caregiving, but less is known about their differences in caregiver appraisal, i.e. to what degree the caregiving is evaluated as a positive and/or negative experience. Using data from a national sample of Dutch informal caregivers of 1,685 older persons, the study examined to what degree characteristics of the care context, care givers and care receivers are associated with positive and negative appraisal of caregiving. Spouses (N=206) report high positive appraisal and high burden, adult children (N = 1,093) report the lowest level of positive appraisal, and other types of caregivers (N=386) report high positive appraisal and the lowest level of burden. Care context, motives and the availability of help from other sources differed largely among the three types of caregivers. Multivariate linear regression analyses for each of the care relationship types showed that motivational factors and help from other sources were more important for positive appraisal, whereas care context and solistic coping were more associated with burden. Which type of motivation and which type of assistance impacts caregiver appraisal varied by type of care relationship. Only among 'other' caregiver relationships, positive appraisal was negatively associated with burden. These results confirm the dual nature of caregiving among spouses and children and the fact that caregiving is merely a positive experience for other types of caregivers.

#### **52-2. TRANSITIONS INTO SHELTERED ACCOMMODATION AND RESIDENTIAL CARE IN LATER LIFE: EVIDENCE FROM THE BRITISH HOUSEHOLD PANEL SURVEY (1991-2008)**

*Maria Evandrou, Jane C. Falkingham, Olga Maslovskaia and Athina Vlachantoni*

*EMail: maria.evandrou@soton.ac.uk*

The UK's population is ageing. In 2011, people aged 65 and over formed 17% of the total UK population and by 2033 this figure is projected to rise to 23% (ONS 2010). Understanding the dynamics of living arrangements in later life and the implications for the provision and funding of appropriate housing and long-term care is critical given population ageing and the current economic climate which can have an adverse impact on state support for older people. This paper investigates the dynamics of living arrangements amongst people aged 65 years old and over between 1991 and 2008, focussing on the two key housing and

care pathways in the latter part of the life course: moving into sheltered accommodation and moving into residential care. The empirical research examines the rates of moving into sheltered accommodation and institutional care after age 64, as well as investigating the determinants and probabilities of these transitions in the UK. The paper employs all 18 waves of the British Household Survey data (1991-2008) and uses a discrete-time logistic regression model in order to model the probability of entering sheltered accommodation and residential care. The paper shows that the factors associated with each of the two transitions in later life are different; for example age, health and marital status are significant determinants of an older person's move into residential care, while the move into sheltered accommodation is in addition associated with an older person's housing tenure and highest educational qualification. Such results indicate that the two kinds of transition may be more prevalent in different stages of the latter part of the life course, and have crucial implications for the design of social care provision for older people in the future.

### **52-3. SIMULTANEOUS HELP TO PARENTS AND CHILDREN IN MULTI-GENERATION EUROPEAN FAMILIES**

*John C. Henretta*

*Email: henretta@ufl.edu*

This paper uses the 2004 Survey of Health and Retirement in Europe (SHARE) data to examine instrumental transfers in families with at least three living generations. The analysis focuses on the behavior of 50-59 year old middle generation households and examines whether those who assist either their elderly parents or their children are more or less likely to assist the other generation. Based on previous research, the following research hypotheses are examined: 1) There will be a positive association between help to children and help to parents, and this association will be stronger in northern than in southern Europe; 2) The characteristics and needs of both elderly parents and children will influence whether the middle generation helps each of the other generations. Results from a log-linear tabular analysis indicate that there is no overall association between helping children and helping elderly parents. In addition, there are no significant differences in this association across the 11 countries examined. Results from multilevel models of help to parents and help to children indicate an asymmetry in results. While children's characteristics influence whether parents are helped, parents' characteristics have no influence on whether children are helped. This latter finding may indicate the primacy of obligations to children.

### **52-4. THE EFFECTS OF PARENTAL MARITAL DISRUPTION ON THE OBLIGATIONS OF MID-LIFE 'ADULT CHILDREN' TO CARE**

*Joanna Sage, Maria Evandrou and Jane C. Falkingham*

*Email: j.sage@soton.ac.uk*

This paper challenges the dominant thesis that parental divorce occurring during childhood has a greater detrimental effect on the obligations (adult) children feel to provide care for their parents in later life, than parental divorce which occurs later in the lifecourse during the child's own adulthood. Drawing upon interviews with mid-life participants who have experienced disruption in their parent's marriage at different stages of the lifecourse (either during childhood, adolescence/young adulthood, or during mid-life), our findings reveal how parental marital disharmony unfolding during adulthood can have particularly detrimental effects on the obligations adult 'children' feel to provide care for their ageing parents. In particular, we show how the deterioration of marital relations in post-retirement couples has resulted in weakened relationships with their mid-life (adult) children, who have expressed diluted obligations to care for their parents as a result – underlining

parental retirement as a key lifecourse event, which can unsettle marital dynamics and family relations. We present these findings within the context of an increasing informal care-gap in the UK, and the complex intergenerational exchange frameworks of our 'sandwich generation' participants, outlining a clear critique of family-centric social care policy in the UK.

#### **52-5. REGIONAL ECONOMIC PERFORMANCE, RURALITY AND DISTANCE BETWEEN PARENTS AND THEIR EMPLOYED CHILDREN. A MULTILEVEL ANALYSIS**

*Thijs van den Broek, Pearl Dykstra and Niels Schenk*

*EMail: broek@fsu.eur.nl*

In this study we assess the associations between regional economic performance, rurality and the geographic distance between parents in Germany and their employed children. Previous studies on parent-child distance have typically included regional rurality in their analyses under the assumption that, vis-à-vis urban regions, rural regions have a poor economic performance. Drawing on the work of Sassen, we problematize this assumption and carry out a direct test of the association between regional economic performance and the distance between parents and employed children. Analyses based on micro data from the German Ageing Survey enriched with INKAR district level indicators ( $N = 5,577$ ) indicate that economic performance of a parent's living district is negatively associated with parent-employed child distance. The negative association between economic performance of a parent's living district and parent-child distance does not vary by the skill level of the child's job, unlike what the polarization thesis and the professionalization thesis led us to expect. Possible implications of the findings for intergenerational solidarity, most notably the availability of informal care for dependent older parents, are discussed.

#### **53-1. A STATISTICAL APPROACH FOR RECONSTRUCTING CONTINUOUS SERIES OF MORTALITY BY CAUSE OF DEATH**

*Carlo G. Camarda*

*EMail: camarda@demogr.mpg.de*

Data on cause-specific mortality have been collected over several decades for different countries. Nevertheless this valuable source of information has not been sufficiently explored. This is mainly due to frequent revisions of the International Classification of Diseases which lead to discontinuities and disruptions in cause-specific mortality trends. This paper proposes a new methodology for reconstructing continuous series of mortality by cause of death. The model assumes death counts as realizations from a Poisson distribution. The expected values of this distribution is a composed mean which embodies the continuous series and the redistribution pattern among causes of death. An algorithm allows the simultaneous estimation of these two components. The known associations among causes is used as input and the only assumption that is made about the underlying continuous series is smoothness. We present a simulation study and an application for demonstrating the performance of our model and its practical characteristics.

#### **53-2. USING PANEL DATA TO PARTIALLY IDENTIFY HIV PREVALENCE WHEN HIV STATUS IS NOT MISSING AT RANDOM**

*Elisabetta De Cao, Bruno Arpino and Franco Peracchi*

*EMail: elisabetta.decao@gmail.com*

Good estimates of HIV prevalence are important for policy makers in order to plan control programs and interventions. Although population-based surveys are now considered the

“gold standard” to monitor the HIV epidemic, they are usually plagued by problems of nonignorable nonresponse. This paper uses the partial identification approach to assess the uncertainty caused by missing HIV status. We show how to exploit the availability of panel data and the absorbing nature of HIV infection to narrow the worst-case bounds without imposing assumptions on the missing-data mechanism. Applied to longitudinal data from rural Malawi, the Malawi Diffusion and Ideational Change Project (MDICP), our approach results in a reduction of the width of the worst-case bounds by about 18.2 percentage points in 2004, 13.2 percentage points in 2006, and 2.4 percentage points in 2008. We also use plausible instrumental variable and monotone instrumental variable restrictions to further narrow the bounds.

### **53-3. HOW TO MODEL FRAILTY?**

*Trifon I. Missov*

*EMail: missov@demogr.mpg.de*

The article studies a mixture model, proposed in Finkelstein and Esaulova (2006), which generalizes many popular models, most notably proportional hazards and accelerated life. In this framework we derive that a crucial feature of the frailty distribution is its regular variation at 0. Among the popular distributions to model unobserved heterogeneity, the gamma, beta, Weibull, and truncated normal densities have this property, as opposed to the inverse Gaussian and lognormal distributions.

### **53-4. BAYESIAN MODELLING OF INTERNATIONAL MIGRATION WITH LABOUR FORCE SURVEY DATA**

*Arkadiusz Wisniowski*

*EMail: A.Wisniowski@soton.ac.uk*

A statistical method for estimating international migration flows based on information obtained from Labour Force Surveys (LFS) is developed in this study. The motivation for using LFS data is the general poor quality or absence of data provided by the national statistical institutes. A simple Bayesian model of flows between two countries is considered, assuming that migration can be measured in the LFS by both sending and receiving countries. The undercount in a particular destination-specific emigration flow is estimated by using the LFS sample of the corresponding receiving country. The model developed in this paper is applied to estimate recent migration flows between Poland and the United Kingdom.

### **53-5. COMPARE SPATIAL AND MULTILEVEL REGRESSION MODELS FOR BINARY OUTCOME IN NEIGHBORHOOD STUDY**

*Hongwei Xu*

*EMail: xuhongw@umich.edu*

The widely used multilevel regressions in neighborhood research typically ignore potential between-neighborhood correlation due to underlying spatial process, and hence may produce overestimated statistical significance of neighborhood effects. In contrast, spatial models make estimation and prediction over space by explicitly modeling the spatial correlations among observations in different locations. Aided by advance in spatial techniques and increased availability of spatial data, researchers have become increasingly interested in the spatial dynamics beyond simple neighborhood-level variation. A better methodological understanding of the strength and limitation of spatial models as compared to multilevel models is needed to help move forward the research on neighborhood and spatial effects. Few comparisons, however, have been made regarding model performance between

spatial and multilevel models through a formal approach such as simulation analysis. In this paper, I seek to systematically compare model performance in estimation and prediction between spatial and multilevel models in presence of both within- and between-neighborhood correlations through simulation studies. I focus on models of binary outcome using logit and probit links given their prevalence and popularity in empirical studies. I will adopt a wide range of performance measures to evaluate different models in terms of bias, accuracy, and coverage. I will perform k-fold cross validation, the gold standard approach in simulation study, to assess the predictive power across models. Finally, I will draw on empirical data to illustrate the application of the spatial approach which remains limited in the existing research on neighborhood effects and demonstrate its relative advantages compared to the multilevel approach.

#### **54-1. ABORTION AND CONTRACEPTION BEHAVIOR IN MACEDONIA: DISCOURSE AND REASONS**

*Vera Dimitrievska, Inge Hutter and Pieter Boele van Hensbroek*  
*EMail: V.Dimitrievska@rug.nl*

**Introduction:** Women who use abortion in Macedonia as a contraceptive method are special group that require more focused investigation. The principal objectives of the study are: 1) To gain insight on the discourse among women, men and key informants from different cultural groups about abortion and contraception behavior, 2) To understand the social and cultural context regarding the abortion and contraception; how is embedded in the economic and political background, 3) To understand (mapping) the process of reasoning (decision-making) about the abortion and contraception behavior among the women. **Methods:** Focus groups and in-depth interviews with women who had abortions, in-depth interviews with men and key informants. Transcripts will be coded and analyzed. Themes will be categorized into domains. **Conclusions:** Using the findings it will be given certain recommendations that will serve as a basis for prevention of unintended pregnancies.

#### **54-2. ASSOCIATED FACTORS ON DECISION-MAKING PROCESS TO ABORTION IN SPAIN**

*Laia Ferrer*  
*EMail: lf.serret@gmail.com*

**Introduction** In Spain there's a large proportion of pregnancy ended in an induced abortion (IA) but there's a limited literature about associated factors related to it. Age appears as an important mediated factor in IA. The objective to this paper is to study the impact of sociodemographic and reproductive characteristics and factors related to relationship on the decision of Spanish women in different age groups about whether or not to continue a pregnancy. **Methods** All pregnancies which its outcomes is known in Spain in 2008, either in live births and in induced abortion, are obtained from both national statistics (birth and induced abortion official statistics). The variables considered were age, country of birth, Autonomous Community of residence, size of place of residence, level of education and work status, cohabitation status and number of children before last pregnancy. Stratified analysis according to age (<25, 25-34, >35 years) was used in order to study the impact of different factors on decision-making process to abortion among women belonging to different age groups. The chi square test was used to analyse the relation between the different factors related to decision to abort separately within each age group and for the study sample as a whole. Separate multivariate logistic regression models were run for each of the three age groups. **Results** Reproductive history characteristics appears as an important factor related to decide whether or not to continue a pregnancy as well as factors related to

the relationship, both factors are especially important among women 25 years old or older. Among younger women the factor more clearly linked to terminate a pregnancy was the education level. Conclusions The impact of sociodemographic, reproductive characteristics and factors related to the relationship on decision-making process to abortion varies according to the different age groups.

#### **54-3. TWO WAYS OF BIRTH CONTROL TRANSITION TOWARDS NEW REPRODUCTION PATTERN IN EASTERN EUROPE**

*Jirina Kocourková*

*EMail: koc@natur.cuni.cz*

Investigation of the relationship between levels of contraceptive use, the incidence of induced abortion, and fertility level has been a subject of many studies. However, their findings have not been consistent as increased contraceptive use need not necessarily lead to lower but to higher abortion rates. When a fertility level in population falls rapidly, the parallel rise in abortion and contraception may occur because only increased contraceptive use by itself is unable to meet the growing need for fertility regulation. This was found out in Russia and Romania where drastic drops in fertility at the end of the 1980s and in the early 1990s were recorded and accompanied by a temporary increase in the abortion rate in both countries. On the other side it was not proved in the Czech Republic where during the steep decline of TFR towards the lowest low level of 1.1 children per a woman in the 1990s even steeper decline in TAR occurred simultaneously together with increase in contraceptive use and its effectiveness. Based on the empirical findings, interactions between all three factors are more complicated in Eastern European countries. While before 1990 the Eastern European countries were uniformly characterized to be the countries with abortion culture and low and ineffective contraception, recently two different types of use of birth control method could be found out in this region. Comparative analysis will include both the changes in the level and structure of induced abortions, and changes in contraceptive practice in selected Eastern European countries. Moreover, the aim is to identify the factors behind the recent differentiation in birth regulation in Eastern Europe.

#### **54-4. WOMEN'S LIFETIME EXPERIENCES WITH INDUCED ABORTION AND CURRENT EMPOWERMENT IN TURKEY**

*Ozge Tuncalp and Michelle J. Hindin*

*EMail: otuncalp@jhsph.edu*

Using the 2008 Turkish DHS, we examined the relationship between history of an induced abortion and current levels of empowerment among 7045 ever married women, ages 15-49. We created three empowerment scores using responses on justification of beating, women's mobility and women's status. We compare our results to those from the 2003 Turkish DHS. Overall 19.3% of our sample ever had an abortion. All three of our empowerment scores were positively associated with having an abortion, whereas the religiosity score was negatively associated ( $p < 0.001$ ). The associations with age, number of living children, current contraceptive use, residence and region were all statistically significant ( $p < 0.001$ ). The women who had an abortion were statistically more likely to have higher empowerment scores, even after controlling for all the other variables in our models. Based on our measures, history of abortion is positively associated with empowerment among Turkish women and negatively associated with religiosity.

#### 54-5. INDUCED ABORTION IN ITALY: AN ANALYSIS FOCUSED ON FOREIGN WOMEN

*Marzia Loghi, Alessia D'Errico, Alessandra Burgio, Rossana Cotroneo and Roberta Crialesi*  
E-Mail: loghi@istat.it

Subsequent to the legalization of abortion in 1978, the Italian Institute of Statistics (ISTAT) started the survey on induced abortion (IA) in 1979. The Italian trend shows that from 1980 to nowadays (2009) there has been a considerable decreasing trend for IA rates (from 15.3 per 1000 cases per women aged 15-49 to 8.0 per 1000). The aims of this paper are to study the recourse to IA especially by foreign women resident in Italy compared to Italian ones, and to compare levels of IA of migrant women resident in Italy with those living in their own country. Focusing on women with not Italian citizenship, it is clear that their proportion of IAs has been increasing over time. In 1995, it was 6,6% while in 2009 it became 33,8%. In particular, it emerges that Romanians living in Italy have higher total fertility rate (TFR) and higher total abortion rate (TAR) than their peers in Romania, and the relationship between fertility levels and abortion levels seems similar in both groups. According to these results the high recourse to IA of Romanian women resident in Italy seems to be more affected by their cultural background than by their migrant condition. Based on the results coming from the preliminary analyses by nationality, age and marital status, it was applied a simulation model (decision tree) to estimate the association among various factors with the risk of IA among migrant women, comparing them with Italian ones. Results show that young women, never married women and foreign women (Romanians in particular), are the subgroups with a higher probability to have recourse to IA. In conclusion, Romanians living in Italy have higher IA levels (31.8 per 1000) than Italian women (6.4 per 1000) and than Romanian ones living in their own country (23.5 per 1000).

#### 55-1. COMPARING INTERNAL MIGRATION AROUND THE GLOBE

*Martin Bell, Elin Charles-Edwards, Marek Kupiszewski, Dorota Kupiszewska, John Stillwell and Yu Zhu*  
E-Mail: martin.bell@uq.edu.au

Cross-national comparisons of internal migration are beset by a range of issues arising from inconsistencies in the way migration is measured, in the spatial and temporal referencing of moves, and in the sources from which the data are derived. This paper presents results from the IMAGE project, a collaborative international research program which aims to provide a robust framework for systematic comparisons of internal migration and advance understanding of the way in which Internal Migration varies Across the GlobE. An essential first step in such comparisons is a thorough understanding of the available data. The paper reports results from the IMAGE database, a global inventory of internal migration data collections for 193 UN Member States. We summarise the types of data collected, the intervals over which migration is measured and the spatial frameworks employed, and show how these vary between countries. We then utilise selected data to establish league tables comparing levels of mobility for a sample of UN Member States.

#### 55-2. INTERNATIONAL COMPARISONS OF POPULATION MOBILITY IN RUSSIA

*Timothy Heleniak*  
E-Mail: heleniak@umd.edu

The population of Russia is regarded as being quite immobile compared to other countries and the lack of mobility has been cited as a factor slowing long-term economic growth.



There have been some recent methodological advances and the use of new datasets on internal migration which make cross-national comparisons, though these do not extend to Russia. This paper adds comparisons of levels of mobility in Russia with other countries. The study finds that the population of Russia is not significantly less mobile than other large countries and that part of the myth of immobility stems from a deterioration of the migration registration system in the post-Soviet period. There are inconsistencies between lifetime mobility derived from population censuses and annual mobility from a population register which originated during the central-planning period. Given changes in the economic structure at both national and regional levels during the period of economic transition, migration theory predicted significant migration movements, many of which were not captured by the statistical system.

### **55-3. UNMASKING THE DICHOTOMY OF TEMPORARY AND PERMANENT LABOUR MIGRATIONS IN INDIA**

*Kunal Keshri and Ram B. Bhagat*

*EMail: kunalkeshri.lrd@gmail.com*

Historically India has witnessed large scale internal labour mobility. Temporary and permanent migrations are two competing forms of labour mobility which are dichotomized on the basis of duration and usual place of residence. Temporary labour migration is a move made for a short period of time (say few months in a year) with the intention of returning to the place of usual residence. Conversely, in permanent labour migration usual residence of the person is changed and his/her chances to return home are very less. While researchers and policy makers have increasingly recognized the importance of temporary migration, little attempt has been made to understand the dichotomy of temporary and permanent forms of labour migration. Indian National Sample Survey, which is responsible for collecting socio-economic data in the country, has recently collected detailed information related to temporary migration along with permanent migration on its 64th round (2007-2008). In this article, using this data we focussed on the extent to which the pattern and characteristics of permanent and temporary migrants differ. We also endeavoured to examine whether social and economic factors have the similar effect on both forms of labour mobility or is it vice-versa? Results show stark differentials in temporary and permanent labour migration in respect to place of residence and sex. Further, results show that socioeconomically backward groups like scheduled tribes and scheduled castes are more likely to migrate temporarily than higher caste groups. Contrastingly, higher caste groups are more likely to be permanent migrants. Results, further, suggest that educational level is negatively associated with temporary migration. It could be inferred from the preliminary results that socio-economically backward and poorest of the poor are more likely migrate temporarily while better-off groups are more likely to go for permanent migration.

### **55-4. INTERNAL MIGRATION AFTER COMMUNISM: SPATIAL POPULATION DYNAMICS IN THE CZECH REPUBLIC, 1989-2007**

*Virginie Piguet and Jana Vobecka*

*EMail: virginie.piguet@dijon.inra.fr*

The aim of the paper is to determine the dynamics of the post-communist spatial population structure during the two decades of transformation after 1989 revolutions, paying special attention to the Czech Republic. The analysis focuses on internal migration as the main driver of spatial population dynamics. It discusses the structure, determinants, and temporal change of internal migration and its consequences on the population structure in metropolitan and non-metropolitan areas. We use full-sample register data on inter-

nal migration flows and data on socio-economic characteristics of municipalities. This unique, previously unexplored, dataset allows us to analyse the social and age structure of migrants at a very detailed geographical scale (municipalities). Using gravity regression models we find that suburbanisation has only recently become the main factor influencing spatial distribution of the Czech population. Results show that higher educated people are more likely to move to suburban areas than those with lower education. The effect of age on destination choices is surprisingly low. However, internal migration flow intensities are smaller than in Western Europe and other developed countries. This may go in some way in explaining why the recent internal migration patterns have had only a small influence on the social and demographic structures of population across urban, suburban and rural areas.

#### **56-1. USE OF LACTATIONAL AMENORRHEA METHOD (LAM) AS CONTRACEPTION AMONG WOMEN IN IBADAN, NIGERIA**

*Monica Akokuwebe, Adebola Adedimeji and Obafemi Omololu*  
*Email: zino952000@yahoo.com*

About 15% of Nigerian women are reportedly practicing any form of contraception despite widespread knowledge and ongoing efforts to increase usage. Whereas, the prevalence of lactational amenorrhea method (LAM) for contraceptive purposes is reported at 5%, the reasons for the low use of this method among lactating mothers are yet to be investigated. This study explores knowledge, attitude and practice regarding LAM as a method of contraception among lactating mothers currently practicing exclusive breastfeeding (EBF) in Ibadan, Nigeria. We utilized systematic sampling strategies to select 338 lactating mothers in 2 health facilities and applied a structured questionnaire to measure knowledge, attitude and practice regarding LAM as a contraceptive method. Data analysis was descriptive to report frequencies, chi-square and correlation of study outcomes. Although awareness of LAM was nearly universal (95%), 61% of participants knew it could be used for contraception. About half of participants (51%) had previously used it for contraception and slightly less than half (48%) currently use it for contraception. Chi-square results show significant associations between educational level ( $p < 0.003$ ), income ( $p < 0.01$ ) and ethnic affiliation ( $p < 0.002$ ) and ever use of LAM. Only income showed a significant association ( $p < 0.05$ ) among current users. Unmet need for modern contraception among Nigerian women is high and natural methods like LAM can increase contraceptive prevalence among lactating mothers. Whereas knowledge of LAM for contraceptive purposes is high, demographic, socioeconomic and other contextual factors impede use. Addressing these barriers through effective programs and policies can contribute to reducing unmet need for contraception among lactating women.

#### **56-2. WHAT DO THEY KNOW? WHAT DO WE KNOW? DIVERGENCY IN THE PARTNERS' STATEMENTS ON THE COUPLE'S CONTRACEPTION**

*Katharina S. Becker*  
*Email: katharina.becker@destatis.de*

In demography and social sciences, contraception is rarely addressed from a couple perspective. Existing findings on contraceptive behaviour mainly are based on information mentioned by only one of the partners, in most cases the female partner. Only few studies provide information on contraception from both partners, giving insight into birth control practices within the couple. Hence, ambivalence, misconceptions and ambiguities in the partnerships' contraception are rarely analysed systematically on broad database. Starting on this point, the paper analyses the dyadic perspective by regarding both part-

ners' statements on contraception. First findings indicate that overall, within every fourth partnership, discrepant statements on a) the question if they do practice contraception (yes or no) b) the contraceptive (method), and c) the consistency (how consequently did they use the method) can be noticed. Even when controlling for essential factors, like sex, the findings hold, indicating that we are dealing with a general phenomenon, bringing about implications for couples' fertility and fertility research as well. A first aim of the paper is to analyse the disparity in the two different methodic approaches, comparing findings of studies on contraception in partnerships that are based on one partner's evaluation versus multi-actor-evaluation surveys. Further, with regard to partners' discrepancy, the paper pursues two more general goals: a) analysing influencing factors on discrepant partners' statements on contraceptive behaviour and b) describing outcomes of the different convergence-divergence-patterns. Using multi-actor-data provided by the first and second wave of the German representative study Panel Analysis of Intimate Relationships and Family Dynamics (pairfam), several hypotheses are put to test in bi- and multivariate analyses. For example, it is assumed that consistency in the couples' answers is positively related to a) the partnership duration, b) the fertility history of the couple, and c) the homogeneity of the partners in socio-economic regards.

### **56-3. MODERN CONTRACEPTIVE USE AMONG ILLITERATE WOMEN IN INDIA: DOES PROXIMATE ILLITERACY MATTER?**

*Mousumi Dutta, Zakir Husain and Sriparna Ghosh*  
 EMail: dmousumi1970@gmail.com

Illiterate women comprise a particularly vulnerable section of the community. They lack empowerment, are unable to voice their choice with respect to, inter alia, contraceptive use, and also lack access to health services. However, their lack of literacy may be compensated to some extent if their partners are literate. Contraceptive use of such illiterate women (referred to as proximate literates in literature), may be higher than that of illiterate women whose partners too are illiterates (called isolate illiterates). This hypothesis is tested using the third wave of the Demographic Health Survey data for India (2005-2006). Current use of modern contraceptives was compared between these two groups (proximate and isolate illiterates) for socio-economic and demographic correlates. This was followed by multivariate analysis, regressing current use of modern contraceptive methods on a dummy representing whether the partner was literate, along with relevant control variables. Results indicate that the proximate illiteracy effect was present, but restricted to only specific groups and communities. Extensions to the basic model shows that higher levels of education of the spouse does not generate significant externalities, indicating the importance of literacy in generating externalities in the sphere of reproductive health.

### **56-4. STERILIZATION DOMINANCE AND ALTERNATIVE CONTRACEPTIVE CHOICES IN INDIA: AN APPRAISAL OF THE SOCIAL AND ECONOMIC IMPACT**

*Isabel Tiago Oliveira, José G. Dias and Sabu S. Padmadas*  
 EMail: isabel.oliveira@iscte.pt

Recent fertility decline in India has been unprecedented especially in southern India where fertility is almost exclusively controlled by means of permanent contraceptive method. The central argument in this paper is that economic changes since the late 1990s and exposure to modern information systems have facilitated new opportunities for women to experience wide range of contraceptive choices other than sterilization. The aim of this paper is to disentangle the interactive influence and impact of economic and social factors on contraceptive choices among women in India. Data for this study are drawn from the 2005-06

National Family Health Surveys focusing on a sample of married and fecund women who reported using a method within the five years preceding the survey. Results from random intercept multinomial logistic regression show that socioeconomic dimensions have overarching influence on method choices, especially modern temporary over sterilization but the effects were not linear as expected.

#### **56-5. TRENDS IN CONTRACEPTIVE USE AND DETERMINANTS OF CHOICE IN CHINA: 1980-2010**

*Cuntong Wang*

*EMail: wctpk@gmail.com*

Background: In China, contraception is the most commonly used practice adopted by couples seeking to limit their number of children and to determine the time interval between births. Since 1980, the implementation of mandatory contraceptive strategy has reduced the fertility rate. Using large-scale data from national statistics and nationally representative sample surveys, the current study aims to assess Chinese trends in contraceptive use, and determinants of choice, from 1980 to 2010 among married couples aged 20-49. Results: A relatively stable Chinese mode of contraception has been established and maintained since the 1980s. This is characterized by long-term contraceptive use which is still dominant in current China. In addition, China's total contraceptive prevalence remains at the highest level across the globe from 1980 to 2010. However, the overall method composition of contraceptive use within China has changed since the mid-1990s. The results from the multinomial logit model show that an individual's contraceptive choice depends not only on individual characteristics, including ethnicity, age, education level, household registration, region, number of living children, sex of the last living child, but also on the strength of family planning policies. A positive coefficient indicates that the looser the strength of family planning policies, the more likely the individual is to choose condoms or another short-term contraceptive method. Conclusions: Long-term contraceptive use is still dominant in China. In fact, over the 30 year period, 1980-2010, and in comparative world perspective, China continues to have the highest total contraceptive utilization rate. Additionally, an individual's contraceptive choice is jointly influenced by the strength of family planning policies and individual characteristics.

#### **57-1. UNDERSTANDING INTERGENERATIONAL TRANSMISSION OF FERTILITY IN A MULTIGENERATIONAL CONTEXT – SOCIALIZATION OF FERTILITY PREFERENCES OR TRANSMISSION OF SOCIOECONOMIC TRAITS?**

*Martin Kolk*

*EMail: martin.kolk@sociology.su.se*

A number of studies have documented consistent patterns of intergenerational transmission of fertility in western countries. The reason why children replicate the family size of their parents has however seldom been extensively covered. The goal of this study is to examine if socialized values on family size explain observed fertility associations or if they rather are a result of continuities in socioeconomic traits. Swedish registry data on childbearing histories, demographic events and socioeconomic can be used to disentangle the various possible explanations of observed fertility continuities. Data is collected for the Swedish 1970-1982 cohorts who are linked with parents and grandparents. Event history models are used in which young men's and women's childbearing histories are studied with covariates on own and parental and grandparental characteristics. Results indicates that some of the associations can be explained by continuities in education and socioeconomic

status but that the primary explanation appear to be explained by transmission of values and preferences on family size

## **57-2. COMMUTER'S MOBILITY- AN ANALYSIS BASED ON SWEDISH REGISTER DATA**

*Siv Schéele*

*EMail: siv.scheele@sociology.su.se*

Commuters are mobile on a daily (or weekly) basis between home and work. But commuters are more mobile as they also have rates of migration and change of workplace higher than non-commuters. In economic theory it is explained as part of a search process. My primary interest is to see which municipalities are more attractive as a residence of living and which as a workplace. That is to study the consequences for the regional pattern. Therefore commuters on a municipal level are studied using the register data from Statistics Sweden (SIMSAM project). This database gives longitudinal data for both residence and workplace. Data are also complemented with data on travel distances and travel times. The study handles commuters in the Mälardalen Region the year 2005, the year for which travel data between dwelling and workplace are given on a very detailed geographic level (SAMS). A discrete-time event history model is set up to study the mobility. Rates of migration and change of workplace respectively are shown to be very dependent on the number of years being a commuter. By taking account of that, the relative risk of migration varies with pure demographic variables like age, gender and family position, whereas the relative risk of change of workplace varies with pure economic variables like income and commuting distance. The risks do also vary by municipality type. Separate models are run for men and women.

## **57-3. SOCIO-DEMOGRAPHIC AND REGIONAL PATTERNS IN ESOPHAGEAL AND GASTRIC CANCER MORTALITY IN SWEDEN**

*Rickard Ljung, Sven Drefahl, Gunnar Andersson and Jesper Lagergren*

*EMail: sven.drefahl@sociology.su.se*

Background: Socio-demographic factors and area of residence might influence the development of esophageal and gastric cancer, but there is a need for research of population-based design and large sample size. Methods: Register-based nationwide cohort study. All residents in Sweden aged 30 to 84 years, in 1990 to 2007 were followed up until 2007 for esophageal and gastric cancer mortality. In total, the study generated 15.2 million person-years in men and 15.8 million person-years in women. Place of birth, place of residence, educational level and marital status were accounted for in the analyses. Cox regression yielded hazard ratios (HR) with 95 % confidence intervals (CI). Results: In men, 3,789 deaths from esophageal cancer and 7,607 deaths from gastric cancer occurred during follow-up, and for women the corresponding numbers were 1,337 and 4,631. Being born in a city region increased the risk of death from esophageal cancer in both men and women compared to the reference group of those living in a non-city region in central and southern Sweden (HR= 1.33, and HR= 1.15, respectively). Death from gastric cancer was increased for those born in Northern parts of Sweden compared to the reference group (HR=1.34 in men and HR=1.27 in women). There was a strong inverse educational gradient in men and women, those with 15 or more years of education had around 50% lower risk of death from both cancers compared to those with 9 years. Being married was protective for risk of death from both cancers, however, excess mortality was much higher for esophageal cancer. Conclusion: Being born and living in large city areas is a risk factor for esophageal cancer mortality, while a higher risk of gastric cancer mortality was identified among those

born in rural areas. Low educational level and living alone are risk factors for both these tumors.

#### **57-4. SHORT-TERM EFFECTS ON MORTALITY OF HOT AND COLD WEATHER IN SWEDEN, 1901 – 2009**

*Daniel O. Åström, Bertil Forsberg, Sören Edvinsson and Joacim Rocklöv*

*E-Mail: daniel.astrom@envmed.umu.se*

The on-going climate change is projected to increase the frequency of extreme weather events. The short-term effects of hot and cold weather and impact on mortality have been thoroughly documented. We investigated if short-term sensitivity to heat and cold temperature extremes changed in Sweden from the beginning of the 20th century until present time. We collected daily mortality and temperature data for the period 1901-2009 in Stockholm, Sweden. Heat extremes were defined as days with temperatures above the 98th percentile of mean lag 0-2, cold extremes were defined as days with temperatures below the 2nd percentile of mean lag 0-25 on the basis of prior studies. The relationship between extreme heat/cold temperatures on all-cause mortality, stratified by decade, sex and age was investigated by time series modelling adjusting for time trends. There was a statistically significant increase in the relative risk of mortality during heat extremes for the total population and for women for all decades investigated, as well as the entire period. There was a declining trend for effects of heat extremes, with a levelling off during the last three decades. A statistically significant increase in the relative risk of mortality during cold extremes was found for the entire period, with a more disperse pattern than that for heat regarding individual decades. Although the relative risks of mortality during extreme events appear to be levelling off, they still pose a threat to public health, with women and the population above 65 becoming the largest and most susceptible groups.

#### **57-5. MOTHER'S AGE AT BIRTH AND CHILDREN'S EDUCATIONAL ATTAINMENT**

*Maarten Buis and Juho Härkönen*

*E-Mail: juho.harkonen@sociology.su.se*

We analyze whether the mother's age at birth affects children's educational outcomes in Sweden. Previous studies have shown associations between mother's age at birth and children's educational outcomes. Theoretically, there are both biological and social reasons to expect causal effects. Biologically, delayed fertility can increase risks for adverse birth outcomes, which can translate to negative effects on schooling. Socially, it has been argued that older mothers are more mature and financially stable, which should translate into positive effects. As a result of these two conflicting forces, there might be a hump-shaped effect with an "optimal" age of childbearing. Furthermore, given the class-based nature of fertility postponement—higher education being linked to fertility postponement—age at motherhood can shape the intergenerational transmission of inequality. We use Swedish register data to test for these hypotheses. Our outcome variable is the choice of educational path after ninth grade. In usual (cross-sectional) research designs, mother's age at birth is confounded with cohort effects and birth order. In this study, we focus on a complete cohort of first children born in 1990. We analyze our data using OLS regressions and instrumental variables, using grandmother's age at first birth and siblings' fertility as instruments. Our preliminary findings indicate that age at motherhood increases educational attainment in the offspring up until around age 30, after which the effect flattens. We also find that age at fatherhood does not affect children's educational outcomes after age at motherhood is accounted for.

## 58-1. LEVELS AND CORRELATES OF NON-ADHERENCE TO THE WHO'S RECOMMENDED INTER-BIRTH INTERVAL LENGTHS AMONG CHILDBEARING-AGED MULTIPAROUS WOMEN IN RUFJI, TANZANIA

*Amon Exavery, Sigilbet Mrema, Amri Shamte, Kristin Bietsch, Godfrey Mbaruku and Honorati Masanja*

*EMail: amonexavery@yahoo.com*

Poorly spaced pregnancies have been documented worldwide to result into unpleasant maternal and child health outcomes. The WHO recommends an interval length of at least 33 months between two live births in order to reduce the risk of adverse maternal and child health outcomes. Recent statistics shows that Tanzania still experiences higher rates of maternal and neonatal mortality of 454 deaths per 100,000 live births and 26 deaths per 1,000 live births respectively. This substantiates the need to describe levels of inter-birth intervals and assess their correlates in order to unveil possible circumstances leading into inappropriate spacing (if any) which if acted upon may also impact both the mortality and fertility. We analyzed longitudinal data from Rufiji Health and Demographic Surveillance System (HDSS) collected from 1999 to 2010. Median inter-birth intervals were calculated and presented by woman's background characteristics. Multivariate analysis was conducted using logistic regression with the binary outcome variable having two categories as adherence (inter-birth interval = 33 months) or non-adherence (inter-birth interval < 33 months). A total of 15,373 inter-birth intervals were recorded from 8,979 women aged 15-49 years. Overall median inter-birth interval length was 33.4 months. Of these intervals, 48.4% were below the WHO's recommended length of = 33 months between two live births for better maternal and child health outcomes. Non-adherence correlates were parity, multiple births, maternal age, maternal education, marital status and place of delivery. In general, one in every two inter-birth intervals in Rufiji district is poorly spaced. Community and health facility-based optimum birth spacing education is urgently required for better health outcomes of our mothers and children.

## 58-2. ANALYSING GAPS IN CHILD HEALTH IN THE UK: A "WEATHERING" HYPOTHESIS PERSPECTIVE

*Alice Goisis and Wendy Sigle-Rushton*

*EMail: A.Goisis@lse.ac.uk*

It is well established that ethnic minority women are more likely to have poorer birth outcomes than white women. U.S. research has also demonstrated that the excess risk of poor birth outcomes for Black women compared to White women tends to increase with the age of the mother. Researchers have suggested that this age pattern may be due to Black women's greater risk of exposure to cumulative health disadvantages, something referred to as the "weathering hypothesis". In the U.K., an ethnically diverse country with high levels of racial segregation and disadvantage, gaps in child health have not been analysed through a "weathering" hypothesis perspective. Conversely, sociobiological research in the U.K. has argued that an early timing of childbearing reflects a coherent strategic response for individuals living in disadvantaged contexts characterized by fewer guarantees of a healthy future. This perspective has not, however, shown whether age gradients in child health follow different trajectories for individuals living in relatively disadvantaged and advantaged areas. By using data from the ONS Longitudinal Study, this paper intends to contribute to understanding gaps in child health in the U.K. This is done by introducing the "weathering" hypothesis perspective to the U.K. context and by extending the socio-biological one which is, as far as child health is concerned, limited in scope. Results reveal

patterns consistent with the “weathering” hypothesis and to a limited extent according to sociobiological arguments. Moreover, results suggest that ethnic minority status could represent an added and modifying burden in the association between exposure to social inequality and (child) health.

### **58-3. COULD INFANT MORTALITY ANALYSIS WITH TIME-INVARIANT COVARIATE EFFECTS BE MISLEADING? EVIDENCE FROM URBAN TURKEY**

*Murat G. Kirdar, Mehmet Ali Eryurt and Ismet Koc*

*Email: kirdar@metu.edu.tr*

This study investigates whether the usual practice of conducting infant mortality analysis with time-invariant covariate effects could be misleading. For this purpose, it compares the results of an infant mortality analysis that does not allow for time-invariant covariate effects with the results of one that allows. The comparison of cumulative regressions with split regressions reveals that the effects of many covariates change substantially by the age of an infant. Considering different dynamics are associated with infant mortality in urban and rural areas and three-quarters of the population lives in urban areas the study is limited with the analysis of urban Turkey. The study uses data from Demographic and Health Surveys conducted in Turkey between 1993 and 2008. We pooled 4 sets of DHS data to provide a large sample size and increase statistical power. In these surveys each woman was asked for a history of all her births, including the month and year of each. Information on birth and death date used in the study is based on retrospective birth histories of women age 15-49. If the baby died before one month, date of death is recorded in a daily basis. In addition to the birth histories of the women, information on a wide range of individual (on the mothers and children), household and community-level variables is collected in TDHSs. Event history analysis is applied to measure the impact of a rich set of variables on infant mortality risks. Mother’s age, mother’s education, birth order, preceding birth interval, prenatal care, place of delivery, gender of the child, family wealth, region and ethnicity included in the analysis as main independent variables. The results show cumulative analysis cannot uncover certain changing covariate effects over the age of the infant, which are uncovered by the infant mortality analysis with time-variant covariate effects.

### **58-4. SUCCESSES AND FAILURES IN THE FIGHT AGAINST CHILD MORTALITY IN SUB-SAHARAN AFRICA: LESSONS FROM SENEGAL, A COUNTRY WITH LOW AIDS PREVALENCE**

*Gilles Pison, Laetitia Douillot, Géraldine Duthé, Malick Kante, Cheikh Sokhna and Jean-François Trape*

*Email: pison@ined.fr*

Child mortality has declined in Sub-Saharan Africa over the last 60 years but the decrease has not been regular. It has accelerated over some periods, as during the last decade, and slowed down during others. Mortality has even increased during some periods, as in the 1990s. This was not solely attributable to AIDS. In order to determine any other diseases or factors that also played a part, Senegal is chosen for study – a country with very low AIDS prevalence but where trends in child mortality have closely resembled those of the whole region. In addition, Senegal has the advantage of possessing relatively numerous information sources available for tracing the evolution of child mortality on a national scale, as well as three demographic surveillance sites in a rural area where child mortality could be followed and the causes of deaths studied in detail over almost 25 years. The decline in child mortality in Senegal in the 1970s and 1980s is attributable to the reduction in deaths from infectious diseases, thanks largely to vaccinations. The situation reversed in



the 1990s due to a combination of several factors: the development of chloroquine resistance leading to many malaria deaths; inefficiencies in the health services leading to failures in basic services, including vaccination; and an adverse economic climate. Mortality decline resumed rapidly in the 2000s due also to a combination of factors, among which the renewal of vaccination efforts and investments in anti-malaria programs played an important role. These factors are common to many countries in Sub-Saharan Africa and explain why many of them experienced the health crisis in the 1990s and the renewal of progress in the 2000s, irrespective of whether or not they were hit by the AIDS epidemic.

#### **58-5. THE EFFECT OF MOTHER'S AGE ON NEONATAL SURVIVAL ASSOCIATED WITH FIRST AND SECOND BIRTH IN RURAL, TANZANIA**

*Majige B. Selemeni, Mathew Alexandre, Dan Kajungu, Abdallah Mkopi, Sigilbet Mrema and Rose Nathan*

*EMail: majiges@yahoo.com*

With a view to improve neonatal survival, data on birth outcomes are very important to plan maternal and child health care services. We present information on neonatal survival from Ifakara Health and Demographic Surveillance System (HDSS) in Tanzania, regarding the influence of neonatal survival. We conducted analysis using data collected from Ifakara HDSS which collect routinely data from Kilombero and Ulanga districts in Morogoro region. The data collection involves continuous recording of vital events within households and among members over time. The analysis includes all births occurred between 2004 to 2009 and unit of observation was live birth. We used survival analysis to compare the survival of neonatal between different factors. In this analysis, we included 12, 721 newborn reported in the HDSS between 2004 and 2009. The neonatal mortality rate were 33 per 1000 live births (95%CI: 30/1000-36/1000) for the period. Using Cox proportional hazard model, we found strong significant association between neonatal survival and mothers' age less than 20 year at delivery ( $p=0.00$ ,  $HR=1.28$ , 95%CI=1.11-1.47), first birth order ( $p=0.00$ ,  $HR=0.66$ : 95%CI=0.57-0.75) and co-residence of husband ( $p=0.00$ ,  $HR=0.76$ : 95%CI 0.66-0.88). While Sex of new born, Social economic status, place of delivery, season and maternal education were not significant association with neonatal survival. Improvement of neonatal survival in developing countries should be to increase knowledge on teenagers to delay giving birth and improve care service to pregnancy women, with great potential for impact of neonatal survival.

#### **59-1. EDUCATIONAL EXPECTATIONS AMONG CHILDREN OF IMMIGRANTS AND NATIVES: A EUROPEAN COMPARATIVE ANALYSIS ON THE ROLE OF SCHOOLS AND FAMILY**

*Alessandra Minello and Helga A. G. de Valk*

*EMail: alessandra.minello@unitn.it*

Children of immigrants are an increasing share of students in the European school systems. This paper focuses on the effects of school characteristics and family on the educational expectations of students of immigrant and native origin in four European countries. We make use of the latest wave of PISA data (OECD 2009) to investigate students' intention to attend university, considering both parental and school determinants. The PISA 2009 data include an individual student questionnaire and are in some selected countries also complemented with a separate additional questionnaire for parents and the school. This detailed information coming from child, parent and school representatives provide us with better and more detailed measures for parental background and school characteristics. It allows for example to disentangle effects of human capital, other family resources as well

as, parental attitude towards school on educational expectations of natives and children of immigrants. Furthermore, it is a unique opportunity to study the interplay of school characteristics and parents and its relation with educational expectations of children of immigrant and native origin. We start with providing a detailed and original overview of educational expectations of children of diverse origin in Europe making a challenging comparative analysis between two more established migrant settlement countries (Portugal and Belgium) and two countries with more recent immigration experiences (Italy and Ireland). In the multivariate analyses the different factors of influence on educational expectations are studied in more detail applying a multi-level school design to account for clustering in schools.

#### **59-2. THE GENDER DIFFERENTIAL AND THE EDUCATIONAL GRADIENT OF PARENTAL EMPLOYMENT IN NORWAY, FRANCE, BELGIUM, AUSTRIA, WEST-GERMANY, ESTONIA, ROMANIA, BULGARIA AND HUNGARY**

*Karel Neels and Zita Theunynck*

*EMail: Karel.Neels@ua.ac.be*

Parental employment is the outcome of a cost-benefit calculation involving a variety of factors. In line with Coale's preconditions for behavioural innovation, we group these factors under the headings 'readiness' (parental employment is economically advantageous), 'willingness' (parental employment is acceptable at both the societal and individual level) and 'ability' (welfare state provisions that support parental employment are available and accessible). Using data from the Generations and Gender Surveys, this paper documents the gender differential and the educational gradient of labour force participation before and after parenthood in Norway, France, Belgium, Austria, West-Germany, Estonia, Bulgaria, Hungary and Romania. The results indicate that the level of maternal employment is elevated in Norway, with a limited educational gradient. In Belgium and France and even more so in Estonia, Bulgaria, Hungary and Romania, the educational gradient of labour force participation is very pronounced, particularly among mothers. Austria and West-Germany show low levels of maternal employment, regardless of education. The between-country differences in maternal employment are subsequently set off against differential attitudes concerning parental employment and differential uptake of family policies in the countries considered.

#### **59-3. EDUCATIONAL QUALITY AND DEPRIVATION: ELASTICITY COMPARISONS BASED ON READING TEST SCORES, PISA 2000 AND 2009**

*Eduardo L. G. Rios-Neto and Clarissa G. Rodrigues*

*EMail: eduardo@cedepplar.ufmg.br*

The goal of this paper is to analyze the link between average, deprivation and inequality of reading test scores from 38 countries evaluated by the Programme for International Student Assessment (PISA), for the years 2000 and 2009. As proficiency data has statistical properties similar to income data, the primary contribution of the current study is to apply well-developed indices and techniques used in economic studies of poverty and inequality to some education data. One hypothesis is that the growth elasticity of educational deprivation reduction is greater than that typically found in economic studies. The reason for this is that the distribution of test scores tends to be more homogeneous as compared to income distributions, which tend to be skewed toward the left. Specifically, to measure deprivation in education we use the poverty metrics developed by Foster, Greer and Thorbecke (1983, 2010) including: 1) educational deprivation headcount index; 2) educational deprivation gap index; and 3) educational deprivation severity index. We define as 'poor in edu-

cation' students who have neither acquired fundamental knowledge nor mastered the basic skills corresponding to their level of schooling. Our findings suggest that in countries with poor performance, increasing the average quality of the educational system would have a stronger impact on the reduction of low-skilled students than pure distributive policies toward educational attainment without an overall improvement in the educational system.

#### **59-4. BETWEEN AND WITHIN SOCIAL GROUP DISPARITIES IN HIGHER EDUCATION: AN ASSESSMENT FOR INDIA AND MAJOR STATES**

*Vini Sivanandan and Arokiasamy Perianayagam*

*EMail: vinisivanandan@gmail.com*

Disparity, measured in terms of educational attainment by social groups in higher education gives an insight as a result of existing affirmative policies in India. Affirmative policies implemented for almost six decades are expected to bring the traditionally backward social group representation in higher education in par with the traditionally forward social group. An attempt was made to measure the intra and inter group disparities between and among the social groups by using the Theil index. Analysis showed that between groups disparity exists and within social group disparity is almost negligible in higher education. Analysis, further carried out by background characteristics of these social groups showed that within group disparity is seen only in females for all the states of India. Between group disparity showed that the group other is having higher educational attainment whereas traditionally backward social groups of India such still lag far behind the traditionally forward group others in terms of educational attainment. The disparities are multifaceted and differ from state to state in terms of the background characteristics.

#### **60-1. THE EFFECT OF DUAL-EARNER COUPLES' GENERALIZATION ON FAMILY TIME IN SPAIN**

*Marc Ajenjo and Joan Garcia Roman*

*EMail: majenjo@ced.uab.es*

The aim of this paper is to analyze the impact of dual-earner couples' increase in family time using data from the Spanish Time Use Survey 2009-2010. Based on one of the questions from the Time Use Diary, which asks 'with whom' the activity is done, we estimated the mean time devoted to 4 different kinds of family time for every couple: conjugal time (time when spouses are together without children), parents-child time (time when spouses are together and with children) and father/mother time (time when the father/mother is alone with children). The mean time spent in each of 7 different activities of daily life and the total amount spent in all of them were calculated for each type of family time. Results are presented in a descriptive way by comparing the mean for each family time spent in every daily life activity. Moreover, differences according to some couples' characteristics are analyzed. The main attribute to be studied is the employment status of the couple members, but other variables like the type of union (cohabitation or marriage), household's income, age or educational attainment are used in the comparison. A measure of the synchronization of both couple members work schedule is calculated when both members are employed. This measure is the quotient between the time when only one member of the couple is at work and the time when at least one member is at work. General Linear models are calculated to test the net effect of each variable in the different types of familiar times. Preliminary results show that in dual earner-couples familiar time is lower. Another evidence from the descriptive results is that mother-time is higher than father-time, a clear evidence of inequality within the couple. More desynchronization supposes less time spent with the couple, but more father-time and mother-time.

## 60-2. FIRST CHILDBIRTH AND THE DIVISION OF DOMESTIC WORK: A COMPARISON OF MARRIED AND COHABITING COUPLES IN SPAIN

*Marta Domínguez*

*EMail: martad@ceacs.march.es*

Research shows that cohabiting couples have more egalitarian divisions of domestic work than marrieds, although the reasons behind this empirical regularity are not clear. In spite of this, studies on the life course have also shown changes in the division of tasks over the lifecourse, and specifically, there seems to be a trend towards traditionalization after childbirth even for couples with egalitarian arrangements prior to that event. In this paper we investigate the effects of the transition to the first child in the domestic division of work as well as on the division of housework, questioning whether there is a trend towards more unequal arrangements among married and cohabiting couples and which are the main determinants of such trend. The case studied is Spain, a country that remains quite traditional concerning domestic work, and where we expect the trend towards traditionalization to be stronger for married than for cohabiting couples. The empirical analysis uses cross-sectional time use data for Spain and panel data from one Spanish region (Catalunya). We estimate the changes on the division of household chores using longitudinal regressions and propensity score matching.

## 60-3. HOUSEHOLD LABOUR ALLOCATION AMONG MARRIED AND COHABITING COUPLES IN ITALY

*Silvia Meggiolaro*

*EMail: meg@stat.unipd.it*

The recent years have seen increase in the phenomenon of non-marital unions also in a country such as Italy which is characterized by traditional family behaviours. The present paper aims to study the extent to which marriage and cohabitation differ in the division of household labour within the couple with data from the nationally representative survey "Family and Social Subjects" conducted in Italy in 2003. The article examines the differences between currently married and currently cohabiting couples in their household labour allocation, distinguishing the heterogeneous groups of cohabitations and marriages according to the experience of previous unions. This allows identification of couples in different stages of their life course and to better characterize differences across couples. Results suggest that, on the one hand, cohabiting couples present more equal arrangements than married ones. Household labour time is, indeed, shared more equally among cohabitations than among marriages, and this is due to fewer hours spent by cohabiting women in household tasks than by their married counterparts. On the other hand, the experience of previous unions does not necessarily mean more equal allocation of household labour in the current union. Having experienced previous unions for married individuals means a more equal allocation of household labour than among married couples in their first unions; however, the same result does not hold for cohabitations. Unions before marriages are predominantly premarital cohabitations and, thus, the patterns established in the cohabitation period are carried over into marriage; in contrast, cohabitations with previous unions are predominantly cohabitations following the end of a previous marriage and, thus, they probably represent particularly selected couples.

#### **60-4. ONCE THE DUST SETTLES. DID THE 1990S LEAD TO RE-TRADITIONALIZATION? TIME USE EVIDENCE FROM SCANDINAVIA**

*Jeff Neilson and Maria A. Stanfors*

*E-Mail: jeff.neilson@ekh.lu.se*

Research indicates that the transition to parenthood intensifies gendered patterns in time use. This strengthens a traditional household division of labour, whereby women perform more child care and housework than men. We know less about how these patterns develop over time in different countries, or whether changes trend similarly between neighboring countries. We know even less whether financial crises influence the household division of labour. This cross-country comparative study investigates the impact of parenthood on gendered weekday time use in paid work, housework, child care and leisure in Sweden, Norway and Finland. We explore how it changed during the 1990s, a turbulent period where Sweden and Finland endured substantial economic crises, while Norway experienced greater economic stability. We know from Sweden that during the 1990s, parents became more equal in sharing housework and child care duties, and parenthood affected men and women more similarly by the end of the decade (Dribe & Stanfors, 2009). We thus ask whether this was a unique Swedish phenomenon, and if so, were developments connected more so to economic crisis, or to societal changes towards gender equality. Using six waves of time diary data from the Multinational Time Use Survey (MTUS), we perform multivariate Tobit regressions, comparing what happened in Sweden during the 1990s to Norway and Finland during the same period. Our results indicate that in all three countries, parenthood by the end of the 1990s affected men and women in a more similar way than before. Gendered patterns of time use in housework and child care showed a less traditional, gender converging pattern. Since these changes were not unique to the most crisis-stricken countries of Sweden and Finland, our findings suggest the developments were not a byproduct of economic crisis, but rather due to underlying societal changes towards greater gender equality.

#### **60-5. CAN PARENTS AFFORD TO WORK? AN UPDATE**

*Linda L. Richardson*

*E-Mail: linda.richardson@oecd.org*

This paper documents in empirical detail how government policies impact on the cost of childcare for parents, identifying how these costs interact with tax and transfer policies to determine the financial incentives of parents to seek paid employment. It extends the OECD's 2007 study of childcare costs and assesses how policies affecting the affordability of childcare have changed since 2004. The primary contributions of this paper are to: measure and compare the affordability of formal childcare across 35 OECD and EU countries; examine how these childcare costs impact on work incentives facing lone parents and second earners in families with young children; explicitly quantify the income gain from employment of mothers of young children and their families by combining gender specific earnings data with OECD tax-benefit models; and identify circumstances where childcare costs and weak work incentives contribute to the risk of families with low earnings potential being trapped in poverty over the longer term. The results are disaggregated to identify policy features that represent barriers to work for lone parents and second earners, with young children requiring care, whose employment decisions are known to be particularly responsive to financial work incentives. The barriers to employment they face, particularly by those with low earnings potential, can be reduced by increased targeting of government assistance. Specific policy reforms undertaken by several countries between 2004

and 2008 seeking to lower these barriers have successfully reduced net costs of childcare. This paper highlights that the appropriate policy response requires consideration of current policy settings beyond those directly related to childcare as well as relative priorities over a range of policy objectives. No one simple set of policy prescriptions is appropriate for observed work incentive issues. Effective policy responses must be multifaceted and tailored to the situation in each country.

#### **61-1. TYPES OF COHABITATION IN LATIN AMERICA**

*Maira Covre-Sussai and Koen Matthijs*

*EMail: maira.covre@student.kuleuven.be*

The coexistence of marriages and consensual unions is a historical feature of nuptiality in Latin America, but with different meanings from those observed in developed countries. Traditionally, cohabitation is common in less developed regions, rural areas, among the lower and less educated social classes. However, the incidence of cohabitation is increasing in Latin America, in social groups and countries where it was never common. The features and meaning of consensual unions for Latin American most developed regions and upper social classes remains quite unclear, but there are evidences that the connotation of this innovative way is closer to those observed in developed countries, denoting a trial period before marriage or an alternative to singlehood. This study uses Demographic and Health Survey (DHS) data for ten Latin American countries to differentiate the types of cohabitation in Latin America. Patterns of union formation, childbearing, dissolution and religiosity are explored through Latent Class Analysis. Two different types of cohabitation are expected: one named as traditional, related to poverty, social exclusion and women subordination and another, named as innovative, related to socio-economic development, secularization and women autonomy.

#### **61-2. FIRST UNION ENTRIES: THE CHOICE BETWEEN COHABITATION AND MARRIAGE AMONG WOMEN IN ITALY AND SPAIN**

*Thaís García Pereiro, Maria Grazia Didonna and Roberta Pace*

*EMail: t.garcia.pereiro@uniba.it*

In Spain and Italy cohabitation has not acquired the same role that it has had in Northern Europe, but the prevalence of cohabiting couples in both countries is not longer marginal. Moreover, the nature of cohabiting couples is also diverse: cohabitation is a temporal alternative that generally ends with the formalization of the union (marriage). Within a western context of changes in union formation patterns, the study of the choice between marriage and cohabitation as first unions becomes of great importance. Is it accurate to talk about a shared pattern of union formation in Mediterranean countries like Italy and Spain? The purpose of this paper is to examine the choice between cohabitation and marriage (timing and determinants) as a first union using a life course comparative approach. For the analysis of the determinants of first partnership formation we will apply discrete-time competing-risks models (one for each country) considering birth cohort, parental divorce, place of residence, educational attainment, employment, leaving the parental home and birth of a child (last three time dependent) as independent variables.

### **61-3. PARTNERSHIP TRANSFORMATION IN THREE FORMER SOCIALIST COUNTRIES: ROMANIA, BULGARIA AND HUNGARY. EFFECTS OF NON-MARITAL CHILDBEARING**

*Mihaela Haragus*

*EMail: mihaela\_c2@yahoo.com*

The existent research documents that in the eastern European countries the non-marital living arrangements (single or in cohabitation) are transformed before or soon after the birth of the child, because marriage continues to be the preferred context for childbearing and childrearing. The aim of this paper is to study the transformation of consensual unions and the role of conception/childbirth in this process in three neighbouring former socialist countries: Romania, Bulgaria, Hungary. We conduct our analysis on data from Generations and Gender Survey and our focus is on first time cohabiting women, and our dependent variable is the (first) partnership transformation, which could be marriage or separation, treated as two competing risks. We construct piecewise constant exponential event history models, where the baseline hazard is duration of cohabitation in months. Our main covariate is the pregnancy-and-parity status (time-varying), while other factors that are controlled in the model are age at union formation, calendar period, current educational attainment, living arrangement during childhood. Results for Romania show that pregnancy increases the risk to make the transition to marriage, while once the child is born the risks of transition decrease, compared with not being pregnant. Consensual unions formed at early ages are more likely to transform into marriages, while those formed above age 30 are less likely, compared with unions formed at 23-26 years. The normative pressure to legitimate the union has been continuously decreasing after the change of the political regime in 1989. Regarding the dissolution of cohabitation, conceiving and giving birth to a child while in consensual union increase the risk of separation, compared with non pregnant women, but this effect exists only when the child is very small (below one year). Having conceived or born the child prior to union formation does not show an effect on the risk of separation.

### **61-4. THE MEANING OF COHABITATION ACROSS EUROPE**

*Nicole Hiekel, Aart C. Liefbroer and Anne-Rigt Poortman*

*EMail: hiekel@nidi.nl*

This study investigates the meaning of cohabitation across Europe. Two research questions are addressed: First, are the different meanings of cohabitation identifiable and quantifiable across different European countries? Second, how do countries differ in the meaning of cohabitation? Using data from the Generations and Gender Survey (GGS) we applied latent class analyses to test whether we identify the different meanings of cohabitation discussed in the literature in different national contexts. Our sample contains of 10,962 cohabiters between 18 and 79 years old from ten European countries (Georgia, Romania, Hungary, Russia, Estonia, Bulgaria, Austria, Germany, France and Norway). Our results show that there is no single meaning of cohabitation. For most cohabiters, cohabitation is related to marriage. They view their union either as a prelude or an alternative to marriage. Facing economic hardship makes cohabiters not feeling ready to commit to marriage. We find little evidence that cohabitation can serve as an alternative to singlehood. Countries differ in the mix of cohabitation meanings. Predominantly, cohabitation in Eastern Europe seems to be only tolerated if the couple has definite plans to marry or faces obstacles to marry directly. Cohabiters in Western Europe more often cohabit because they ideologically refuse the institution of marriage or consider it irrelevant.

#### **61-5. WHEN THE FIRST UNION COMES TO AN END: IS IT LESS DISTRESSING IF WE WERE COHABITING?**

*Lara Tavares and Arnstein Aassve*

*EMail: ltavares.wiv@gmail.com*

Using data from a large survey, the British Household Panel Survey (BHPS), this paper explores the extent to which marital and cohabiting unions differ with respect to the short-term effects of union dissolution on psychological distress. We compare spouses who divorced or separated with cohabitators whose first union ended and test the hypothesis that spouses experience larger negative effects. The results show that this difference is not statistically significant once the presence of children is controlled for. Having children is found to be a major source of increased psychological distress when one is going through union dissolution. However, it does not explain serious psychological distress, which appears to be associated with internal factors (the personality trait neuroticism) rather than with contextual factors.

#### **62-1. THE CONTRIBUTION OF MOTHERS OF FOREIGN NATIONALITY TO THE RECENT RECOVERY OF PERIOD FERTILITY IN FLANDERS (BELGIUM)**

*Lisa Van Landschoot, Jan Van Bavel and Helga A. G. de Valk*

*EMail: Lisa.Van.Landschoot@vub.ac.be*

After decades of decline, period total fertility has been recovering in Europe since the early 21st century. In the literature, two main explanations are given for this: the end, or slowing down, of the postponement of parenthood and the contribution of migrant populations to the birth rate. This paper addresses the latter issue and investigates to what extent mothers of foreign nationality contributed to the recent recovery of period fertility in Flanders (Belgium). We use data collected by an official Family and Child Care Agency to calculate the nominators of age-specific fertility rates for different groups of nationality. Since we lack data that are perfectly equivalent for the denominators, we propose a method to indirectly assess the impact of births to foreign women on age specific and total fertility. Our first results indicate that total fertility in Flanders would have been about one tenth of a child lower without women of foreign nationality. Women who had foreign nationality at birth but who acquired Belgian nationality later on, also have a limited positive impact on total fertility. Still, the recent recovery is mainly due to the end of postponement in the native Belgian population.

#### **62-2. THE FERTILITY OF IMMIGRANT WOMEN: FAMILY DYNAMICS, MIGRATION, AND TIMING OF CHILDBEARING**

*Luis Alberto Del Rey Poveda and Emilio A. Parrado*

*EMail: adelrey@usal.es*

In contexts of below-replacement fertility the growth and age structure of national populations is directly affected by immigration. The demographic contribution of immigration however, stems from two sources. The first one, obviously, is immigration itself as the arrival of foreign populations affect receiving countries. The second one is the fertility of immigrant women since the level of immigrant women's fertility might be different from the pattern prevalent among native residents. Still our understanding of the interaction between immigration and fertility is limited preventing a precise assessment of the population contribution of immigration and the extent to which it might counteract the problem of population aging. In this study, we provide a detailed analysis of the fertility patterns of immigrant women in Spain. Data come from the 2007 National Survey of



Immigration that collected unique retrospective information on family dynamics, migration, and fertility histories. The analysis follows a life-course perspective to identify the main transitions connecting migration and fertility behavior. Our main objectives are to: describe the reproductive patterns of immigrant women before and after migration, assess the fertility-specific contribution of immigration to the Spanish population, and elaborate on the implications of the association between migration and fertility for standard demographic analyses. Preliminary results show that migration is a significantly disruptive event that alters the age pattern of childbearing. Specifically, the fertility of immigrant women is low before migration but increases in the years shortly after arrival. The extent of the disruption is connected with family dynamics and issues of spousal separation in association with migration. A main implication is that the failure to recognize the disruptive age pattern of childbearing among immigrant women overstate the level of immigrant fertility and exaggerates the fertility-specific contribution of immigration to population growth. The extent of the disruption though varies by national origin group.

### **62-3. ESTIMATING THE FERTILITY OF RECENT MIGRANTS TO ENGLAND AND WALES (1991-2001) – IS THERE AN ELEVATED LEVEL OF FERTILITY AFTER MIGRATION?**

*James Robards, Ann M. Berrington and Andy Hinde*  
*E-Mail: james.robards@soton.ac.uk*

In England and Wales the total fertility rate has been rising for almost ten years. Since the late 1990s migration to England and Wales has also accelerated. It is possible that the large number of migrants of childbearing ages moving to England and Wales, larger family size norms among foreign born women and a birth timing effect among recent migrants to England and Wales have led to the increase in the TFR. However, the relative influence of any timing effect among recent migrants on the total fertility rate is not known. Research on migrant fertility in France (Toulemon, 2004) and Sweden (Andersson, 2004) has identified elevated fertility levels among migrants in the time period immediately after the migration event. In England and Wales research has focused on period measures of fertility rather than estimating if there is an elevated level of fertility among the large number of recent migrants to England and Wales. This analysis seeks to identify if there is a higher rate of fertility among a sample of recent migrants to England and Wales. Through using longitudinal data on date of arrival in England and Wales and subsequent childbearing duration this research estimates the probability of giving birth in the period after the 2001 census.

### **62-4. BETWEEN HERE AND THERE: DO IMMIGRANTS FOLLOW THEIR HOME COUNTRY'S FERTILITY NORMS?**

*Kamila Cygan-Rehm*  
*E-Mail: kamila.cygan-rehm@wiso.uni-erlangen.de*

This paper focuses on the role of home country's birth rates in shaping immigrants' fertility. We use the German Socio-Economic Panel (SOEP) to study completed fertility of first generation immigrants who arrived from different countries and at different times. We find that women from countries where the aggregate birth rate is high tend to have significantly more children than women from countries with low birth rates. This relationship is attenuated by selection operating towards destination country. In addition, the fertility rates of source countries explain a large proportion of fertility differentials between immigrants and German natives. The results favor the socialization hypothesis suggesting that home country's culture affects immigrants' long-run outcomes.

## 62-5. EDUCATIONAL ATTAINMENT OF 1.5 IMMIGRANT GENERATION AND DIVERGENCE IN THE TIMING OF CHILDBEARING

*Sam Hyun Yoo*

*EMail: sambyun.yoo@asu.edu*

As the proportion of foreign-born population to overall population has increased, the fertility of immigrants, particularly Hispanic immigrants, has received a lot of attention in the US. In general, the fertility of immigrants is affected by the fertility norms and behaviors of a dominant society in the country of destination. Research focused on immigrants' fertility demonstrates that in the long-term perspective the fertility of Hispanic immigrants converged into that of non-Hispanic whites in the US, supporting assimilation hypothesis. Despite clear evidence for assimilation, the question still remains whether the process of fertility assimilation is identical by social status. In addition, most studies on immigrant fertility focused on only the 'quantum' of fertility and did not give much attention to the 'tempo' of fertility. With recently released data sets, the Current Population Survey and National Longitudinal Study of Adolescent Health, this study examines whether immigrants' fertility has similar assimilation patterns across social status in the US. Examining the fertility of 1.5 immigrant Hispanic women helps reduce migration-related issues mentioned in the previous studies, such as selectivity, the nature of migration, and data artifact. Focusing on educational attainment, this study analyzes the timing of first birth, comparing immigrant and non-immigrant women. To be specific, compared to non-immigrant women, whether the acquisition of higher education accelerates or delays the timing of first birth for immigrant Hispanic women is tested. The timing of first birth is critical to understand the dynamics of fertility behavior as well as the tempo of immigrant fertility. Given the diversified immigration flows in the US and Europe, the results of this study provide empirical evidence for the dynamics of immigrant fertility assimilation.

## 63-1. EDUCATIONAL HOMOGAMY AND ENTRY INTO FIRST MARRIAGE: ANALYZING DISCRETE-TIME EVENT-HISTORY DATA WITH CONDITIONAL LOGIT MODELS

*Jani Erola and Juho Härkönen*

*EMail: jani.erola@utu.fi*

We use discrete-time conditional logit event history models to analyze entry into homogamous and heterogamous marriages. Educational homogamy is usually analyzed either using log-linear models on cross-sectional data or regular event-history models. The advantage of the former approach is the possibility for separating effects due to educational level from homogamy and heterogamy, but it has the disadvantage of having to rely on intact marriages or newlyweds (while disregarding the unmarried). The latter allow analysis of the process of entry into homogamy, but are limited in testing for hypotheses of the forces of attraction that lead to educational homogamy. Discrete-time conditional logit event history models combine the advantages of both approaches. We demonstrate the use of these models by analyzing entry into first marriage according to own, spouse's and mother's educational level with Finnish registry data from a cohort born 1971-80. The results suggest that homogamy according to mother's education does not strengthen the tendency to homogamy according to own education. Rather homogamy according to background is likely to compensate the lack of it according to own education while the match according to own qualifications are considered as more important. The results show the usefulness of the applied method for the analysis of educational homogamy.

### 63-2. CHILDREN AS BARRIERS TO REPARTNERING IN DIFFERENT NATIONAL CONTEXTS

*Katya Ivanova, Matthijs Kalmijn and Wilfred Uunk*  
E-Mail: [k.o.ivanova@uvt.nl](mailto:k.o.ivanova@uvt.nl)

Many studies in the past have found that having children from a previous union is a barrier to women's chances to repartner. Most of these studies are old, however, and little is known about whether or not this effect is stable across different national contexts. This paper re-examines the effects of children from a previous union on repartnering chances of men and women using recently collected life history data from the Generations and Gender Survey (GGS). Our first research questions focus on the micro level: (1) To what extent do men and women differ in repartnering chances? (2) To what extent does the presence of children affect repartnering? (3) To what extent can the gender gap in repartnering be explained by women's greater share in child custody after divorce? (4) To what extent does the children effect on repartnering differ between men and women? Our second goal is to explore country similarities and differences in the effects of children on repartnering. We focus on five countries which vary in the opportunities that mothers have on the labor market as well as in the degree to which divorce is common and accepted. The countries are: France, Norway, the Netherlands, Romania, and Russia. We examine whether the effects of children on women's repartnering are less negative in countries where divorce is more accepted and where (single) women with children have good opportunities on the labor market.

### 63-3. CHANGING FAMILIES, UNCHANGING ATTITUDES: THE EFFECT OF MARRIAGE, DIVORCE, AND CHILDBEARING ON GENDER ROLE ATTITUDES IN SWEDEN

*Gayle Kaufman and Eva Bernhardt*  
E-Mail: [gakaufman@davidson.edu](mailto:gakaufman@davidson.edu)

While evidence from the U.S. indicates that individuals who marry and have children become more traditional in their attitudes, does this hold for Sweden? In other words, how strong are egalitarian attitudes in Sweden? Can they withstand changing family dynamics such as marriage and children? In this paper we are able to study change (or stability) in gender role attitudes among young adults in Sweden, arguably one of the most gender-equal societies in the world. Since we have longitudinal data, we can study change over time for the same individuals. We focus on family transitions as the main explanatory variable (i.e. union formation and dissolution, as well as the transition to parenthood) and examine their impact on five different measures of gender role attitudes. Using data from the 2003 and 2009 Swedish Young Adult Panel Survey (YAPS), we find very few significant effects of life course transitions on changes in gender role attitudes. In fact, of 20 regression models investigating cohabitation, marriage, divorce, and childbearing on changing attitudes, only three union transition coefficients are significant. We conclude that there is great stability of attitudes in this highly egalitarian society. It seems young Swedish adults' gender role attitudes are fairly immune to union and parenthood transitions.

#### 63-4. THE PREVALENCE OF COHABITING UNIONS WITH CHILDREN AND ITS INFLUENCE ON UNION STABILITY: THE GERMAN CASE

*Christine Schnor*

*E-Mail: schnor@demogr.mpg.de*

This paper studies the determinant influence of union status on union stability among couples with children. Commonly it is assumed that marital unions are more stable than cohabiting unions because the latter are less consolidated and do not operate as a long-term commitment. However, cohabiting unions might become more stable the more widespread they become. We test this hypothesis using data from the German panel study pairfam and its supplement DemoDiff. Germany represents a special case because childbearing within cohabitation is much more common in eastern than in western Germany. The event-history approach is used to model the transition to separation after first childbirth. In addition, we test the influence of unobserved characteristics that influence the union context at childbirth and subsequent union stability by modeling the probability of cohabiting at first childbirth jointly with the separation risks after birth. The results show that the effect of union context on separation risks remains significant after controlling for individual and union characteristics. The interaction of union form and region point out that cohabiting at the time of first childbirth increases the risk of union dissolution only in western Germany, while the union context has no significant influence in eastern Germany. The comparison of the effect of marriage timing reveals that marriages starting during pregnancy are negatively associated with union stability in western Germany, but not in eastern Germany. Those remaining in cohabitation after childbirth have a higher risk of dissolution than marriages formed before conception in both countries, which support previous findings. The transition to separation is not found to be influenced by unmeasured selective characteristics of those cohabiting at the time of childbirth. We conclude that the regional prevalence of childbearing within cohabitation is a non-redundant factor in the analysis of union stability that should be considered in future studies.

#### 63-5. THE IMPACT OF EARLY LIFE CONDITIONS ON FEMALE REPRODUCTIVE HEALTH, SOUTHERN SWEDEN 1813-1968

*Luciana Quaranta*

*E-Mail: luciana.quaranta@ekh.lu.se*

The importance of early life conditions for health in later life has been known for many years. Recent developments in modelling techniques have given rise to a series of in-depth studies which have focused, amongst other things, on educational attainment, labour market outcomes, adult health, the incidence of particular diseases and old-age mortality. Not many studies, however, focus on the impact on health during early adulthood and, in particular, the literature that analyzes the effect of early life conditions on female reproductive health by taking a life course approach is scant and often inconclusive. Using data from the Scanian Demographic Database, which is based on family reconstitutions from church records on births, deaths and marriages for five rural parishes for the years 1813 to 1968, this work studies the impact of nutrition during the fetal stage and of the disease load experienced in infancy on the fertility outcomes of women by analysing the sex ratios at birth and the probability that her offspring will die perinatally. We find that exposure to disease in a female's early life reduces her likelihood of giving birth to a boy for second and higher order parities.

#### **64-1. WHO MIGRATES OUT OF AFRICA? EDUCATION, OCCUPATIONAL STATUS AND EARNINGS AS DETERMINANTS OF MIGRATION FROM SENEGAL TO FRANCE, ITALY AND SPAIN**

*Pau Baizán and Amparo Gonzalez-Ferrer*

*EMail: pau.baizan@upf.edu*

This paper examines the role of individuals' education, socio-economic status, and income on migration from Senegal to Europe. Our main hypothesis is that selectivity of migrants is to a large extent the result of different employment probabilities at destination, according to skills. The intermediate or positive selectivity (with respect to the source population) often found in migration studies will then reflect the inadequacy of the skills of important fractions of the sending countries' population to the requirements of labor markets of receiving countries. We use life course data from the survey «Migrations between Africa and Europe», which includes data on migrants, non migrants and returned migrants, surveyed in Senegal, France, Italy and Spain. Our results from event history models confirm the strong positive selection of Senegalese migrants to Europe. Consistently with our hypothesis, predicted earnings in Europe (accounting for the selectivity of migration) for low educated individuals falls below minimum wages in Europe.

#### **64-2. SELF-SELECTION AND ECONOMIC ASSIMILATION OF IMMIGRANTS: THE CASE OF IRANIAN IMMIGRANTS ARRIVING TO THREE COUNTRIES DURING 1979-1985**

*Yitchak Haberfeld and Christer Lundh*

*EMail: haber@post.tau.ac.il*

The patterns of immigrant self-selection from their source countries and the characteristics of the host countries have been depicted as the main determinants of immigrants' economic assimilation. The present study is designed to evaluate the combined impact of both factors on immigrants' economic assimilation. The situation to be studied could be characterized as a natural experiment: immigrants originated from one country and immigrated during the same period to three different destination countries. We study immigrants who left Iran right after the Islamic revolution, and arrived during 1979-1985 to the US, Israel, and Sweden. Such a situation allows us to compare three immigrant groups that probably differ in both observed and unobserved attributes, and three destination countries that differ in their migration policies and labor market characteristics. Consequently, the explanatory power of the impact of immigrants' self-selection combined with the impact of country-specific characteristics on economic assimilation is high due to the experiment-like situation. To analyze Iranian immigrants who came to the three countries during 1979-85 at the age of 22 or higher upon arrival, the 5% 1990 and 2000 Public Use Microdata files (PUMS) of the US census, the 20% demographic samples of the 1983 and 1995 Israeli censuses of population, and the 1990 and 2000 Swedish registers were used. The results indicate that the "most qualified" immigrants – both on observed and unobserved variables – who left Iran right after the Islamic revolution, arrived in the US. Their positive self-selection led them to reach complete earnings assimilation with natives there. Iranian immigrants who arrived in Israel and Sweden did not achieve full earnings assimilation with natives. Of these two groups, Iranian immigrants in Sweden showed better assimilation than their counterparts in Israel. The market structure played a certain role in immigrants' earnings assimilation in Sweden only.

### **64-3. 'FOR THE SAKE OF FAMILY AND FUTURE': LINKED LIVES OF HIGHLY SKILLED INDIAN MIGRANTS IN THE NETHERLANDS AND UNITED KINGDOM**

*nu Kōu, Ajay Bailey and Leo van Wissen*

*EMail: a.kou@rug.nl*

In this paper we aim to reveal how significant others, such as parents, spouse and children, shape the life course events and the migration trajectory of highly skilled Indian migrants in the Netherlands and United Kingdom. We employ a qualitative approach to the life course framework to highlight the linked lives that can alter the migration decisions. Our findings are drawn from 47 semi-structured biographic interviews. The preliminary results underscore how further migration decisions are often informed by the implications of the different life stages of the significant others. The key elements identified are the care-giving cycle of and for the parents, employment opportunities of the spouse, and cultural upbringing and educational considerations for the children of the highly skilled migrants. Only by embedding individuals within the contexts of the people in their lives, we are able to fully comprehend the complexities of future onward and/or return migration decision making among the highly skilled.

### **64-4. COMPLEX TRAJECTORIES OF LEGAL STATUS AMONG SENEGALESE MIGRANTS IN EUROPE**

*Erik Vickstrom*

*EMail: evickstr@princeton.edu*

This paper will examine how European contexts of reception produce irregularity among Senegalese migrants. What are the trajectories of legal status of Senegalese migrants? What factors can explain the complexity and turbulence of these trajectories? How do these trajectories vary by context of reception? How do the social origins of migrants influence their trajectories of legal status? Using longitudinal life-history data from the MA-FE-Senegal project, this paper will employ sequence analysis techniques to analyze these complex trajectories. Preliminary results indicate that initially undocumented Senegalese migrants more time undocumented, but tend to access legal status at some point, while even Senegalese migrants who arrive legally spend some time in undocumented statuses. Measures of both transversal and longitudinal entropy are higher in France and among initially documented migrants. Analysis of sequence distances reveals four types of legal status trajectories, with an undocumented trajectory more common in France and among initially undocumented migrants.

### **65-1. PARENT-CHILD RELATIONSHIPS AND THE USE OF REPRODUCTIVE HEALTH SERVICES BY SCHOOL-ATTENDING ADOLESCENT GIRLS: CASE OF IMO STATE, NIGERIA**

*Ezinwanne Christiana Dike and Ajibola Falaye*

*EMail: ezidike@yahoo.com*

Access to, coverage of, and utilization of sexual and reproductive health services are very vital in preventing unwanted pregnancy and sexually-transmitted infections (STIs). It is also vital for the overall social and physical wellbeing of women, more especially adolescents. However, while most studies in this area are concentrated in developed countries, there are few studies that researched on the factors that influence utilization of sexual reproductive health services in less developed countries. Guided by Andersen and Newman's Framework of Health Services Utilization, this study explored how the relationship between parents and their adolescent girls in secondary schools in Imo state, Ni-

geria influences the latter's utilization of sexual and reproductive health services. Using a cross-sectional survey involving a representative sample of 1800 female secondary school students between the ages of 14-19, data was collected using a questionnaire instrument. Results from bivariate analysis revealed a positive significant relationship in parent-child relationship and use of sexual and reproductive health services. Parent-child relationship was measured by the degree to which parents are close to, support and communicate with their adolescent girls. Sexual and reproductive health services are services like contraceptive use, treatments of STIs, ante- and post-natal services, HIV counseling and testing, etc. Findings also showed that there was a joint contribution of Parental Closeness, Support and Communication on the use of services. Analysis of the relative contribution showed that although Parental Communication and Closeness were significant, Parental Closeness was not. This study has implication for both public and non-governmental programs. It will also aid to develop best practices for interventions among secondary school adolescent girls and their parents. This will consequently help to reduce mortalities and morbidities caused by non-use of sexual health services. Keywords: parent-child relationship, adolescent, sexual health, service utilization, Nigeria

## **65-2. IMPROVING FAMILY PLANNING SERVICE DELIVERY TO ADOLESCENTS IN GHANA: EVIDENCE FROM THE KINTAMPO NORTH MUNICIPALITY AND KINTAMPO SOUTH DISTRICT**

*Yeetey A. Enuameh, Ernest Nettey, Charlotte Tawiah, Abubakari Sulemana, Ellen Boamah, Alex Manu, Janine Barden-Ofallon and Seth Owusu-Agyei*  
E-Mail: yeetey@gmail.com

Family planning (FP) essentially empowers individuals and couples to anticipate and attain their desired number of children by facilitating appropriate spacing and timing of births through contraceptive use and involuntary infertility treatment. The appropriate spacing and limiting of pregnancies has a tremendous impact on the health of mothers and on overall pregnancy outcomes. Encouraging FP uptake among adolescents is vital to reducing maternal mortality (MDG 5) and infant mortality (MDG 4) from resultant births and other complications. Adolescents make up a fifth of the population of the Kintampo North Municipality and the Kintampo South district, indicators that are similar to those of the country Ghana as a whole. Though they remain high, pregnancy rates among adolescents have seen some decline in recent years in most low and middle income countries like Ghana. In direct contrast to the high pregnancy rates, general contraceptive use among adolescents in Ghana is low. This study seeks to identify the baseline, trends and changes in FP needs and practices of adolescents over time in the Kintampo North Municipality and the Kintampo South District of the Brong Ahafo Region of Ghana; using this evidence to define the best approach to satisfying their FP needs. The present document will focus on baseline findings as part of a longitudinal study of the sexual and reproductive health needs of the population being conducted through the Kintampo Health and Demographic Surveillance System (KHDSS). We collected data using a mixed-methods (quantitative and qualitative) approach and from multi-informant sources (male and female adolescents, community members and health care providers in the study area). Ultimately, we expect findings from this study to influence FP policy and programmatic direction at the Ministry of Health (MOH) in Ghana and beyond.

### **65-3. EFFECT OF E-MAIL, VIDEO AND LECTURE MEDIA IN THE SOCIAL PERSONAL GUIDANCE OF UNDERGRADUATE**

*Akanle F. F. Florence*

*EMail: folusoakanle@yahoo.com*

The study aimed at comparing the effect of E-mail, video and lecture method in the provision of socio personal guidance (Sexuality Education) for undergraduates. The study used a non equipment pretest, post-test control group design. Purposive and accidental sampling techniques were combined to select 30 undergraduates for the study. Treatment consisted of exposure to the sexuality content (SEC) using different media. A researcher-made-instrument named sexuality adjustment scale (SAC) was used for both test. The SAC was subjected to validation and reliability procedure. Data was analysed using ANCOVA. Results revealed a significant gain in information, change in sexual behaviour and development of skill in all groups. This highlights for counsellors to develop skills and techniques for on-line counselling. The implication of this for sexuality educator and counsellors is discussed and recommendations made.

### **65-4. STI/HIV KNOWLEDGE AND SEXUAL BEHAVIOUR: EVIDENCE FROM THE 2010 TRANSITION TO ADULTHOOD SURVEY OF GREATER JAKARTA**

*Anna Reimondos, Iwu D. Utomo, Peter McDonald and Terence H. Hull*

*EMail: Anna.Reimondos@anu.edu.au*

This paper examines the sexual behaviours, focusing in particular on the incidence of premarital sex, as well as the level of knowledge of STIs and HIV/AIDS among a sample of young people living in Greater Jakarta. The analysis is based on data on 3,0006 young people aged 20-34 who were surveyed in the 2009/2010 Greater Jakarta Transition to Adulthood Survey conducted in Jakarta, Bekasi and Tangerang. The survey is the first comprehensive survey of transitions to adulthood conducted in Indonesia and is funded by the Australian Research Council, WHO and the National University of Singapore. In the analysis of young people's level of knowledge regarding HIV/AIDS we found that a relatively high proportion, one in seven, had never heard of HIV/AIDS. Knowledge of HIV/AIDS was however strongly related to age and education. Whereas one third of those with primary school education had never heard of HIV/AIDS, the equivalent figure was only 7 % for those with a university degree. The majority of respondents who had heard of HIV/AIDS correctly identified that it could be transmitted by unprotected sex, sharing of needles and from blood transfusions (79-84%). However misconceptions were also prevalent as a significant percentage believed that HIV/AIDS could be transmitted from activities such as kissing and infected person and from mosquito bites. With regards to sexual behaviour we find that 11 per cent of never married respondents and 10 per cent of ever married respondents had had premarital sex. Among the never married respondents, reports of premarital sex differed greatly by gender, with only 5 percent of females reporting experience of sexual intercourse compared to 16 percent of males. Though we speculate that the incidence of premarital sex may be under reported, it is still considerably higher compared to the incidence found from other surveys.



### **66-1. THE ROLE OF INHERITED FACTORS FOR LONGEVITY: SOUTHERN SWEDEN 1813-2009**

*Tommy Bengtsson and Göran R. Broström*

*E-Mail: Tommy.Bengtsson@ekh.lu.se*

We estimate a model of overall mortality among married persons aged 50 years and above taking genetic as well as socioeconomic and environmental factors in succeeding generations into account. We consider whether these factors have direct or indirect effects on health. The demographic and economic individual level data come from the Scania Economic Demographic Database linked with central register data after 1968. To these, local grain prices, as an indicator of food costs, and the local infant mortality rate, as an indicator of the disease load, have been added. Preliminary, we find that age of death of the mother and the father have persistent impacts on their adult children's overall mortality regardless of sex, even after controlling for socioeconomic and environmental factors over the life course. In addition, we find strong birth cohort effects and effects of the disease load in the first year of life.

### **66-2. ACHIEVING EXCEPTIONAL SURVIVAL: ARE SOCIOECONOMIC CONDITIONS IN CHILDHOOD STILL IMPORTANT?**

*Alain Gagnon, Valérie Jarry and Robert R. Bourbeau*

*E-Mail: alain.gagnon.4@umontreal.ca*

Previous studies showed that siblings of centenarians experienced greater longevity than their birth cohort, revealing that surviving to very old ages is modulated by a familial component. Furthermore, a substantial body of literature has focused on early familial life as a source of longevity differential in very old age. However, less established in the literature is whether childhood conditions have the same effect within long lived families. In this paper we discuss early-life factors which could affect an individual's chance to reach the advanced ages, with particular focus on siblings of centenarians. We utilized an event-history database that links age at death of individuals to their childhood characteristics gathered from the 1901 and 1911 Canadian census records. We verify on one hand if early-life factors that influence a normal person's survival also have an effect on the longevity of long-lived persons. On the other hand, we compare the influence of childhood conditions on the odds of surviving, first from age 40 to age 75 and then, from age 75 to age 90. The effects of early-life conditions were found to be much smaller for women than for men as well as for siblings of centenarians, suggesting that siblings of centenarians have a possible favorable genetic background or biological robustness. Moreover, we found that influence of early-life socioeconomic factors lessen in older age, drawing a distinction between determinants involved in normal lifespan and those that lead to exceptionally old age.

### **66-3. THE LONG SHADOW OF COMMUNISM: NEW CROSS-NATIONAL EVIDENCE FOR THE EUROPEAN HEALTH DIVIDE**

*Yuka Minagawa and Robert A. Hummer*

*E-Mail: yminagawa@utexas.edu*

This research presents analyses focusing on the understanding of health disparities between European countries, known as the "European health divide." Using data from 47 European countries, spanning from 1992 to 2008, this paper investigates how gender-specific life expectancy at birth and infant mortality rates differ across three groups: Western Europe, East Central Europe, and the former Soviet Union. The analyses lead to several important conclusions. First, consistent with prior research on this topic, men and women in

Eastern Europe face greater disadvantages in terms of longevity compared to their Western European counterparts. The gap in life expectancy has become even larger over time. Second, we find evidence suggestive of another health divide in Europe: gender-specific life expectancy in the former Soviet countries is significantly lower than that in the East Central European countries. Third, mechanisms of health inequality appear to differ considerably by gender. Socioeconomic and behavioral factors explain the differences between Eastern and Western Europe in life expectancies of women, whereas large disparities remain for men. We observe similar patterns of regional inequality in health among infants, but cross-country differences are explained by socioeconomic conditions for both male and female infants. To conclude, there remain large health disparities across Europe. Observed health differentials reflect divergence in the historical, cultural, and socioeconomic environments between these countries.

#### **66-4. SOCIOECONOMIC DIFFERENCES IN HEIGHT AMONG YOUNG MEN IN SOUTHERN SWEDEN, 1818-1968**

*Stefan Öberg*

*EMail: stefan.oberg@econhist.gu.se*

Socioeconomic differences in heights have been investigated and found in many studies on different populations and historical periods. Despite the large number of studies there are few where it has been possible to study the long-term developments of the differences. I have linked information from conscript inspection lists to men born between 1797 and 1950 in the Scanian Economic Demographic Database. This is a longitudinal database on the population in five rural parishes in southern Sweden including all demographic events as well as information on occupations and landholding. I can therefore analyze the socioeconomic differences in heights in the whole population dividing the men into classes using their family backgrounds. Because family relations are known I can also adjust the analyses to better compare the differences between families. The long time period covered makes it possible to investigate how the social differences in heights changed as the society and economy developed from the pre-industrial, agrarian setting in the early 19th century to the modern industrialized society in the mid-20th century. The results show that there were always socioeconomic differences in heights in the studied population. Sons of fathers with non-manual occupations were always taller and were the group most clearly separable from the others at all times. Farmers were also taller than manual workers but the difference is smaller and not as consistent. The level of skill of the father did not have a large impact on the heights of the sons, except in the first decades of the 20th century. The results indicate a Kuznetsian development of the inequalities in heights with temporarily increasing differences in the early 20th century. The socioeconomic differences did not decline consistently until mid-20th century. But declining explanatory power of the socioeconomic indicators throughout points to reduced importance of the differences over time.

#### **66-5. INFANT AND EARLY CHILDHOOD MORTALITY IN A HISTORICAL CONTEXT**

*Evelien Walhout and Jornt Mandemakers*

*EMail: e.c.walhout@uvt.nl*

The objective of this paper is to test, in a historical setting, whether and how social class influences the level of infant mortality and how this may be related to or explained by breastfeeding practices. What social groups are affected most with high infant mortality in a high mortality regime and how does it evolve along with overall mortality decline. Socioeconomic variation in infant mortality can be explained by the uneven distribution of

risk and protective factors between social groups. Infants are exposed to different health risks because socioeconomic status is highly correlated with housing, sanitary conditions, proper nourishment, and medical treatment. We expect therefore that infant mortality was higher among the poorer classes. In addition to analyzing infant mortality according to social group, we test – using individual level data including causes of death regarding the population of the Dutch town of Roosendaal – several hypotheses in order to explain social differentials and its mechanisms regarding infant mortality. The explanations for the findings are considered in the context of different social and environmental conditions, disease environment, and infant feeding practices. Besides socioeconomic determinants, previous research on infant mortality in past and present has discussed the role of breastfeeding and its direct effect on infant survival. In order to connect social differences with distinct feeding practices and related health risks we will particularly focus on: 1. timing (or occurrence) of death within the first two years of life (related to the incidence of weaning); 2. the distribution of infant death throughout the year (the practice of artificial feeding accompanied by poor sanitary standards will result in excess summer mortality); 3. the main causes of infant death (the practice of bottle feeding will result in high numbers of deaths because of gastro-enteritis or diarrhea); and 4. differences/changes in historical time.

#### **67-1. GENDER INEQUALITY AND ITS IMPACT ON SEXUAL AND REPRODUCTIVE HEALTH: THE EXPERIENCE OF YOUNG MEN AND WOMEN IN THREE BRAZILIAN TOWNS**

*Alessandra S. Chacham, André Caetano and Andrea B. Simão*

*EMail: achacham@pucminas.br*

In our work we investigated how unequal gender relations reduce young women's autonomy and shape their sexual and reproductive trajectories, affecting their sexual and reproductive health. In our analysis we used data from a survey with a sample of 450 young women and 300 young men between 15 and 29 years of age from low income households in three different middle sized towns located in Minas Gerais, a state in southeast Brazil. One town is located in the metropolitan area of Belo Horizonte (the state capital), another one is located in the impoverished north region of the state and the other in the wealthier, more developed south. We found a very similar prevalence of teenage pregnancy in all the three cities investigated: 31%, a number much higher than the state average of 16%. Our preliminary analysis indicated that the presence of control and violence from a partner is related to a higher likelihood of teenage pregnancy among young women and a smaller probability of condom use. Among young men, those who declared to have a controlling or violent behavior towards a partner were also more likely to have gotten a teenage partner pregnant and less likely to have used condoms in the first and last intercourse. Young women's lack of control in the sphere of sexuality also showed to be statistically associated with the probability of teenage pregnancy. Young women who did not have used condom in their first intercourse had higher chances of ever being pregnant before 20 years old. This group was the most likely to be married at the time of the interview and also the least likely to demand condom use from a partner. Our results reinforce the importance of understanding the impact of gender inequality on men's and women's sexual and reproductive health.

## **67-2. SON PREFERENCE AND PRENATAL SEX SELECTION: RECENT TRENDS IN THE UK SOUTH ASIAN DIASPORA**

*Sylvie Dubuc*

*EMail: sylvie.dubuc@spi.ox.ac.uk*

Son preference and discrimination against girls have been reported in many countries and notably in South and East Asia. The availability of various pre-natal sex-determination techniques such as ultrasound screening since the 1980s, has resulted in well documented prenatal sex-selection against females in many Asian countries. New results from the 2010 Indian census data suggests sex-selection against females has further increased and spread. PNSS against females has recently also been evidenced in Western countries with important Asian diasporas. In the UK, a male biased sex ratio at birth among India-born women over 1990-2005 reflects the trend observed in India. However, a closer analysis by main Indian region of origin suggests less bias in the Indian Diaspora. New results for India-born mothers since 2006 suggest a stabilisation, potentially announcing the beginning of a reversal. Further monitoring will be necessary to validate (or not) this trend. If confirmed, potential explanations for this apparent reversing trend could include the significant public debate on sex selection in the UK. Differing public discourse in the UK, India and the USA, are reflecting ethical viewpoints that are expressed in legislation and that may offer soft policy options to curb sex selection.

## **67-3. TOWARDS THE ABANDONMENT OF FEMALE GENITAL CUTTING IN COMMUNITIES IN ABIA STATE: INITIATIVES IN NIGERIA**

*Ezinne Enwereji*

*EMail: hersng@yahoo.com*

The aims of this paper include: to find out the extent to which individuals are disposed to support abandonment of female genital mutilation or genital cutting (FGM or FGC ) despite its attendant risks. Also to note the extent to which individuals are aware of the medical and social effects of FGM. The question is, how can planned and coordinated activities to discourage FGM practice in rural areas be carried out so as to prevent its negative outcomes like violence, quarrelling and others? A round table discussion with 24 respondents was conducted. Discussions centered on reasons for performing FGM, its benefits, risk factors, strategies to encourage its abandonment and others. At the end of the discussion, community mobilization and sensitization on the risks of FGM were initiated. Data were analysed qualitatively. Awareness of at least two effects of FGM were emphasized. Only a few individuals could hardly mention up to two effects of FGM on females, showing poor knowledge of effects of FGM. Study noted that a good number of women, especially those with lower education (primary 6 to secondary school attempted) and no formal education are still practicing FGC. Those who had good knowledge of harmful effects of FGM lacked the courage to support its discouragement for fear of being accused of encouraging adolescents' promiscuous sex life. Generally, there was strong belief especially among men that FGM should not be discontinued for the simple reason that its practice helps to curb excessive sexual drive among females. Moreover, FGM was considered as a cultural practice that attracts some resources to those who conduct it and such constituted an alibi for its continued practice. Findings reveal poor knowledge of health and social effects of FGM, and therefore, periodic training to establish peer-to-peer education for women is recommended.

#### **67-4. DOES EMPOWERMENT OF WOMEN HELP IN USE OF MATERNAL HEALTH CARE SERVICES IN INDIA: EVIDENCE FROM NORTH-EAST REGION**

*Mousumi Gogoi*

*EMail: gogoi.mousumi2008@gmail.com*

The present study tries to focus on women's empowerment status and its association with utilization of maternal health care (MHC) services in North-East India using third round of National Family Health Survey (2005-06). Descriptive statistics, bivariate and multivariate techniques are used to justify the objectives. Different indices have created to show women empowerment in the region, and it is found that women were empowered in terms of decision making. Having own money and mobility among women is still far behind. The proportion of using any ANC is quite high but utilization of full ANC is very low among women in the region. Empowerment status is not directly hindered in use of health care services but lack of own money and mobility is a disadvantageous aspect. Region as a whole, proportion of institutional delivery and delivery by health professional is fairly uncommon.

#### **68-1. MORTALITY IN OLD AGE. THE EPIDEMIOLOGIC TRANSITION AMONG ELDERLY IN SWEDEN 1911-2010**

*Sören Edvinsson*

*EMail: soren.edvinsson@ddb.umu.se*

Life expectancy has increased in an enormous way during the last centuries, in Sweden as well as in other countries around the world. Sweden was however one of the forerunners in the development. Much of the early increase in life expectancy was determined by a rapid decline in infant and child mortality. A common assumption has been that further increases will slow down and eventually stop when mortality among the youngest have reached very low and maybe lowest possible levels. The experience from the last century contradicts however such an assumption. Life expectancy has continued to increase but is now mostly driven by declines in mortality among the elderly. In this paper we explore the Swedish epidemiological transition for a hundred year period, 1911-2010. We analyse changes in causes of death of persons 60 years and older. Making such an analysis is however not a straight-forward undertaking and faces the researcher with several challenges related to quality of the available data. The study thus involves an examination on how causes of death were recorded and categorized and what that implies on how old age has been considered in history. The paper investigate if we find an epidemiological transition among the elderly and what causes have contributed most to the decline in old age mortality. Furthermore we analyse if we can identify a delay in the ageing process over time through the recorded causes of death.

#### **68-2. DIFFERENCES IN INCIDENCE AND PREVALENCE IN LONG-TERM CARE AMONG THE ELDERLY IN GERMANY: THE ROLE OF EDUCATION**

*Olga G. Grigorieva and Gabriele Doblhammer-Reiter*

*EMail: grigorieva@demogr.mpg.de*

As the proportion of the elderly increases, the problem of long-term care (LTC) utilization attracts more and more attention of researchers and policy makers. Individual health status, living and financial arrangements along with available community resources are all expected to have an impact on care use. This paper analyzes the association between educational level and the transition to LTC in Germany using the only available source of data to evaluate this association, the German Micro Census panel data. The sample used for the

analysis is restricted to individuals aged 65 years and above. Men and women and western and eastern parts of Germany are studied separately. Panel logit model is applied to assess the impact of explanatory variables on the first use of care while Generalized Estimation Equations (GEE) model takes into consideration the recurrence of the transition. Receiving Care Allowance ('Pflegegeld') is considered as a proxy for the LTC utilization. The eligibility to this payment depends on the subjective physical assessment of the applicants. The preliminary results reveal the higher incidence rates for less educated people as well as for women and people residing in East Germany. The logit regression model indicates the significant association between education and the transition to LTC for men and individuals from West Germany only. When recurrent status of the event is taken into consideration (GEE model), education is found to have a very strong impact on the transition to care for both men and women as well as for two regions.

### **68-3. CORRELATES OF THE INCIDENCE OF DISABILITY AND MORTALITY AMONG OLDER ADULT BRAZILIANS WITH AND WITHOUT DIABETES AND STROKE**

*Pilar Guevara, Flavia Andrade, Maria Lebrão and Yeda Duarte*  
Email: [peguez2@illinois.edu](mailto:peguez2@illinois.edu)

The combined effect of diabetes and stroke on disability and mortality remains largely unexplored in Brazil and Latin America. This study addresses this gap and analyses the impact of diabetes and stroke, in combination, on disability and mortality in Brazil. The sample was drawn from two waves of the Survey on Health and Well-being of the Elderly, which followed 2,143 older adults in São Paulo, Brazil from 2000 to 2006. Disability was assessed via measures of activities of daily living (ADL) limitations, severe ADL limitations, and receiving assistance to perform these activities. Logistic and multinomial regression models controlling for sociodemographic and health conditions were used to address the influence of diabetes and stroke on disability and mortality. By itself, the presence of diabetes did not increase the risk of disability or the need for assistance, however, diabetes was related to increased risks when assessed in combination with stroke. After controlling for demographic, social and health conditions, individuals who had experienced stroke but not diabetes were 3.4 times more likely to have ADL limitations than those with neither condition. This elevated risk more than doubled for those suffering from a combination of diabetes and stroke (OR 7.34, 95% CI 3.73-14.46). Similar effects were observed for severe ADL limitations and receiving ADL assistance. Over time, older adults who had experienced a stroke were at higher risk of developing ADL limitations, of remaining disabled and of mortality. However, risks were even higher for those who had experienced both diabetes and stroke. A combined history of stroke and diabetes represents a major burden on the quality of life among older adults in São Paulo. Results highlight the need for specialized health programs to assist a growing population of diabetic patients recovering from a stroke. Implications related to policy programs in Brazil are discussed.

### **68-4. HIGHER MORTALITY RISKS FOR OLDER PEOPLE IN INSTITUTIONAL CARE: A COMPARISON OF BELGIUM AND ENGLAND AND WALES**

*Michel Poulain and Emily Grundy*  
Email: [michel.poulain@uclouvain.be](mailto:michel.poulain@uclouvain.be)

In Northern and Western European countries a sizeable proportion of the older population, particularly the older old population, live in various types of communal establishment such as residential and nursing homes. Typically this group is not included in surveys and their mortality is not analysed separately. However, information on survival in institutional care

is needed for planning purposes and to provide insight into the role of socio-demographic factors as risk factors for admission. A greater understanding of socio-demographic variations in the mortality of this group is also needed in order to fully understand the dynamics of mortality trends and differentials in the older population as a whole. In this paper we use linked census and vital registration data for England and Wales (based on the 1% sample ONS Longitudinal Study) and for Belgium (exhaustive data extracted from the population register) to examine trends and differentials in survival of the institutional population. Results show that, in both Belgium and England and Wales, survival in the population in institutional care is much lower than in the non institutional population even if Belgium has slightly higher survival rates. Individual characteristics observed at census (sex, age, marital status, self-reported health, education) are considered to explain differentials in survival taking into account that the same socio-demographic factors influence the risk of admission to institutional care.

#### **68-5. COGNITIVE LIFE CYCLE DEVELOPMENT: A CROSS-COUNTRY COHORT STUDY**

*Vegard Skirbekk, Daniela Weber and Valeria Bordone*

*Email: skirbekk@iiasa.ac.at*

We study life cycle variation in cognitive abilities for nationally representative cohorts for the fifty plus populations in eight countries born from 1944 to 1952 – we observe their cognitive abilities in their teenage years and again when they are past 50 years of age. We use standardized test scores from 1964 IEA data on school performances of pupils of two age groups (around 13 years of age and around 19 years of age, for males and females belonging to the 1949-1952 and 1944-1947 cohorts, respectively). We observe these cohorts again at older ages in the mid-2000s (data from ELSA, HRS, JSTAR, and SHARE surveys that include standardized tests of cognition). We consider math tests both at younger and older ages and also analyze other cognitive tests for the seniors. Sweden along with the US improves their country-ranking-ordering the most across the life cycle, while Belgium and France decline the most.

#### **69-1. THE DAWN OF REPRODUCTIVE CHANGE IN NE ITALY. A MICRO-ANALYSIS USING A NEW SOURCE**

*Angelica Bazza, Gianpiero Dalla Zuanna and Marcantonio Caltabiano*

*Email: angelica.ba@tiscali.it*

The historical decline of fertility in Italy has never been studied with micro-data, except for some researches restricted to limited areas. In this paper we use the individual retrospective fertility survey combined with the 1971 Census in Italy. It is an unpublished source, but of good quality, at least for the variables of our interest. We analyze data on Veneto (the region of Venice, NE of Italy), covering a statistically significant sample, extended to 20% of the female population. It is possible to compare the fertility of cohorts born in 1882-1931 (whose TFR decreased from 4.5 to 2.4 ). The main objectives are to identify the forerunners of the decline and explore pathways of diffusion of birth control, considering both the differences by social class and those by micro-territorial area (the 580 municipalities of the region). After describing the trends of marriage and fertility by education, we will use multilevel regression models clustering data by municipality. Using this methodology, we include as covariates also territorial data not available by the Census source (e.g. territo-

rial indices of secularization), that could be linked to marital and fertility behavior. The preliminary descriptive results show that: (1) The average age at marriage and the proportion of unmarried women decrease cohort after cohort; (2) The differences by education in marital behavior shrink; (3) The few graduate women born in the last decades the 19th century already had a TFR around two; (4) This value is approached – but never reached – by the women with low educational qualifications born fifty years after.

## **69-2. FERTILITY REACTIONS TO THE “GREAT RECESSION”: THEORIES AND EVIDENCE**

*Joshua R. Goldstein, Liat Raz-Yurovich and Michaela Kreyenfeld*

*EMail: goldstein@demogr.mpg.de*

A number of competing theories have emerged about the effect of economic conditions on fertility. The current recession gives us a chance to assess these predictions in action. We first review the micro evidence from economic uncertainty literature and the predictions of economic theory for aggregate change. We then use macro-level data from the Human Fertility Database (HFD) to provide an overview on how the recent recession has shaped order and age specific fertility patterns in Europe. Overall, countries that were hit hard by the recession show a decline in fertility, in particularly at younger ages. However, the evidence is not as conclusive as one may wish, in particularly if one turns to order specific data. We speculate that the welfare state may mediate some of the adverse effect of the recession on fertility in some countries. Furthermore, we argue that different segments of the population may have responded differently to growing economic uncertainties. We buttress our argumentation by using prospective fertility and employment data from selected European countries. Our results indicate that the relationship between economic conditions and fertility is more multilayered than simple cross-correlations of aggregate fertility and employment measures suggest.

## **69-3. COMPREHENSIVE ANALYSES OF FERTILITY TRENDS IN THE RUSSIAN FEDERATION DURING THE PAST HALF CENTURY**

*Tomas Frejka and Sergei V. Zakharov*

*EMail: Tfrejka@aol.com*

The transformation of traditional childbearing patterns of early family formation to patterns of later family formation was the fundamental feature of the fertility trends of the past half century in Russia. The childbearing postponement and recuperation process commenced with the birth cohorts of the mid 1960s in the early 1990s and was still in progress in 2010. The past quarter century was also marked by waves of concern with low fertility and attempts to increase fertility. – Pro-natalist policy measures of the early 1980s advanced childbearing and raised TFRs between 1981 and 1987. But the quantum of fertility remained unchanged among the 1950s birth cohorts around 1.9 births per woman. – A serious concern about low fertility at or below 1.3 births per woman from 1995 to 2006 led to the implementation of an extensive set of pro-natalist measures in 2007. Preliminary analyses indicate that the result of the 2007 policies was again to advance childbearing, and fertility quantum may apparently be retained around 1.6 births per woman. – It is obvious that the family policies of the 1980s failed to raise fertility. Preliminary analyses indicate that the fate of the 2007 policies could be similar. – In both cases the main emphasis of the policy sets was on material birth and child benefits, parental leaves and child care. Apparently insufficient attention was devoted to improving general social and economic conditions of young people, such as employment and living conditions, and promoting gender equality at home, at work and in other societal institutions. The question



arises whether the efforts of the government and other entities to raise fertility during the 2010s will be strong enough and sufficiently effective to offset economic and social forces challenging childbearing. As of 2012 the outlook for a future fertility increase does not appear hopeful.

#### **69-4. POPULATION AND FERTILITY REVERSALS IN A HIGH-IMMIGRATION, LOW-FERTILITY SETTING: THE CASE OF VIENNA**

*Tomas Sobotka, Kryštof Zeman, Maria E. Winkler-Dworak and Richard Gisser*

*EMail: tomas.sobotka@oeaw.ac.at*

Throughout much of the 20th century, Vienna recorded fertility rates deep below fertility in other parts of Austria, repeatedly falling to extreme low levels. In a closed population, this would lead to accelerated depopulation and a rapid ‘greying’ of the population, a development observed until the mid-1970s. However, persistently high immigration rates from both Austria and abroad together with higher fertility among foreign-born women have brought about several important reversals in population trends in the city of Vienna. A long-lasting population decline came to an end and vigorous population increase set in. Also the number of births has increased considerably since the 1970s, contributing to another reversal from natural population decline to natural population increase which has surpassed that for the whole Austria after the year 2000. Fertility rates recovered slightly from their lows in the 1970s as well as extreme low levels recorded in the early 1930s and around 1950. High immigration—concentrated especially into younger ages—and more frequent childbearing among foreign-born migrants have also contributed to the decline in the share of elderly in the 1970s-1990s, contrasting with its rise elsewhere in Austria. We analyse and discuss these developments and show that high immigration combined with higher fertility among migrants can 1) strongly alter population structure and trends over long periods of time, 2) stimulate substantial population increase where closed population would fall rapidly, and 3) slow down the pace of population ageing. In addition, extreme low fertility levels may be reversed even when they had persisted for many decades. These findings are likely to pertain to many other regions in richer parts of Europe. They suggest that in attractive regions migration rather than fertility often becomes the main driver of population trends. Worries about the negative consequences of low fertility are therefore often misplaced or exaggerated.

#### **70-1. TOWARDS AN ANNUAL MEASURE OF PREVALENCE FOR INTERMARRIAGES IN EUROPEAN COUNTRIES**

*Giampaolo Lanzieri*

*EMail: giampaolo.lanzieri@ec.europa.eu*

The important migratory flows that have entered in Europe in the recent years and the perspective of immigration as partial solution to ageing populations have brought the issue of the integration of migrants to the attention of policy-makers, especially within the European Union (EU). Two sets of measures of integration (MIPEX and Zaragoza indicators) have been already proposed for policy purposes, but none of them include yet an indicator based on intermarriages, traditionally an important measure of social integration. In an earlier paper on recent trends of intermarriages in Europe, the author has compared various annual measures of intermarriage and discussed their potential interpretation in terms of integration/assimilation of migrants. However, these latter indicators are based on the annual number of mixed events and they are therefore measures of incidence/flows. In the current paper the author exploits two annual EU sample surveys (the Statistics on Income and Living Conditions and the Labour Force Survey) to derive annual measures of preva-

lence of intermarriages. In the centenarian tradition of studies on intermarriages, measures of stock are mainly derived from censuses, which have obviously a much wider time span and are thus less fit for the monitoring of migrants integration in rapidly evolving situation like in the nowadays EU. In lack of information from population registers or alternative exploitable administrative sources, annual large sample surveys may be a precious source of information for integration monitoring. EU-SILC and EU-LFS allows estimating annually the number of mixed couples based on country of birth and country of citizenships of the spouses. The study investigates pro and cons of EU-SILC and EU-LFS as sources for intermarriages prevalence, and analyses the recent values for the EU Member States.

#### **70-2. AGE HOMOGAMY AND GENDER-SPECIFIC EARNINGS: SWEDEN 1990-2009**

*Paul Nystedt and Martin Dribe*

*EMail: paul.nystedt@liu.se*

Previous research has shown considerable marriage premiums in earnings for men, but often penalties for women of being in a union. In this study we extend this research by analyzing how the age difference between spouses affects the earnings profiles of men and women. As we follow people over time in advance as well as within their marriage we are able to separate pre- from post-marital earnings movements. The studied core sample consists of information on annual earnings 1990-2009 for all Swedes born 1960-74. There is prominent sorting into marriage according to age, high earning men and women marrying a spouse of the same age. For men, this process is enforced within marriage insofar as the earnings profile is steeper the lesser the age gap. For women, the earnings development within marriage seems to be totally unrelated to the spousal age gap.

#### **70-3. RACIAL HOMOPHILY AND EXCLUSION IN ONLINE DATING PREFERENCES: A CROSS-NATIONAL COMPARISON**

*Gina Potarca and Melinda Mills*

*EMail: g.f.potarca@rug.nl*

Although finding a partner online has surged, there is limited knowledge about the characteristics and preferences of individuals. In particular, racial background is a strong determinant of partner selection and a barometer of race relations. The aim of this study is to extend existing research on interracial unions by examining racial homophily and exclusion in online dating preferences across 9 European countries. We analyze data from 9 countries (Germany, The Netherlands, Austria, Switzerland, Sweden, Italy, Spain, France, and Poland) (N= 100,817), distinguishing between majority- (i.e., European) and minority-status racial group members (i.e., Arabic, African, Asian, and Hispanic). A series of multilevel logistic regression analyses reveal that race and education remain robust predictors of partner choices, while structural factors such as relative group size, group-specific sex-ratio and racial diversity in regional marriage markets also play a considerable role. The larger the sizes of their own group, the more likely minority members are to have same-race preferences or to exclude other racial groups. Users living in racially heterogeneous regions have lower levels of racial homophily and exclusion of Europeans, Hispanics or Asians. Regions with strong anti-immigrant attitudes are associated with higher levels of exclusion of all minority racial groups.

#### **70-4. ARE TALLER WOMEN MORE SUCCESSFUL AT THE MARRIAGE MARKET? THE CASE OF INDIA**

*Jeroen Smits and Christiaan W. S. Monden*

*EMail: jeroen.smits@fm.ru.nl*

Positively valued traits allow individuals to attract better partners at the marriage market. Height as a signal of health capital is such a trait. Taller women are healthier than shorter women, they give birth more easily and they get healthier offspring. We therefore would expect them to be more successful at the marriage market as well, especially in less affluent societies. However, the available evidence is mixed and data on actual marriage outcomes are scarce. We analyze data on partners' height for over 32,000 marriages concluded since 1980 in India. The analyses suggest that taller-than-average women are more successful in the competition for desirable mates: they are more likely to marry, get higher educated husband with better jobs and are less likely to lose their husbands by divorce or premature death.

#### **70-5. PARENTAL INVOLVEMENT IN PARTNER CHOICE: THE CASE OF TURKS AND MOROCCANS IN THE NETHERLANDS**

*Pascale I. van Zantvliet, Matthijs Kalmijn and Ellen Verbakel*

*EMail: p.i.vanzantvliet@uvt.nl*

This study contributes to previous research on partner choice by providing more insight into third party influence. More specifically, the study aims to describe and explain parental involvement among Turkish and Moroccan immigrants in the Netherlands. Analysis of the large scale national data of the Netherlands Longitudinal Life-course Study (NELLS) shows that parental involvement is modest among Turkish and Moroccan, but relatively high when compared to levels of parental involvement among the native Dutch. Furthermore, analyses reveal variation within the Turkish and Moroccan group. Our study shows that more independent children are less likely to experience parental involvement and that parental involvement is lower in dating and cohabitation. Furthermore, our study suggests that parental involvement has several consequences for the life course, including the type of partner that is chosen and union development.

#### **71-1. GENDER EQUALITY AND PREFERENCE THEORIES IN FERTILITY INTENSIONS' EXPLANATION: THE CASE OF POLAND**

*Ewa Fraczak and Aneta Ptak-Chmielewska*

*EMail: ewaf@sggw.waw.pl*

In demographic research the effects of social capital, lifestyle preferences and gender equality in the family and the society have received only limited attention. These factors are likely to have special importance for fertility-related decision making and behavior in societies facing economic uncertainty along with transformation of values and norms, such as Poland. Hence, in our study we focus on fertility intentions in the context of three theories, namely (i) preference theory, (ii) gender equity theory and (iii) social capital theory. However all theories require re-interpretation in case of countries in transition like Poland. In our empirical analyses, we rely on data extracted from the first wave of the Polish panel survey called "Late fertility diagnosis" conducted in 2007 on a sample of 1200 women (aged 19, 23, 27 and 31 years) in two big cities in Poland. Both descriptive and logistic regression methods are used as analytical tools. We focus on re-interpretation of theoretical context in the light of results of our analysis.

## 71-2. SPATIAL MOBILITY AND FERTILITY INTENTIONS

*Johannes Huinink and Michael Feldhaus*

*EMail: huinink@empas.uni-bremen.de*

Job-related spatial mobility are shown to be negatively correlated with having children, particularly for women, in the literature. However, up to now fertility intentions have not been investigated in this respect. In this paper the effects of commuting arrangements of men and women on the intention to have a child within next two years as well as the probability to realise this intention are addressed. The assumption is that after accounting for other important factors (employment status, level of qualification, type of consensual union, number of children, residential mobility) time consuming commuting is negatively related to a fertility intention of women and its realization. For men effects are supposed to be nonexistent. Longitudinal data from the first three waves of the German Family Panel (pairfam) are used to test the hypotheses. Firstly, a cross-sectional, multivariate probit-regression on the intention to get a child within two years, on being childless, and on medium/long distance commuting is applied. The model shows no significant correlation of circular mobility with an intention to get a child but with the probability of women to be childless. Secondly, a longitudinal difference model on changing fertility intentions between panel wave 1 and 3 is estimated. For women there is evidence of a moderate positive relationship of interrupting medium and long distance commuting and, surprisingly, continuing medium and long distance commuting on the intention to get a child within two years. Thirdly, for men and women who reported a fertility intention in the first wave a Heckman-selection probit-regression on the probability to become pregnant between wave 1 and 3 is estimated. It shows negative effects of medium and long distance commuting on becoming pregnant. Taken together, these findings support assumptions on a characteristically different function circular mobility plays in different phases of the fertility related decision process.

## 71-3. GENDER IDEOLOGY AND FERTILITY INTENTIONS ACROSS EUROPE

*Trude Lappegård, Gerda R. Neyer and Daniele Vignoli*

*EMail: trude.lappegard@ssb.no*

There is an ongoing discussion about the relationship between gender attitudes and fertility intentions. In this paper we focus on three dimensions of gender: gender roles in the public sphere, mothers' role in the family, and fathers' role in the family. We make use of the first Generations and Gender Survey of eight Eastern and Western European countries, estimating the likelihood of planning for a(nother) child during the next three years for women and men separately. The results show that the relationship between gender ideology and childbearing intentions is a complex issue with extensive variation across gender role dimension, gender and societies. Generally, egalitarian attitudes towards gender roles in the public sphere and mothers' role in the family have a negative association with childbearing intentions in the near future, while there is a more positive relationship between egalitarian attitudes towards father's role in the family and childbearing intentions.

## 71-4. GENDERED DIVISIONS OF LABOUR AND THE FORMATION OF FERTILITY INTENTIONS

*Zsolt Speder*

*EMail: speder@demografia.hu*

The research aims to unfold the relation between gender division of labour and fertility behaviour in a European comparative perspective. The comparative study includes West-

ern and Eastern countries from Europe, representing different welfare regimes; Austrian, Georgian, French, Hungarian, Norwegian and Russian GGS data from the first wave will be compared. The fundamental hypothesis assumes that the nature of gender division of labour in partnerships influences fertility behaviour. Fertility behaviour is measured by short-term (within three years) fertility intentions. Gendered division of labour will be measured by two indicators. On the one side, the employment profiles of the partnership (male breadwinner vs. dual earner partnerships) measures the gendered division of labour outside the household, namely the labour market and welfare system related division of labour. The division of labour at home, the housework division on the other side, will be measured by a scale based on the items directly measured by the GGS. Logistic regression will be employed in order to identify if and what kind of division of labour influences the formation of fertility intentions. The two basic demographic factors, closely related to fertility behaviour, age and parity, will be controlled. Results points to the directions, that division of labour have an influence among woman and within a context of more unequal division of labour.

#### **71-5. THE SOCIO-ECONOMIC DETERMINANTS OF CHILDBEARING INTENTIONS: A MACRO-MICRO ANALYSIS**

*Maria Rita Testa*

*E-Mail: maria.rita.testa@oeaw.ac.at*

In this paper I investigate the individual and country level socio-economic determinants of child-number and child-timing intentions in Europe. The analysis is based on the Eurobarometer surveys conducted in 2006 and 2011 which contained several questions on childbearing intentions. Two different sets of multi-level proportional-odds models are used with a response variable equals to the number of additionally intended children or to the timing of the next intended child. The results show that at the individual level child-number intentions are correlated with enduring characteristics of individuals, like religiosity and level of education while child-timing intentions are closely associated with more transient characteristics, like enrolment in education or non-marital status. The perceived behavioural control is an important factor affecting both the number of additionally intended children and the timing of the next intended child: the more control is perceived the larger the intended family size and the sooner the child is planned. At the country level the proportion of high educated people positively influences the child-number and the child-timing intentions. This result holds independently on whether individuals are childless or have already one child. The Gross Domestic Product (GDP) per capita affects negatively the timing of the next intended child and positively the timing of the second intended child. This results is in line with the positive relationship between Human Development Index and Total fertility Rate observed in the OECD countries (Myrskylä et al.2009).

#### **72-1. APPLYING A MULTIPLE EQUILIBRIUM FRAMEWORK TO DIVORCE RISKS IN GERMANY**

*Daniela Bellani and Gøsta Esping-Andersen*

*E-Mail: daniela.bellani@upf.edu*

For many years now, divorce research has focused on the influence of women's new economic role. A number of studies show that divorce risks are associated with women's income. And, yet, there is also mounting evidence that the social gradient of divorce is being reversed. How does one reconcile such findings? In this paper we offer an alternative framework, based on multiple equilibrium models, that predicts that couple instability should be greatest where strong normative consensus is absent – i.e. in unstable equilibria.

We should expect significantly lower divorce risks in either the traditional family equilibrium or in a (possibly) emerging gender-egalitarian one. One important upshot is that research on family dynamics should be more sensitive to non-linearities. Using the GSOEP waves 1986-2009, we apply discrete time event history analysis to West German couples and relate partnership durations to couple specialization. We focus particularly on inequity effects related to the division of domestic and market work.

## **72-2. SHARED ATTITUDES AND COUPLES' BREAK-UP PLANS**

*Maria Brandén and Eva Bernhardt*

*EMail: maria.branden@sociology.su.se*

This study examines whether couples where partners share notions on what is important in life show greater union stability compared to couples where partners disagree. We examine what effect sharing notions about the importance of work, family and leisure activities has on couples' break-up plans. The Young Adult Panel Study 2009 includes 1058 Swedish heterosexual couples with self reported attitudes for both partners. Using separate step-wise logistic regressions for each kind of attitude we examine how sharing notions on the importance of work, family and leisure activities is associated with couples' break-up plans during the preceding year. Sharing attitudes was expected to create a common basis for discussion and perhaps a mutual confirmation of worldviews, hence increasing union stability. However, it might be more important to share attitudes on the importance of family life than attitudes regarding other areas of life, i.e. to share attitudes that are 'instrumental' for a good relationship. Finally, we expected that being similar to a partner is more important for areas that any of the partners consider very important in life. Preliminary results indicate that couples with leisure oriented men more often have suffered from break-up plans during the last year. The woman's leisure orientation however has no impact. Neither does the work orientation of the man or the woman. Couples have less often had break-up plans if either the man or the woman is family oriented. The attitudes as such hence seem to matter; however sharing these attitudes has no significant association with break-up plans, for neither of the attitudes studied. Hence it seems as if it is the attitudes rather than sharing these attitudes that are associated with relationship quality.

## **72-3. WHAT ARE THE RISKS, FOR CHILDREN, OF FAMILY DISRUPTION? EUROPEAN COMPARISONS**

*Didier Breton and France Prioux*

*EMail: dbreton@unistra.fr*

This study applies an original approach by adopting the child's standpoint to measure changes in the risk of family disruption (i.e. parental breakup) by child's age and cohort, and to identify the parental characteristics associated with the highest risk of childhood exposure to disruption. Data from the GGS surveys conducted in the 2000s in several European countries can be used for these analyses as they include complete family event histories of adult respondents (birth of children, union formation and separation). Pursuing research already carried out in France, then extended to Russia, we broaden the comparison to other European countries in the Generations and Gender programme (Austria, Norway, Netherlands, and possibly Germany) to identify the countries where the risk of childhood exposure to parental separation is highest, and to see whether the characteristics of the most unstable parental couples are shared across countries. In particular, we want to find out whether differences between married and unmarried parents are narrowing, and whether the effect of educational level is identical in all countries. The risk of disruption by age and cohort is calculated by means of longitudinal and/or cross-sectional analysis. We

then model the risk of disruption before certain ages (5 years then 10 years) using a logistic regression to verify the effect of the various characteristics of the parental couple, all other things being equal.

#### **72-4. MARRIAGE DURATION AND DIVORCE: THE SEVEN-YEAR ITCH OR A LIFE-LONG ITCH?**

*Hill Kulu*

*EMail: hill.kulu@liverpool.ac.uk*

Most studies show that the risk of divorce is low during the first months of a marriage; it then increases to reach a maximum and thereafter begins to decline. The reason for this rising-falling pattern of divorce risk, however, is far from clear. Classical psychological literature considers this pattern consistent with the notion of a seven-year itch. Other researchers argue that the rising-falling pattern of divorce risk is a consequence of misspecification of longitudinal models because of omitted covariates or unobserved heterogeneity. This study investigates the causes of the rising-falling pattern of divorce risk. We use register data from Finland and apply multilevel hazard models. We first study the hazard of divorce over the marriage duration with and without controlling for a set of demographic and socioeconomic characteristics of women and their partners. We then control for unobserved heterogeneity to detect any changes in the shape of baseline risk. We also examine the hazard of divorce over the marriage duration separately for both first and subsequent marriages as well as across cohorts to identify any changes over years.

#### **72-5. SOCIO-ECONOMIC DETERMINANTS OF DIVORCE IN LITHUANIA: SPECIALIZATION HYPOTHESIS RECONSIDERED**

*Ausra Maslauskaitė, Aiva Jasilionienė, Vlada Stankuniene, Domantas Jasilionis and Vladimir M. Shkolnikov*

*EMail: amaslauskaitė@ktl.mii.lt*

The study focuses on socio-economic determinants of divorce in Lithuania and is based on the census linked dataset covering all first divorces and person years of exposure of married males and females during 2001-2003. The theoretical framework of the research is based on the gender role specialization hypothesis that associates the decrease in the gender role specialization and increase in the divorce risks. Main goal of the study is to examine the potential of the specialization hypothesis for the explanation of the divorce trends in part of Eastern Europe where the family modernization process due to historical circumstances followed a specific path. The study suggests that the observed socio-economic differentials in first divorce risk support the specialization hypothesis for males. Males with lower socio-economic status and lower prospects to fulfil the traditional breadwinner role experience higher risks to end their marriage in divorce. The findings on the link between the economic role of women and the risk of divorce are inconsistent. Although economically inactive women experience a lower risk of divorce, unemployed women were still more prone for divorce as in the case of males.

#### **73-1. THE INTERGENERATIONAL TRANSMISSION OF FIRST BIRTH TIMING IN NORWAY**

*Lars Dommermuth and Torkild Hovde Lyngstad*

*EMail: ldo@ssb.no*

The intergenerational transmission of family size and fertility timing between generations can play a role for fertility patterns, but the evidence for such transmission is still weak. The strong data requirements, i.e. detailed fertility histories of both the parents and their

children, make it difficult to study this topic. Solid knowledge about any such effects may be of importance for development of policies, as the implications for future fertility are obvious. So far, studies on the intergenerational transmission of the timing of first birth only have used ordinary event history analysis. A common downside of these studies is that they are generally unclear about the status of causality. There are numerous other factors linked with both parents' and children's fertility behaviour that are not controlled, and which may in whole or in part generate the observed association and bias regression coefficients of the transmission effect. In our study we will address this problem in three steps and give new insight into the intergenerational transmission of first birth timing. We use Norwegian register data, including information from over 300.000 women born in 1954-64 and their mothers. We will first run ordinary Cox proportional hazard regressions to test for the existence of a transmission effect of timing of birth between mothers and their daughters. In a second step, we will include family fixed-effects to make within-family comparisons of how mother's age at birth of daughter A affects daughter A's age at first birth. The fixed-effects method allows us to control for all non-measured stable characteristics at the level of the family in a model of the transmission of timing of birth. In a third step we will examine how censoring and unequal censoring times within the family affect results in family fixed-effects models.

### **73-2. OUT OF CONTEXT? THE EFFECT OF DEEP-ROOTED CULTURAL TRAITS ON THE TRANSITION TO ADULTHOOD AMONG THE ITALIAN SECOND GENERATIONS IN FRANCE**

*Roberto Impicciatore*

*EMail: roberto.impicciatore@unimi.it*

Several studies tried to evaluate the effect of cultural traits such as familism on demographic behaviours but the estimated effects may be biased by the different context, mainly in terms of welfare and legislation. An interesting strategy in order to disentangle the effect of long term cultural factors from the influence given by the legislative and structural context takes into account international migrations and in particular the characteristics of second generations of migrants, i.e. individuals born and grown in the country of arrival but influenced by a different cultural background. In this paper we focus on demographic behaviors of the Italian's second generations in France. Relevant differences emerge between Italian G2 and autochthones, in particular among women and cohorts born after the Second World War. Therefore, our results are in contrast with the hypothesis that the familistic perspective is entirely due to the Welfare and the institutional setting. On the other hand, they indicate the persistence of deep-rooted cultural developed in Italy during the parent's childhood and transmitted to their children born and growth in a foreign country.

### **73-3. INTERGENERATIONAL DETERMINANTS OF INCOME LEVEL IN FINLAND**

*Outi Sirniö, Pekka Martikainen and Timo M. Kauppinen*

*EMail: outi.sirnio@helsinki.fi*

This study estimates the level of intergenerational transmission of income in contemporary Finland and assesses the contribution of other social characteristics to this relationship. Previous studies show that resources of the family of origin have apparent association with their children's outcomes in adulthood. Research on income mobility that also incorporates information on other socioeconomic and demographic factors is seldom carried out. A longitudinal register-based data-set obtained from Statistics Finland used in this study is a representative 11% sample of the whole population residing in Finland. Cohorts born 1973 to 1976 are selected for this analysis. Parental characteristics are assessed between



1987 and 1991 when the participants were aged 13 to 16, and corresponding individual characteristics between 2003 and 2007 at the age of 29 to 32. Mobility tables and logistic regression modeling are used to analyze intergenerational associations focusing on entry into the lowest and the highest income quintile in adulthood. About every third of those originating from the lowest and the highest income family backgrounds also end up in the corresponding income level. Association between personal and parental income level is particularly explained by parental social class and education level, especially for men. Personal social class and education level mediate the effects of parental income level more notably among women than men. Single-parenting and periods of unemployment increase low income risk. Income mobility from bottom to higher income is more challenging than to the reversed direction. Results show that both parental and personal socioeconomic characteristics determine one's income level in adulthood. Eventhough Finland is considered to be a society with, compared to other Western countries, a high level of social and income mobility, results indicate that those with more privileged backgrounds benefit greatly. Meanwhile, more effort is clearly required for the others to achieve higher position in the society.

#### **73-4. INTERGENERATIONAL TRANSMISSION OF AGE AT FIRST UNION AND THE EFFECT OF PARENTAL DIVORCE**

*Elma Wobma and Carel Harmsen*

*EMail: e.wobma@cbs.nl*

Important life course transitions often have an intergenerational connection: e.g. young first-time mothers are likely to have young parents and people who grew up in disrupted families run a higher risk of divorce. This connection is related to the intergenerational transmission of attitudes, preferences and socio-economic resources. Because the intergenerational transmission of attitudes regarding marriage timing, the age at union formation as well as the age at first child has been shown, we expected the actual timing of the first union to be transmitted from parents to children as well. Using a register data set (N=1.3 million, birth cohorts 1976-1980), we studied the relationship between a woman's age at first union and her mother's age at first marriage, and likewise for men and fathers. This way, the direct transmission of union formation timing was studied. The indirect transmission was measured by incorporating socio-economic variables in the dataset. Additionally, relevant demographic data like sex, migrant background, birth cohort and experience of parental divorce were included. We used datasets specifically designed by Statistics Netherlands for relationship histories, optimal links between children and parents, and household composition and change, enriched with socio-economic data from the Social Statistical Database. First results confirm the intergenerational transmission of age at first union: there is a positive correlation between a person's and parent's age at first union, which is strongest for the younger age groups. We also found that men and women who had experienced parental divorce entered into their first union at significantly lower ages, but were less likely to get married. The effect of parental divorce on age at first union was very strong and remained so after controlling for age at leaving the parental home. Lower educated women started cohabiting earlier in life, but for men the effect of education was not very clear-cut.

### 73-5. A COMPARATIVE ANALYSIS OF EUROPEAN TRANSFERS OF TIME BETWEEN GENERATIONS AND GENDERS

*Emilio Zagheni and Marina Zannella*

*EMail: zagheni@demogr.mpg.de*

This study provides estimates of non-monetary transfers between generations and genders, and complements existing work developed by the National Transfer Accounts (NTA) project. We use time use data from the Harmonised European Time Use Survey (HETUS), and the Multinational Time Use Study (MTUS), to evaluate the extent of transfers of time between generations and genders across European countries. We estimate age and sex-specific profiles of time spent in unpaid productive activities (e.g., housework, childcare, care for the elderly). The unpaid working time is then allocated to those age groups that benefit from it (e.g., children for childcare, everybody in the household for housework) in order to estimate age-specific consumption profiles of time. We observe large transfers of time from females to males, and from adults to children and the elderly. Preliminary results indicate that there are similar patterns across countries, but also large variations. For instance, the extent of gender inequality in domestic work is much bigger in southern European countries. As we develop our models, we expect to be able to provide more precise statements on life course differences in household production and consumption, over time and across countries. The estimation of the time spent in activities such as childbearing, and caring for the elderly, allows us to evaluate the strength of intergenerational ties and the extent of incentives and disincentives for particular fertility choices in different social and institutional settings.

### 74-1. CONSISTENCY OF REPORTS ON ORPHANHOOD STATUS: INSIGHTS FROM A LINKAGE OF INDIVIDUAL RECORDS BETWEEN SUCCESSIVE CENSUSES IN SOUTHEASTERN MALI

*Bruno Masquelier and Véronique Hertrich*

*EMail: bruno.masquelier@ined.fr*

Due to the lack of full-fledged civil registration systems in sub-Saharan Africa, reports on the survival of parents collected in censuses and demographic surveys continue to play an important role in the estimation of adult mortality. Data on parental loss also serve to monitor trends in orphanhood prevalence, and provide information on health outcomes, schooling attainments and living arrangements of orphans. However, in many countries, as is the case in Mali, empirical estimates of orphan prevalence differ substantially from model-based estimates. These discrepancies have been ascribed to the “adoption bias”, which refers to the fact that a sizeable fraction of fostered orphans are misclassified as non-orphans, leading to implausibly low proportions of orphans. In this paper, we use a unique linkage of individual records between successive censuses in southeastern Mali to investigate the consistency of reports on orphanhood status. In light of this analysis, we review model-based estimates of orphan prevalence and adult mortality in Western Africa.

### 74-2. CENSUS MEASURES OF UNION FORMATION IN THE TIME OF COHABITATION

*Jeroen J. A. Spijker, Albert Esteve and Teresa Antònia Cusidó*

*EMail: jspijker@ced.uab.es*

If today Hajnal would have had to use proportions single from census data to characterize marriage regimes of countries in terms of marriage timing and intensity, he would be faced with the widespread phenomenon of non-marital cohabitation which is increasingly dis-

sociating relationship status from legal marital status. Writing almost half a century ago, Hajnal was already aware of the fact that there are several accepted forms of marital union in some societies whereby only some are classified as marriages in the census, i.e. mainly those declared by the civil or ecclesiastical authorities and since then, cohabitation has increased in varying degrees in most, though not all parts of the world. The main objective of the paper is therefore to document how historically as well as currently censuses have dealt with the issue of cohabitation. To do so, we have exhaustively analyzed of over 900 census questionnaires, representing almost 200 countries, thus covering most of the world's population from 1970 to 2010. The inventory showed that direct ways in which cohabitation is captured include using the question on marital status (e.g. "common-law marriage"), a separate question on consensual unions if available and from the relationship to the head of household question (e.g. "spouse"). Indirect way include the presence, or existence, of own children (the latter of which is usually only asked to women). Although researchers have criticized in the past the use of census data for research in demographic behavior as it does not permit the analysis of transitions, the advantages of census data (i.e. its sample density, its detail and its multi-level perspective) may outweigh its inconveniences depending on the objective of the research. For the final paper, the best available option to capture current cohabitation according to census questionnaires for each country will be presented.

#### **74-3. ON ESTIMATING A DE FACTO POPULATION AND ITS COMPONENTS**

*David A. Swanson and Jeff Tayman*

*EMail: David.swanson@ucr.edu*

This paper deals with estimating a population that is largely defined by the fact that neither its size nor composition are readily accessible from census data in the U.S. and the other countries that use the De Jure concept of population. The population in question is that of de Facto population, which is the concept of people enumerated, estimated, or forecasted where they are found rather than where they usually reside. Estimating this type of population as well as its components is an important, but not easy task. In an effort to develop this field of population estimation more fully, we provide a basic equation to define the De Facto population and an example of its use. We describe and discuss each of the components of this equation and also provide examples of estimates of its direct components and an implied component – the daytime population. Although we view a population impacted by a disaster as distinct from a De Facto population, we include a discussion of it here since many of the methods used to estimate a De Facto population are applicable.

#### **74-4. USING ADMINISTRATIVE DATA SOURCES TO ESTIMATE IMMIGRANT FLOWS TO SMALL AREAS**

*Nigel Swier, Ruth Fulton, Ian McGregor, Sofie De Broe, Amanda Sharfman, Rebecca Tinsley, Nicola White, Simon Whitworth, Alistair Dent, Jennifer Ford-Evans, Helena Howarth, Ben Winkley and Peter Youens*

*EMail: Nigel.Swier@ons.gsi.gov.uk*

National Statistics Offices are increasingly looking at the opportunities of using administrative data sources to supplement or replace surveys and censuses. The Migration Statistics Improvement Programme has been led by the Office for National Statistics in the UK. One of the aims of the Programme has been to improve the estimates of long-term international migration at a local level through the use of administrative data from employment, education and health administrative systems. International immigration figures for England and Wales are estimated using the International Passenger Survey (IPS) that asks immigrants for their reason for visit ('work', 'study' or 'other'). This paper presents the

method built on an approach proposed by the University of Leeds using a range of administrative sources. This is an approach that combines national level data from the IPS, which is specifically designed to meet the UN definition of a long-term migrant, with administrative data sources to provide estimates of migration that provide greater richness for small areas. Data linkage is used to minimise double counting across sources. This paper outlines the distributional model that has been developed and discusses how these methods could be used in the future to provide Census-type information on a regularly basis.

#### **75-1. STABLE POPULATIONS REVISITED**

*Anders Ahlbom, Sven Drefahl, Vladimir Canudas-Romo and Karin Modig*  
*EMail: anders.ahlbom@ki.se*

We collected data on the age structure, mortality, and fertility of the Swedish population from Statistics Sweden and the Human Mortality Database to investigate some aspects of the Swedish population at 1900 and onwards using stable population models. Using the fertility and mortality rates for the year 1900 we found a very good agreement between the actual population age structure and the corresponding stable population age structure for both sexes combined. This was not the case for the year 2000. In a second step we investigated the relative impact of a decreased fertility and a decreased mortality on the age distributions. The conclusion from this exercise is that the big changes to the age distribution that have taken place during the previous century largely are the result of lowered fertility, not of increased life expectancy. A discussion of the implications of the results will be ready for the EPC meeting.

#### **75-2. ANALYZING THE IMPACT OF MORTALITY ASSUMPTIONS ON PROJECTION OUTCOME WITH THE PROBABILISTIC POPULATION PROJECTION MODEL**

*Christina Bohk and Roland Rau*  
*EMail: christina.bohk@uni-rostock.de*

Mortality is one of the three core demographic parameters that drive population growth. In recent years, populations of many highly developed countries age due to increasing life expectancy and decreasing fertility. A growing proportion of elderly people is a key characteristic of aging populations. As elderly people are mostly affected by mortality, generating mortality assumptions will gain more importance in population projections. To analyze the impact of mortality assumptions on the projection outcome, we conduct a population projection with real-world data for Germany with the Probabilistic Population Projection Model (PPPM) that has several methodological advantages (in generating mortality assumptions and analyzing projected outcome) compared to typical projection models. A unique feature of the PPPM is the association of the projection outcome and its generating assumptions for each projection trial. This feature allows us to combine selected result paths to a distribution that have one or more certain assumptions in common. Therefore, we conduct one projection with multiple mortality assumptions, and compare thereafter result distributions that are a combination of result paths with different mortality assumptions. Our results indicate, that mortality assumptions indeed have a major impact on projected total population size in older populations, and that common probabilistic projection approaches can underestimate future uncertainty due to their restriction to only one assumption with stochastic variation for each model parameter.

### **75-3. ANALYTICAL SOLUTIONS AND APPROXIMATIONS TO GOMPERTZ-MAKEHAM LIFE EXPECTANCIES**

*Adam Lenart and Trifon I. Missou*

*EMail: lenart@demogr.mpg.de*

We study the Gompertz and Gompertz-Makeham mortality models. We prove that the resulting life expectancy can be expressed in terms of a hypergeometric function if the population is heterogeneous with gamma-distributed individual frailty, or an incomplete gamma function if the study population is homogeneous. We use the properties of hypergeometric and incomplete gamma functions to construct approximations that allow calculating the respective life expectancy with high accuracy and interpreting the impact of model parameters on life expectancy.

### **75-4. MEASURING THE RELATIVE PROGRESS OF MORTALITY IMPROVEMENT (RPM) TO EVALUATE STAGNATION AND SUDDEN INCREASE OF LIFE EXPECTANCY IN THE NETHERLANDS 1970-2009**

*Wilma Nusselder, Frederik Peters and Johan P. Mackenbach*

*EMail: w.nusselder@erasmusmc.nl*

Between 1970 and 2001 the Netherlands, formerly being a country with one of the highest life expectancy in the world, experienced a long period of stagnating or even increasing mortality levels followed by a sudden increase in life expectancy more recently. Using the two measures period life expectancy and cross-sectional average length of life (CAL) we compute a measure indicating the relative progress of mortality improvement (RPM), which we compare between the Dutch pattern with other countries and the record levels. Our analysis shows that the RPM is in particular a sensitive indicator of sudden period changes, and thereby seems to relate closely to public health policy. While smoking as a determinant of longevity operates more gradually over time, major reforms in health care seem to have a direct and large impact on period life expectancy. RPM thereby works as magnifier helping to identify effects and their relative size. We utilize this indicator for evaluating the trend in life expectancy in countries that experienced comparable patterns of stagnation and resumption, as Norway and Denmark. We conclude that health care policy has a direct and sustainable impact on longevity and need to be taken into account if variations in life expectancy between are explored.

### **75-5. SENSITIVITY OF FUTURE LIFE EXPECTANCY AT BIRTH AND AT AGE 65 DUE TO DIFFERENT MORTALITY FORECASTING METHODS**

*Lenny Stoeldraijer, Coen van Duin, Leo van Wissen and Fanny Janssen*

*EMail: l.stoeldraijer@cbs.nl*

With rapid population aging, mortality forecasting is of increased importance, especially for the insurance and pension industries. However, current approaches to project future mortality differ more and more both by and within countries, leading to different outcomes. We review the current methods behind official mortality forecasts in Europe, compare outcomes and assumptions of different projection methods within one country and compare the outcome of different types of methods for this country using similar explicit assumptions on the historical period and the jump-off rates. We compare direct extrapolation, the Lee-Carter model, the Li-Lee model, a cohort model, the separate projection of smoking- and non-smoking-related mortality and the official Dutch forecast. Statistical offices in Europe mostly predict mortality through extrapolation methods, but also make use of target values, expert opinion and cause-specific mortality. Approaches for the

Netherlands include explanatory models, the separate projection of smoking- and non-smoking-related mortality, and projecting the age profile of mortality. Clear differences in explicit assumptions, including the historical period, exist. The life expectancy at birth ( $e_0$ ) in 2050 varies by almost 5.5 years for both males and females. Using Dutch data for 1970-2009, different methods result in a range of 2.1 years for females and 1.8 years for males. For  $e_{65}$ , this is 1.4 and 1.9, respectively. Because the choice of the explicit assumptions add more to the differences than the choice of the forecasting approach, the choice for the projection method should not only be based on different approaches, but more importantly on the explicit assumptions.

#### **76-1. DOES RURAL OUTFLOW OF LABOUR CONTRIBUTE TO INFLOW OF IMMIGRANTS?**

*Amir Amiri and Nasser Mirzahosseini*

*E-Mail: amiri57@gmail.com*

In this paper, we focus on an internal site (Bouinzahra township and Khiaraj village which are located in the province of Qazvin in Iran) as one of the origins of internal outflows and as an attractive region for low-skilled immigrants. Drawing on the quantitative and qualitative data, the study aimed to trace the migration flows across this site over the past four decades and we argue that the processes of rural out migration in long-term can cause immigrants inflow in the opposite direction to the rural area. Demographically speaking the findings demonstrate that the population under study faces significant demographic changes. Since the majority of rural migrants are male, young, and better educated, the remaining population has concentrated in women and the elderly; to extent that according to the last census (2006), the sex ratio is about 92 males per 100 females and even some primary and secondary schools have closed due to the population decline of this village. A major finding is that while the predominant reasons of the outflow from rural areas are declared as unemployment or the search for better jobs and the desire to improve the conditions of life, on the other side an interesting phenomenon has appeared and surprisingly this site became attractive to immigrants not for the relative prosperity of the region but to fill employment openings. In other word, the gap left by rural workers moving out is filled by workers not from other parts of the country but from foreign immigrants. In conclusion, we argue that where there are evidences of the contribution and the linkage of the rural outflow of labour to inflow of immigrants, there is a potential for creating new category of study of internal and international migration, both at the theoretical and the empirical level.

#### **76-2. ITALIANS' AND FOREIGNERS' INTERNAL MOBILITY IN ITALY**

*Oliviero Casacchia, Cecilia Reynaud, Salvatore Strozza and Enrico Tucci*

*E-Mail: oliviero.casacchia@uniroma1.it*

Internal mobility in Italy, after periods of both stagnation and intense growth, different directions and actors, showed a marked increase also thanks to the contribution of the foreigners residing in Italy. In the last years, in fact, international immigration seems to have affected greatly the nature and features of internal mobility. Between 1995 and 2009, the changes of residence between Italian municipalities increased of 18%. Simultaneously, the contribution of the foreign population to internal migrations reached the level of 16%. The increase of the number of foreign residents, their greater propensity to move within the country, and structural factors such as the greater incidence of foreigners within the younger age-groups, may only partly explain these changes. We use data from the population register on changes of residence, which allows the knowledge of individual movements

and which is the source mostly used to study internal mobility. This work aims at assessing the structural characteristics of internal migrations of the foreign and the Italian population, focusing on the intensity of the flows, the concentration level of enrolments and cancellations, respectively by area of origin and destination, and lastly on the role played by populations and distances. Besides the classical measures, we adopt a gravitational model which allows to quantify the effects on internal mobility due to the dimension of the populations in the areas of origin and destination and the distance between macro-areas. The gravitational model in its most elementary formulation allowed to show that the three macro variables constitute an important not negligible component in the study of the migratory phenomenon. The estimates obtained for the years 1995, 2000 and 2005, clearly highlights the different behaviours of Italians and foreigners and a different evolution of phenomenon.

### **76-3. MIGRATION AND WELL-BEING: DID INTERNAL MIGRATION FROM SOUTHERN TO NORTHERN ITALY IN THE MID-TWENTIETH CENTURY AFFECT HEIGHT CONVERGENCE?**

*Donatella Lanari and Odoardo Bussini*

*Email: dlanari@stat.unipg.it*

Assessing human well-being through anthropometric measures, particularly height, is well documented in the literature. However the impact of internal migration on the biological welfare has not been yet documented, mainly for lack of detailed data. The phenomenon of a stature convergence across Italian regions during the second half of the twentieth century has been evidenced by several studies. Increases in stature were indeed higher in southern areas, which were initially characterized by height lower than the national average. However, this trend is also affected by the massive migratory flow of people from southern to northern Italy in the 1950s-60s, which greatly slowed the rate of increase in mean height in the receiving regions, since immigrants were on average shorter than the local residents. Based on conscripts' micro-data (1951 and 1980 cohorts), we aim to estimate the contribution of South-North migrations on over-estimation of the height convergence of southern and island areas. We exploit the dataset which includes a representative sample of 111,834 Italian conscripts born in 1951 and 162,295 born in 1980. Our research question is the following: given the size of migration flows from South to North of Italy and the variety of ethnic profiles, what is the contribution of internal migration, operating through decreased rates of height growth, in explaining convergence stature in Italy? We provide estimates of the impact of internal migration during the economic boom in term of speed of stature convergence combining the information concerning the places of residence and municipality where the military conscript was born. Results indicate that migrations may explain about 20-25 percent of the high speed of convergence of stature across areas of Italy in the 1950s and 1960s, whereas lack of identification of migration flows yields an over-estimation of the well-being changes in people living in the South of Italy.

### **76-4. DOES MIGRATION MAKE YOU HAPPY? A LONGITUDINAL STUDY OF INTERNAL MIGRATION AND SUBJECTIVE WELL-BEING**

*Beata Nowok, Maarten van Ham, Allan Findlay and Vernon Gayle*

*Email: beata.nowok@gmail.com*

People migrate for a variety of reasons but most expect to be better off after migration. We investigate whether individuals who migrate within the UK actually become happier and, if yes, when and for how long. Thus we extend research conducted to date on migration impacts which has focused almost exclusively on the labour market outcomes and mate-

rial well-being of migrants. Using life satisfaction responses from 12 waves of the British Household Panel Survey (BHPS) we observe year-to-year changes in individuals' level of life satisfaction both prior and after migration events. A temporal pattern of migrants' happiness is derived employing a fixed-effects model. The analysis is conducted separately for men and women. The latter are often trailing spouses who sacrifice their labour-market outcome for the benefit of the household as a whole. At the same time, however, men and women may be affected differently by their labour and non-labour market gains and losses. We find evidence of significant changes in happiness around the time of migration. Migration is preceded by a considerable drop in life satisfaction. After migration people bounce back to their original happiness level. Nonetheless the positive effect of migration is transient and the life satisfaction drops steadily in the years after a migration event. Unlike in the case of labour market implications of migration, life satisfaction trajectories are remarkably similar between men and women.

#### **76-5. INTERNAL MOBILITY OF INTERNATIONAL MIGRANTS: THE CASE OF BELGIUM**

*Didier Willaert and Helga A. G. de Valk*

*Email: dwillaer@vub.ac.be*

Research on international migrants traditionally focused on their international moves only. In this study we expand on this work by looking at the internal mobility of international migrants living in Belgium. In our paper we will pay special attention to the case of Brussels, the main urban area in Belgium. This article studies the level of internal mobility of international migrants as compared to the majority group. We also test whether the same or different patterns of mobility are found among different origin groups in Belgium. Second, we study where international migrants move to by distinguishing between different areas and regions. Finally, we question how and to what extent neighbourhood characteristics are important for internal mobility of international migrants. Our work is based on the 2001 census and the 2006 register data of Belgium including the total population. The data are unique as beside regular data we also have detailed information on the evaluated and objective neighbourhood characteristics.

#### **77-2. PRIORITIES AND ISSUES OF REPRODUCTIVE HEALTH IN POLICIES AND PROGRAMS IN BANGLADESH: A RESULT BASED POST ICPD ANALYSIS**

*Kabita R. Bhadra and Sadananda Mitra*

*Email: arunima2kbd@yahoo.com*

There was serious concern of low performance of reproductive health indicators in Bangladesh including maternal mortality ratio which was almost plateau over last decades. There was no success story in other areas of reproductive health except family planning before ICPD. After the paradigm shift of ICPD-94, there were radical changes of priorities agendas of reproductive health in the policy and program level. As a result, there was substantial improvement in the arena of reproductive health in recent years. The maternal mortality ratio has been reduced sixty six percent in 2010 from 1991. There was also significant progress in the health system of the country including wider service delivery up to the doorstep at the community level, quality of care, public private partnership, demand side intervention etc. The aim of the paper is to dissect the policy documents of the country to show how the changed priority agendas, adopted in reproductive health after ICPD,



accelerated the progress in this arena. This will ultimately help to achieve the MDG-5 targets by 2015. The policy issues in reproductive health also focused here that could retard some components to achieve the millennium targets. The top down policy planning in health in the country failed to capture some regional/micro level issues that will lag uniform performance of reproductive health services. As a result, a section of population will be marginalized and remain vulnerable even if national average is on the track. There needs demand driven bottom-up policy formulation in reproductive health in Bangladesh pertaining to penetrate the benefits to every corner irrespective of regions and backward communities.

### **77-3. PERCENTILE COSTS OF DELIVERY CARE AND INFLUENCE OF JANANI SURAKSHA YOJANA PROGRAMME ON COST-TO-FAMILY FOR DELIVERY CARE IN EIGHTEEN MAJOR STATES OF INDIA**

*Hanimi Reddy Modugu and Ashok Kumar*

*EMail: red dyhanimi@rediffmail.com*

This study provides evidence on direct costs-to-family for seeking delivery care at different institutions or attended by different attendants. In India for half of the population in their respective cohorts: a government institution delivery costs (Rs 1100) five-times the home delivery (Rs 200); and a private institution delivery costs (Rs 4300) four-times the government institutional delivery and twenty times the home delivery. High costs associated with institutional care coupled with limited reach of JSY program (15%) is responsible for 52% women opting for home delivery, even though this situation seemed to have improved in 2009 as compared to DLHS-3 survey period. A caesarean-section in a private institution costs thrice the government institution, and high costs associated with private institutional care is forcing 30-50% families to borrow money/sell property, irrespective of JSY benefit. The results of this study are useful to policy-makers for developing state-specific JSY implementation strategies, taking into account the costs incurred by families on delivery, according to place and type of delivery and the proportion of families that have borrowed money/sold property. We conclude that, there is still a strong need for finding innovative methods for JSY implementation tailored to the needs and performance of the states, to achieve 80% institutional deliveries target before 2015.

### **77-4. HETEROGENEITY IN MATERNAL HEALTH CARE UTILIZATION AND FACILITY ADEQUACY AT HEALTH CENTERS: A MICRO LEVEL APPROACH**

*Rachana Patel*

*EMail: contact.rachi@gmail.com*

This study investigates the association between adequate facility at health centers and utilization of maternal care services. Data from DLHS 3(2007-2008) were used to meet the purpose. Southern region always shows better performance in all way compared to north-central region. Further, only one focused region was studied and where hypothesis received confirmation from regression i.e. Proximity to health services with doctor, nurse or with doctor/nurse both (adequate manpower) was always significant. Spatial autocorrelation in the institutional delivery among the neighboring districts of Middle East and some of Western UP and the significance level to accept the substantial spatial correlation with the service utilization indicators(Moran's I, LISA). Health service availability and average distance from villages' indicator captures the spatial structure of institutional births(Bi-LISA). Service utilization indicators shows substantial spatial structure (Moran's I, LISA). Spatial regression models significantly capture the effect of facility adequacy on utilization more compared to OLS model(R-square).

### **78-1. PERCEIVED STIGMA AND DISCRIMINATION TOWARDS PEOPLE LIVING WITH HIV/AIDS AMONG YOUNG PEOPLE IN TAMIL NADU, INDIA**

*Ramesh Chellan, Periyathambi Rajendran, Bimal Charles and N. Ganeshan*

*E-Mail: rameshchellan@gmail.com*

In India, prevalence of HIV/AIDS is relatively high and very little is known in the context of HIV/AIDS related stigma and discrimination. To prevent HIV/AIDS associated stigma and discrimination, it is important to understand the factors related to stigma and discrimination towards People Living with HIV/AIDS (PLHAS) in India. A community based survey of 796 male youth in urban slum aged 18-23 years is conducted in Tamil Nadu. Univariate analyses and multivariate logistic regression analyses are used to determine the perceived stigma and discrimination towards PLHAS and the factors associated with stigma and discrimination. Sixty percent of respondents perceived any one stigma and discrimination towards PLHAS. The respondents perceived that PLHAS as characterless (43.5 percent), they will not continue friendship or relationship with them (41.1 per cent), and they have to be isolated (21.2 percent). Multivariate analysis suggests that below 21 years of male youth, primary and below, those who never involved in sexual activities and misconception related knowledge of HIV/AIDS prevention are significantly more likely to state perceived stigma towards PLHAS. Therefore, all interventions need to address stigma and discrimination as part of their focus and behavior change communication also need to address HIV/AIDS related stigma and discrimination in order to bring change in the behavior among youth slum towards PLHAS.

### **78-2. THROUGH WHICH PATHWAYS DO COHABITING MARRIED COUPLES BECOME HIV SERODISCORDANT? EVIDENCE FROM A LONGITUDINAL STUDY IN RURAL MALAWI**

*Kim Deslandes and Simona Bignami*

*E-Mail: kim.deslandes@umontreal.ca*

In sub-Saharan Africa, transmission of HIV occurs primarily through heterosexual intercourse. HIV discordance among cohabiting couples is widespread. The importance and challenges in preventing HIV transmission within serodiscordant couples are well recognized but poorly understood. Most existing studies mainly rely on cross-sectional data and are thus prone to selection bias. This limits developing effective joint voluntary counseling and testing programs, which have shown promising results for reducing HIV transmission in some countries. We use data from a large-scale longitudinal couple survey in rural Malawi (the Malawi Diffusion and Ideational Change Project) to explore the pathways through which cohabiting married couples become HIV serodiscordant, and their implications for HIV prevention. First, we use sequence analysis to describe and categorize the different marital trajectories of MDICP couples. Second, we use these groups of marital trajectories as the main independent variable to predict couples' HIV status at the time of the most recent survey to which they participated.

### **78-3. DEMOGRAPHIC CHANGE, PROSTITUTION, AND SEXUALLY TRANSMITTED INFECTION RATES IN CHINA**

*Avraham Ebenstein and Ethan J. Sharygin*

*E-Mail: aebenste@rwj.harvard.edu*

Since 1979, China has experienced an explosion in the sex ratio at birth. In 2005, there were 25 million more men than women below the age of 20. We examine the implications of having large numbers of men fail to marry on the supply and demand dynamics of sex

work, with a focus on how this may affect the prevalence of sexually transmitted infections (STIs). We present an account of the massive increase in sex work following the economic reforms in the late 1970s. We then analyze the current dynamics of demand and supply for sex work in China, using both national census data and detailed microdata on sex workers. We find a clear link between high population sex ratios, the prevalence of sex work, and STI rates. We conclude our analysis with a discussion of policy responses in light of an anticipated increase in sex work.

#### **78-4. SPOUSAL COMMUNICATION AND WOMEN'S HEALTH-SEEKING BEHAVIOR FOR STDs: THE ROLE OF SEASONAL MIGRATION**

*Arusyak Sevoyan and Victor Agadjanian*

*Email: arusyak.sevoyan@gmail.com*

This study adds to the scant research on the association between labor migration and sexually transmitted diseases (STDs). It builds upon earlier findings that left-behind women had higher risks of contracting STDs than women married to non-migrants. Using a sub-sample of women reporting STD symptoms in a 2007 survey in rural Armenia, a setting with high rates of seasonal male migration and STDs, we examine how migration influences spousal communication about STDs, and how this association, in turn, affects women's health seeking behavior. The preliminary findings show that migrants' wives reporting STD symptoms were less likely to talk to their husbands about these symptoms than women married to non-migrants. We also find that women married to migrants were less likely to seek professional care for their STD symptoms than those married to non-migrants, and that this effect was positively moderated by their communication about these symptoms with their spouses.

#### **78-5. INTIMATE PARTNER VIOLENCE AND SYMPTOMS OF SEXUALLY TRANSMITTED INFECTIONS AMONG MARRIED INDIAN WOMEN**

*Amy K. Winter and Rob Stephenson*

*Email: awinter@princeton.edu*

Intimate partner violence (IPV) and its negative health effects on women is an increasingly documented and significant public health topic. Evidence suggests that high levels of IPV exist in India where cultural norms surrounding the value and treatment of women act to increase IPV tolerance. This study examines the association between self-reported IPV and symptoms of sexually transmitted infections (STI) among a sample of 65,610 married Indian women (age 15-49). There is relatively little work that has examined associations between intimate partner violence (IPV) and sexual health outcomes for women in low income countries. Data are taken from the 2005-2006 Indian National Family Health Survey-III. Logistic regression models are fitted to two symptoms of STIs (genital sores, and abnormal genital discharge). Key covariates are experiences of three types of violence (verbal, physical, and sexual), and the combined effect of multiple types of violence on STI symptoms. Results indicate that after controlling for other covariates, the experience of verbal, physical, or sexual IPV is independently associated with increased odds of STI symptoms. Additionally, there is a demonstrated association of trend between the number of types of IPV and STI symptoms. The more types of IPV a woman experiences the more likely she is to report genital sores and abnormal genital discharge (test for trend  $p$ -values  $< 0.05$ ). Women who reported all three types of IPV are 4.6 times more likely to report a genital sore and 3.2 times more likely to report abnormal genital discharge, compared to women with no report of violence. It is important to link IPV and gynecologic health services, especially for women who experience all three types of IPV. Health care providers

need be attuned to the possible role of IPV when women present for gynecologic care with STI symptoms.

#### **79-1. A COMPARISON OF THE CANCER-RELATED MORTALITY OF FRANCE AND ITALY USING THE MULTIPLE CAUSE-OF-DEATH APPROACH**

*Aline Desesquelles, Antonio Salvatore, Marilena Pappagallo, Luisa Frova, Monica Pace, France Meslé and Viviana Egidi*  
EMail: [alined@med.fr](mailto:alined@med.fr)

In the literature, multiple cause-of-death (MCOD) data have been used in order to re-evaluate mortality levels attributed to a given condition, as well as to examine what are the most frequent/specific associations of causes involving this condition. We use this approach to analyse and compare cancer-related mortality of Italy and France. Though treatments have improved, cancer remains a very lethal disease. Thus it is expected that cancer often is selected as the underlying cause of the death but it may vary according to anatomic sites. Cancers with the best survival profiles may be considered as chronic conditions, and the presence of comorbid conditions among long-term cancer survivors is likely to become more frequent. Data for the two countries are for year 2003. They are based on all mentions reported on the death certificates by the certifying physicians. The similarity of the results for the two countries is very striking. We find that the re-evaluation of the mortality levels is modest for most anatomic sites. The impact of the MCOD approach is larger for malignant neoplasms of the skin and of the prostate. For all anatomic sites, the most frequent associations are with neoplasms, diseases of the circulatory system, and diseases of the respiratory system, but the picture is very different for the most specific associations. The simultaneous reporting of a neoplasm as underlying and contributing cause of the death is a feature of the cancer-related mortality. As far as we know from the medical state of the art, we are able to categorize all other associations according to five lines of interpretation ("degeneration of the contributing cause", "risk factor for cancer", "common cause", "consequence / complication of cancer", "symptom of cancer").

#### **79-2. ASSOCIATION BETWEEN METABOLIC RISK FACTORS AND CARDIOVASCULAR DISEASE MORTALITY: POPULATION-LEVEL ANALYSIS IN HIGH INCOME COUNTRIES**

*Mariachiara Di Cesare, James Bennett, Nicky Best, Sylvia Richardson and Majid Ezzati*  
EMail: [m.di-cesare@imperial.ac.uk](mailto:m.di-cesare@imperial.ac.uk)

Starting from the 1970s a consistent decline in the mortality level from cardiovascular diseases has been observed among high income countries. High systolic blood pressure, high serum total cholesterol, high and low fasting plasma glucose, and overweight/obesity are known risk factors for cardiovascular disease at the individual level but less is known about their associations at the population level. We will use data of previously reported estimations for risk factors and observed CVD mortality rates to disentangle the association at population level. A Negative Binomial regression, to account for over-dispersion, will be used to model the impact of the four metabolic risk factors on the level of cardiovascular disease mortality, separately for each sex. preliminary results show a changing pattern of association between risk factors and cardiovascular mortality by year, country, age, and sex.

### **79-3. ADULT MORTALITY IN THE ASIAN PART OF THE FORMER USSR: SIMILARITY AND DISPARITY OF EPIDEMIOLOGICAL PROFILES IN ARMENIA, GEORGIA AND KYRGYZSTAN**

*Géraldine Duthe, Michel Guillot, France Meslé, Jacques Vallin, Irina Badurashvili, Karine Kuyumjyan, Liudmila Torgasheva and Mikhail B. Denissenko*

*Email: geraldine.duthe@ined.fr*

The former USSR region has been experiencing a major health crisis. In Russia – the largest and most studied former Soviet republic – unfavorable mortality trends have been observed for several decades, and these trends have been attributed to a large extent to high consumption of strong alcoholic beverages. In this presentation, we focus on adult mortality trends in three countries located in the Asian part of the former USSR: Armenia and Georgia in the Caucasus, and Kyrgyzstan in Central Asia. We examine similarities and differences in the epidemiological profiles of these three countries. We find that mortality attributable to alcohol contributes to a great extent to adult mortality levels in these countries. However, we also find that levels and trends vary greatly from one country to another. These differences may be explained by differences in the proportion of the population that is Slavic, but also by cultural differences among native populations in the production and consumption of alcoholic beverages.

### **79-4. OCCUPATIONAL INEQUALITIES IN CAUSE-SPECIFIC AND ALL-CAUSE MORTALITY IN EUROPE**

*Marlen Toch, Gwenn Menvielle, Terje A. Eikemo and Johan P. Mackenbach*

*Email: marlen.toch@svt.ntnu.no*

Although life expectancy increases we observe substantial differences in mortality between socioeconomic groups. These inequalities differ considerably between European populations. Such inequalities are unfair, unnecessary and potentially avoidable. Cross country comparisons can help identify the scope for reduction. Europe is a unique region in this respect, as inter country population characteristics as well as history and development between countries differ, and highly reliable and comparable data on mortality and socioeconomic position are available in the majority of the countries. Previous research focussed mainly on educational rather than occupational class inequalities. Thus, the aim of this study is to investigate occupational inequalities in cause-specific and all-cause mortality in Europe at the start of the new millennium. We analyse nationally representative data around the year 2005 on cause-specific and all-cause mortality by occupational class from 12 populations in Europe ranging from Denmark, Finland, and Sweden in the North, to Austria, England and Scotland, France, and Switzerland in central Europe, and Italy (Turin and Tuscany) and Spain (the Basque country and Madrid) in the South. This cross-sectional and longitudinal data was obtained from population censuses and mortality registries from each investigated population. Data were centrally harmonized which enhances cross-country comparability. Men from age 30 to 59 are analysed and Occupational class is analysed according to upper and lower non-manual workers, skilled and unskilled manual workers, as well as self-employed and farmers combined. In order to assess the magnitude of occupational class inequalities, rate ratios for cause-specific and all-cause mortality are estimated with Poisson regression. We corrected the rate ratios to account for an underestimation of mortality inequalities due to exclusion of economically inactive persons. This study contributes to the aim of tackling inequalities in Europe, as it analyses mortality inequalities by occupational class with recent, comprehensive and comparable data from 12 European countries.

## 79-5. THE HEALTH STATUS OF TURKISH IMMIGRANTS IN GERMANY

Annelene Wengler

*EMail: wengler@wiso.uni-koeln.de*

When studying immigrants we often compare them to the native population within a country. This comprises one major problem: we compare two highly heterogeneous groups which in general seem to have only few things in common. Among other factors, they differ with regard to their socioeconomic status, their living, and working conditions. This especially holds true for European countries where immigration has been occurring only for a few decades and the immigrant population is still relatively young. This problem can be solved by applying propensity score matching. The study at hand focuses on the health status of Turkish immigrants currently residing in Germany. Previous results in the field are rather inconclusive and do not clearly indicate a better or worse health status of immigrants compared to German natives. Data from the Generations and Gender Survey (2005/2006) is used which includes a sufficiently large sample of Turkish immigrants (4,000) and German natives (10,000). By matching Turkish immigrants and German natives with similar socioeconomic characteristics and coping resources no differences in health status can be observed. More precisely: this shows, that the differences between Turkish immigrants and German natives which are observed in other studies (and by applying regular regression models to the data) might simply be a matter of differences in socioeconomic status and the allocation of resources. Furthermore, we differentiate between first and second generation immigrants. This allows for thoroughly analyzing the special situation of second generation immigrants, which comprise characteristics of two different societies.

## 80-1. AMBIVALENCE ABOUT CHILDREN IN THE FAMILY BUILDING PROCESS IN SWEDEN

Eva Bernhardt and Fran Goldscheider

*EMail: eva.bernhardt@sociology.su.se*

Research on the effects of attitudes towards children and subsequent childbearing has focused on relatively simple measures, but as in studies of intergenerational relationships, ambivalence may characterize the attitudes of young adults when they consider decisions related to parenthood. Many may have both strong positive feelings, such as about children confirming adult status, and strong negative feelings, given the great costs of children, both in time and money. In Sweden, the primary costs of children are temporal, because of generous paid parental leave, subsidized child care, and child allowances. Nevertheless, Sweden has shared in the growth of norms of intensive parenting, greatly increasing the time costs of children. We examine the effects on fertility (first and second births) of ambivalent attitudes towards children. Preliminary results show that those who hold positive attitudes about the value of children in their lives, transition earlier to parenthood, especially if this is combined with less concern about the time costs to their freedom. But even the 'ambivalent', i.e. those who combine positive expectations with great concern about restricted personal freedom, make the transition to parenthood almost as quickly. We hypothesize that 'ambivalence' (mixed feelings about becoming a parent) as reported after the transition to parenthood has a greater negative impact on continued childbearing (second births).

## **80-2. FIRST BIRTHS IN SWEDEN: SELF-PERCEIVED AND OBJECTIVE CONSTRAINTS ON CHILDBEARING**

*Sara Ström and Eva Bernhardt*

*E-Mail: sara.strom@sociology.su.se*

Using data from two independent sources – The Swedish Housing and Life Course Cohort Study (HOLK) and the Young Adult Panel Study (YAPS) – we will analyze self-perceived and objective constraints on first births in Sweden. As point of departure, we take the widely cited work in studies of population and fertility “Becoming a parent in Europe” by John Hobcraft and Kathleen Kiernan (1995). They argue that five factors together form the prerequisites for childbearing in modern societies: partnership, education, employment, housing and security. We will analyze first birth propensities in relation to the following three normative factors: educational attainment, steady income and housing. We will focus on 1) the relative importance of each factor in relation to the other factors and 2) the importance of different interactions between these factors. The analyses are based on information about married and cohabiting respondents only. We hypothesize that, in addition to having entered a coresidential relationship, having a completed education is regarded as the first step, and a prerequisite for achieving an adequate housing situation and obtaining a sufficient income to start a family. As for housing and income, a solution to the housing issue can be obtained after a pregnancy has occurred or even after the birth of the first child, but an adequate income should preferably be attained beforehand. Preliminary results indicate that not having a sufficient income seems to be the crucial self-perceived constraint on childbearing for men, likely reflecting the pervasive strength of the male provider role ideology in Sweden (in the minds of young men anyway). Using register data and self-reported housing biographies, housing seems to be the factor of greatest importance for first births from an “objective” perspective.

## **80-3. FROM FERTILITY INTENTIONS TO REALIZATIONS. IMPLEMENTING THEORY OF PLANNED BEHAVIOR WITH GRAPHICAL MODELS**

*Letizia Mencarini, Daniele Vignoli and Anna Gottard*

*E-Mail: letizia.mencarini@unito.it*

Our paper studies fertility intentions and their realization. We derive the theoretical model from the social psychological model of Theory Planned Behavior (TPB), and test its validity in a low fertility context (i.e. Italy). We move beyond existing research and use the theory of graphical models to have a precise understanding and a formal description of the developmental process of the fertility-making process, by representing possible dependencies among all the variables of a multivariate distribution with a chain graph. Overall our analysis strongly supports the validity of TPB for the Italian context and, therefore, provides an input to the systematic study of fertility decision-making processes. However, our analysis also gives some channelling evidence that partly complicates the application of TPB to fertility research, especially as regards the role of background factors.

## **80-4. ARE YOU READY FOR A CHILD? MIXING METHODS TO UNDERSTAND FERTILITY INTENTIONS**

*Isabella Buber-Ennser and Katrin Fliegenschnee*

*E-Mail: isabella.buber@oeaw.ac.at*

Combining qualitative and quantitative methods and using a mixed method approach is rarely done in demography. The current paper aims to better understand the concept of fertility intentions with regard to family formation. During problem-centred interviews with

childless men and women, not only economic circumstances but also the issue of feeling ready was argued as being crucial for the decision to have a child. Based on these qualitative results, additional questions were included in the Austrian “Generations and Gender Survey” (GGS) which allow to analyse the dimension of being ready also quantitatively in a national representative dataset. Our quantitative results revealed that the feeling of being ready has additional explanatory power for childbearing intentions among childless men and women in Austria.

#### **80-5. HOW REAL ARE REPRODUCTIVE GOALS? UNCERTAINTY AND THE CONSTRUCTION OF FERTILITY PREFERENCES**

*Maire Ni Bhrolchain and Eva Beaujouan*

*EMail: mmb2@soton.ac.uk*

Many women in developed countries give uncertain answers to standard survey questions on fertility intentions. The prevalence of uncertainty is even higher on alternative definitions that incorporate the expected time to first/next birth. On a broad definition, uncertainty is near universal at the youngest ages in Britain, and declines in frequency with age. The finding is surprising, since uncertainty is absent from theoretical accounts of family formation. Women and couples are, rather, assumed to have clear preferences and intentions in relation to family building. We present evidence and arguments to show that uncertainty is both real and soundly based. Drawing on psychology and economics, we propose a new theoretical approach, suggesting that fertility preferences are constructed through the life course. A constructive account of preferences and intentions can explain both their instability and their inconsistency with fertility outcomes. Preferred family size may be a discovery rather than a goal.

#### **81-1. INTERGENERATIONAL EXCHANGE OF INSTRUMENTAL SUPPORT**

*Tak Wing Chan and John Ermisch*

*EMail: tw.chan@sociology.ox.ac.uk*

We use data from the British Household Panel Survey to explore the pattern and dynamics of the exchange of instrumental support between adult children and their non-coresident parents. Viewed in the cross-section, the level of actual instances of intergenerational exchange in contemporary Britain is rather low. Viewed longitudinally, we report an asymmetric pattern in the ebb and flow of exchange, with stopping probabilities being multiples higher than starting probabilities. Furthermore, when the finance or health of adult children worsens, parental help is often not forthcoming, but when their finance and health improves, parental help is likely to be scaled back. Nonetheless, there is evidence that parents and adult children are supportive of each other at critical moments of life transitions, such as divorce, the birth of a child, or widowhood. Together, these results paint a nuanced picture of the significance of the extended family in contemporary Britain, and give qualified support to the latent kin matrix hypothesis.

#### **81-2. FAMILY NORMS AND FINANCIAL TRANSFERS FROM ADULT CHILDREN TO PARENTS IN EUROPEAN REGIONS**

*Maaïke Jappens and Jan Van Bavel*

*EMail: Maaïke.Jappens@vub.ac.be*

Intergenerational family solidarity is still alive and well in Europe. As research shows, many parents and adult children support each other with financial gifts, care and household help. While time-related transfers are generally directed both towards the older and the younger generation, cash mainly flows downwards. Therefore, most research focuses



on financial support from parents to children. Yet, in some places, a substantial part of the elderly does receive financial gifts from their children. This kind of support may even become more important with the aging of European populations and the pressure upon pension schemes. Based on data from the second round of the European Social Survey, we are interested in European patterns of financial support of older parents by their adult children. Are these patterns mainly determined by economic and institutional factors, or does the cultural climate play a role too? To answer these questions, we work on the level of regions nested within countries. This allows us to make use of multilevel techniques, and to account for the heterogeneity that does exist in European countries. Unlike most other comparative research about intergenerational family support, we include Western as well as Eastern Europe in our analyses.

### **81-3. CHANGING CONTEXTS OF FAMILY AND INTERGENERATIONAL FAMILY SUPPORT**

*Carin Lennartsson, Johan Fritzell and Merrill Silverstein*

*Email: carin.lennartsson@ki.se*

Despite the maturation of welfare states, family solidarity continues to be strong and mutual intergenerational support is a central part of many, if not all most families. How intergenerational support late in life has changed in Sweden as a result of the changing context of family life is unclear. It is also unclear if and how it affects each child within the same family. This study examines intergenerational intra-family financial and social support in Sweden, in the form of money transaction and instrumental support. The first question to be addressed is whether there is a difference between stable and disrupted families in intergenerational support? The second question is whether there is a genetic basis for supportive exchanges? That is, are financial transfers more likely to go to biological children? And are biological children more likely to help and care for older parents than non-biological children? Using data from two a nationally representative surveys – the Swedish panel study of living conditions of the oldest old (SWEOLD) and the Level of living study (LNU), the results will discuss long-term consequences of changes in the family structure on later intergenerational intra-family support. We will also discuss the findings from a class and gender perspective in the context of the Swedish welfare state.

### **81-4. THE LATE LIFE LEGACY OF LEAVING HOME**

*Thomas Leopold*

*Email: thomas.leopold@uni-bamberg.de*

This study investigated how earlier patterns of leaving home affected parent-child relations in later life. We proposed different pathways (relationship quality, structural opportunities, long-term reciprocity, and processes of mutual socialization) by which the time spent in the parental home may set the stage for intergenerational solidarity in aging families. Using fixed-effects models with data from SHARE (N = 7,630 parent-child dyads), we assessed the effects of earlier coresidence on intergenerational proximity, contact frequency, and support exchange more than a decade after children had left home. We found that compared to siblings who moved out “on time”, late home leavers lived closer to their aging parents, maintained more frequent contact, and were more likely be providers as well as receivers of intergenerational support. Overall, this evidence paints a positive picture of extended coresidence, revealing its potential of strengthening intergenerational ties across the life course.

## **82-1. FAMILY LIFE AND DEVELOPMENTAL IDEALISM IN YAZD, IRAN**

*Mohammad J. Abbasi-Shavazi, Abbas Askari-Nodoushan and Arland Thornton*

*E-Mail: mabbasi@ut.ac.ir*

This paper is motivated by the theory that developmental idealism has been disseminated globally and has become an important international force for family and demographic change. With a focus on Iran, we examine the extent to which developmental idealism has become part of a world culture that is being disseminated globally to ordinary people. Using data collected in 2007 from a sample of women in Yazd, Iran, we find considerable support for the expectation that many elements of developmental idealism have been widely disseminated. Statistically significant majorities of respondents associate development with particular family attributes, believe that development causes change in family life, believe that fertility reductions and age-at-marriage increases help foster development, and perceive Iran as a dynamic country with family trends headed toward modernity. Multivariate analyses also demonstrate that such factors as parental education, respondent education, and income affect adherence to developmental idealism in predicted ways.

## **82-2. FAMILY POLICIES IN QUEBEC AND THE REST OF CANADA: IMPLICATIONS FOR FERTILITY, CHILD CARE, WOMEN'S PAID WORK AND CHILD DEVELOPMENT INDICATORS**

*Roderic Beaujot, Zenaida R. Ravanera and Jane-Ching (Jiangqin) J. Du*

*E-Mail: rbeaujot@uwo.ca*

Given its unique demographic situation, and its desire to be in control of its own destiny, Quebec has evolved family policies that differ considerably from the rest of Canada. The Civil Law tradition in Quebec, in contrast to Common Law in the rest of the country, has meant that there was already a tradition of alternative forms of marriage in Quebec. The extent of cohabitation, along with the greater policy attention to family questions, has brought a more Nordic model in Quebec, in contrast to a more Liberal model in the rest of the country. Quebec differs considerably in terms of child care (since 1997) and parental leave (since 2006). Survey data indicate that attitudes to alternative forms of child care have come to differ considerably between Quebec and the rest of Canada. The Nordic model has helped Quebec to avoid particularly low fertility. The child care policy was designed to both improve child welfare and to enhance women's opportunities in employment. Comparisons to other provinces indicate that women's paid work has benefitted, but not child development indicators. It may be that universal programs do not permit as much focus on disadvantaged children, where early intervention programs have a larger impact. The different legal traditions and historical context of Quebec compared to the rest of Canada have brought differential understandings regarding cohabitation, seen as a common law union in the rest of Canada, but as a union libre or union de fait in Quebec. Common law is largely treated as equivalent to marriage, while union de fait is more of an alternative to marriage. After comparing family policy developments in Quebec to those of the rest of Canada, this paper considers implications in terms of fertility, child care, women's paid work, and child development indicators.

### 82-3. GENDER EQUALITY PERCEPTIONS, DIVISION OF HOUSEHOLD WORK AND PARTNERSHIP BREAK-UP IN SWEDEN IN EARLY 21ST CENTURY

*Livia Olah and Michael Gabler*

*E-Mail: livia.olah@sociology.su.se*

With the increase in female employment and the decrease in gender labour specialization there has also been a marked change in men's and women's gender role attitudes. An increasing share of both genders has come to prefer gender egalitarianism. Here we study the impact of gender equality perceptions, i.e. the interplay between gender role attitudes and behaviour in terms of sharing unpaid work with one's partner, on partnership stability. We focus on Sweden, a country with long experience of the dual-earner model and policies supporting female labour-force participation while also promoting men's active engagement in family tasks. We test four models of marriage (partnership): the companionate model, the institutional model, the equity model, and the gender model (see Wilcox & Nock 2006), all suggesting different associations between gender role attitudes, the gender division of paid and unpaid work, and the risk for divorce/separation. For the empirical analyses we use data from the Swedish Young Adult Panel Study (YAPS) conducted in 1999, 2003 and 2009. Parametric survival model (exponential model) is the tool of analysis. Our findings show that both women and men who hold gender egalitarian views but experience a traditional division of work in their partnership are substantially more likely to divorce/separate than those with egalitarian views who also share housework equally. These results speak in favour of the equity model of marriage. Next, we plan to analyze parents separately, taking into account their division of childcare work.

### 82-4. MARRIAGE AS A SUBJECTIVE CHOICE – CHANGING ATTITUDES TOWARDS FORMAL UNIONS IN THE LOWEST-LOW FERTILITY COUNTRY

*Iga Sikorska*

*E-Mail: iga.sikorska@gmail.com*

Polish society represents traditional family values with marriage remaining constantly the dominant form of a relationship and cohabitation rate at the very low level (on average around 3%). During years of democratic regime the number of marriages decreased by about 25% which was accompanied by postponement of marriage, decreasing stability of relationships and enormous increase in the number of divorces. Those signs provoke to thinking about reasons for such a change especially considering that marriage remains first step towards independence in the transition to adulthood process. Assuming that not only the objective determinants shape the process of union formation but the subjective attitudes as well, the aim of the analysis is to develop the set of distinctive perceptions of marriage characterized by the individual norms and values associated with formal relationship. The author using two Polish Retrospective Surveys 2001 and 2006 attempted to distinguish various attitudes towards marriage based on the subjective evaluation of importance of traditional values and incentives, socio-cultural norms attributed to marriage, division of household duties and mutual relations between spouses as well as perception of divorce and individual aspirations. To deal with the latent construct of combinations of norms and values expressed in qualitative scale the explanatory latent class analysis was applied. The study was extended to test the expected changes in time and the age effects as well as the influence of age-dependant life's experience i.e., experiencing formal relationship, having children, opinion on cohabitation, religiosity. Considering different paths of transitioning to adulthood, especially culturally driven male-breadwinner model of family, separate models for males and females were estimated. As hypothesized, a map of distinct

perceptions of marriage was created, including various traditional as well as modern and destandardized approaches. Expected age and life's experience effects were confirmed, counter to expectations little effect of time was revealed.

### **83-1. OPPORTUNITY COSTS: THE FISCAL COST OF (NOT) EDUCATING IMMIGRANT MINORS IN THE US**

*Noli Brazil, Alma Vega and Iván Mejía-Guevara*  
Email: [nolib@demog.berkeley.edu](mailto:nolib@demog.berkeley.edu)

One of the greatest fiscal costs of immigration is spending on educating immigrant youth. While numerous studies have noted the exorbitant cost of providing foreign-born minors with K-12 schooling, far fewer studies have examined the proportion of all U.S. spending on education that goes toward educating these youth and the social costs/benefits of doing so. Using National Transfer Accounts (NTA) methodology, this study examines the fiscal cost of educating immigrant minors in the U.S. relative to all spending on education. It also generates a counterfactual scenario in which spending is not allocated toward educating immigrant minors, allowing us to observe the effects on economic productivity due to a lesser educated workforce. This study provides a detailed profile of the number of immigrants that receive a portion of their schooling in the U.S., and the share of the cost shouldered by the U.S. and Mexico. This study contributes to the discourse on fiscal spending on immigrants by contextualizing the fiscal cost of education within the larger U.S. budget on education.

### **83-2. THE SOCIAL DESIRABILITY OF (IN)TOLERANCE TOWARD MUSLIM IMMIGRANTS IN THE UNITED STATES: RESULTS FROM A POPULATION-LEVEL LIST EXPERIMENT**

*Mathew J. Creighton and Amaney Jamal*  
Email: [mathew.creighton@upf.edu](mailto:mathew.creighton@upf.edu)

Do Muslim immigrants face a great social barrier to their acquisition of citizenship in the United States? To assess the degree to which Muslim immigrants are targeted, we compare the results to opposition to Christian immigrants. By employing a randomized, experimental design, we move beyond standard direct estimates, which do not account for the social pressure to appear tolerant. We show that opposition to citizenship for Muslim immigrants is not more widely held, but is more openly expressed. Therefore, in the public sphere, Muslim immigrants are indeed targeted. However, there is no significant difference in the underlying, true level of opposition. This stems from significant social pressure to publically appear tolerant toward Christian immigrants. In addition, some determinants of opposition (e.g. political ideology, income and ethnicity) only predict overt expression of opposition, not the true underlying level of opposition. We conclude that although the social barrier is no greater for Muslim immigrants, they are more likely to experience it.

### **83-3. LATINO HEALTH PARADOX OR HEALTHY IMMIGRANT PHENOMENON? ADULT MORBIDITY IN THE INTEGRATED HEALTH INTERVIEW SERIES 2000-2009**

*Ross Macmillan, J. Michael Oakes, Naomi Duke, Wen Fan, Liying Luo, Hollie Nyseth, Regan Sieck and Alain Vandormael*  
Email: [ross.macmillan@unibocconi.it](mailto:ross.macmillan@unibocconi.it)

Health is central to research on both immigration and assimilation, and differences in health among immigrants are a focal part of health disparities research. In these fields, immigrant health has been deemed “paradoxical” because a) immigrants tend to have

better health than is predicted by their socioeconomic position and b) acculturation into American society is associated with declines in immigrant health status despite increases in socioeconomic position and related utilization of health care. Importantly, much of our understanding of immigrant health and its paradoxical nature come from studies of Hispanics. Using newly released data from the 2000-2009 Integrated Health Interview Series, we extend inquiry to 10 distinct immigrant groups based on global region of birth. The research has three facets. First, we systematically assess health both across different immigrant groups and in relation to the prominent US born racial and ethnic groups. Second, we examine education gradients and assimilation trajectories across immigrant groups. Finally, we assess the ability of widely recognized explanatory factors to account for health differences across immigrant groups, educational gradients, and assimilation effects. Across four health outcomes, health advantages among immigrants are robust regardless of group, educational gradients and marginally detrimental acculturation trajectories are generally consistent, and there is limited ability of the explanatory factors to account for the immigrant health advantages. We conclude that these highlight the significance of healthy immigrant selection and discuss implications for the “paradox” of immigrant health and existing theory and research on assimilation processes and health disparities research.

#### **83-4. VARIABILITY IN IMMIGRANT HEALTH ACROSS COHORTS AND DURATION IN THE UNITED STATES**

*Julien O. Teitler, Melissa L. Martinson and Nancy E. Reichman*  
*Email: jot8@columbia.edu*

In this paper, we investigate whether health differences exist across immigrant cohorts, and the extent to which arrival cohort accounts for observed differences in immigrant health by duration of residence in the U.S. Specifically, we describe cohort changes in the health of immigrant mothers arriving in the U.S. between 1970 and 2005, as well as the health of their U.S. born children. We use restricted National Health Interview Survey (NHIS) files from 1998 to 2005, which include data on 108,745 immigrants. Our analysis for infant and maternal outcomes includes 13,891 observations. Preliminary results demonstrate that maternal and infant health has declined over successive cohorts. When arrival cohort is controlled for, we find that maternal and infant health by duration in the U.S. follows a curvilinear pattern.

#### **83-5. ETHNIC-IMMIGRANT DISPARITIES IN OBESITY IN THE UNITED STATES: PATTERNS AND MECHANISMS**

*Ming Wen, Lori Kowaleski-Jones and Jessie X. Fan*  
*Email: ming.wen@soc.utah.edu*

Using data from 4,331 respondents age 18-64 from the 2003-2006 National Health and Nutrition Examination Survey (NHANES), we examine the patterns of gender-specific disparities in the risks of obesity and abdominal obesity across six ethnic-immigrant groups: US-born whites, US-born blacks, foreign-born blacks, US-born Hispanics, and foreign-born Hispanics. We also explore whether total caloric intake and total physical activity (PA) are mediators of the observed disparities. Obesity risks are captured by clinically measured body mass index (BMI) and waist circumference. Total PA is objectively measured by accelerometer data. After controlling for socio-demographic and health factors, gender differences of ethnic-immigrant disparities in obesity risks are clearly manifested. Among men, the only group difference in obesity risk found is that US-born whites have higher risk of obesity than foreign-born Hispanics; by contrast, US-born whites have higher risk of abdominal obesity than most of the other groups, making the US-born white

the most vulnerable group among men. Among women, US-born whites have lower risk of obesity than US-born blacks but higher risk compared to foreign-born blacks and Hispanics. US-born whites are also at lower risk of abdominal obesity than US-born blacks but at a higher risk compared to foreign-born whites. No other group differences are significant in the multivariate models. The US-born black is definitely the most vulnerable group among women. Nativity plays a salient role in obesity risks. Meanwhile, total caloric intake is not a significant covariate of either obesity outcome and cannot explain any of the observed ethnic-immigrant disparities. Total PA is a significant covariate of both obesity outcomes and can explain some ethnic-immigrant disparities. Taken at the face value, promoting PA is likely a fruitful approach to tackling with weight problems among black women. More studies are warranted to confirm these ethnic-immigrant disparities in obesity risks and elucidate the underlying mechanisms.

#### **84-1. LONG-DISTANCE MIGRATION AND MORTALITY IN SWEDEN: TESTING THE SALMON BIAS AND HEALTHY MIGRANT HYPOTHESES**

*Sven Drefahl and Gunnar Andersson*

*EMail: sven.drefahl@sociology.su.se*

The demographic study of migrants involves challenges related to their life courses being stretched over several geographies while most data are collected for one specific geography only. Sometimes this produces various “paradoxes” in migrant demography. For example, mortality research highlights the surprisingly low mortality of migrants to Europe and the US, despite their imminent socioeconomic disadvantages. Three main mechanisms may contribute to these patterns: 1) the so called “salmon effects” in mortality, being produced by situations when migrants opt to return to their country of origin in anticipation of death, 2) selective immigration of healthy migrants, and 3) the underreporting of emigration and return migration. In our study, we test these hypotheses by focusing on the migration effects that may occur within a single country, for which register data can cover the entire life courses of individuals. Instead of focusing on international migrants, we exploit Swedish register data to detect possible salmon and healthy-migrant effects for long-distance migrants from Northern Sweden (Norrland) to Southern Sweden. We apply hazard regression methods to Swedish population registers to examine the age, duration-specific and time-varying influences of migration status on individual mortality during 1971-2007. The study covers 11.9 million Swedish born individuals. About 473,000 people were born in Norrland and had moved to other parts of Sweden, about 131,000 of them had returned to Norrland during our observation period. To distinguish between healthy-migrant and salmon effects we ask whether migrants from Norrland to Southern Sweden have lower mortality than the general population of Norrland, whether they have lower mortality than the population of Southern Sweden, whether return migrants to Norrland have a higher mortality than those who stay in the South, and whether patterns are altered by age. First descriptive results confirm that both mechanisms can be observed for the internal migrants in Sweden.

#### **84-2. LIFE COURSE SOCIO ECONOMIC POSITION AND LATER LIFE HEALTH: A FORMAL COMPARISON OF THE CHAINS OF RISK AND CRITICAL PERIOD HYPOTHESES**

*George B. Ploubidis, Benova Lenka, Emily Grundy and Bianca De Stavola*

*EMail: George.Ploubidis@LSHTM.ac.uk*

The relative contribution of early and mid or later life socio-economic position (SEP) to later life health is not fully understood and there are alternative hypotheses about the im-

portance of direct versus indirect effects. We use data from the English Longitudinal Study of Ageing to address this issue and to investigate alternative hypotheses about life course influences on biomarkers of later life health. We found that the effect of early life SEP reaches until the beginning of late old age, predicting physical health and fibrinogen levels at least 65 years later. However, a more complicated pattern of associations than what was implied by previous findings was observed. Cohort specific effects emerged, with current SEP dominating the effect on later life physical health and fibrinogen levels in participants under 65, while early life SEP had a more prominent role in explaining later life inequalities in physical health for men and women over 75. We extend previous findings on mid adulthood and early old age to old age and the beginnings of late old age. The complexity of our findings highlights the need for further research on the mechanism that underlies the association between SEP and later life health.

#### **84-3. SOCIAL DETERMINANTS OF MORTALITY AFTER LEAVING PARENTAL HOME – EFFECTS OF CHILDHOOD AND CURRENT SOCIODEMOGRAPHIC FACTORS**

*Hanna Remes and Pekka Martikainen*

*Email: hanna.remes@helsinki.fi*

Most research on life course effects on health has concerned adult and older populations and life course trajectories have often relied on only few measurement points. From a life course perspective, early adulthood is an important transitional period as the taken paths in education, employment, and family formation seem to affect health differentials over the effects of preceding childhood living conditions. This study examines mortality differentials in late adolescence and early adulthood by both parental background (family structure in childhood, parental education, occupational class, and income) and current living arrangements, level of own education, and current main economic activity. Mortality is followed from the point of leaving parental home, an important threshold in the transition to adulthood that generally occurs early in Northern Europe. The study is based on longitudinal register data that include a representative 11% sample of the Finnish population with an over-sample of 80% of all deaths. We calculated mortality rates and estimated Cox proportional hazards models to study deaths between ages 17–29 from 1990 to 2007. Strong excess mortalities were found among young people with lower education, the non-employed, and those living without a partner. The effects of parental background on mortality in early adulthood were largely, but not entirely, mediated by the current sociodemographic factors, education in particular. Adjusting for both childhood and current factors, early age at leaving parental home remained an independent risk factor for premature death. The strength of the social determinants of mortality among the young was mainly driven by external causes of death, but to a lesser extent deaths due to diseases contributed to differentials as well.

#### **84-4. THE FORGOTTEN GRIEVER: A NATIONWIDE FOLLOW-UP STUDY OF MORTALITY SUBSEQUENT TO THE DEATH OF A SIBLING**

*Jan M. Saarela, Mikael Rostila and Ichiro Kawachi*

*Email: jan.saarela@abo.fi*

Previous findings suggest that the loss of a family member is associated with mortality among bereaved family members. The least studied familial relationship in the bereavement literature is that of siblings although loss of a sibling may also involve health consequences. The authors conducted a follow-up study based on data from the Swedish total population register, covering the period 1981 to 2002. Using Cox regressions, mortality risk ratios

of bereaved and non-bereaved persons aged 18-69 years were estimated. All-cause and cause-specific mortality (unnatural causes, natural causes, cardiovascular disease, cancer, suicides, accidents, and all other causes) were examined. In men, the mortality risk of bereaved persons was 1.26 (95% CI: 1.22-1.30) that of non-bereaved persons, and in women it was 1.33 (1.28-1.39). An elevated mortality risk associated with a sibling's death was found in all age groups studied, but the association was generally stronger at younger ages and could be observed predominantly after more than one year of follow-up. There was an increased death risk also if the sibling died from a discordant main cause, which may strengthen the possibility that the association observed is not due to confounding alone.

#### **85-1. REGIONAL DIFFERENCES IN SUPPORT TO FAMILIES WITH CHILDREN AND FERTILITY RATES**

*Mare Ainsaar and Kadri Soo*

*EMail: mare.ainsaar@ut.ee*

Family policy can be defined as purposeful efforts of central and local governments in maintaining and improving well-being of families with children. However analysing measures and an impact of family policy, only central government's efforts are taken into account often and only few studies analyse the measures of family policy on the local governing level (Gauthier 1992, Forssén 1998, Dunkan ja Goodwin 1988). All those local lower level studies have demonstrated large differences in coverage and amount of transfers to families within one country. This obviously cause difference on well-being levels and perhaps also on fertility behaviour in different regions. The aim of the paper is to analyse influence of the regional differences in total child friendliness (all local level financial support directed to families) and direct local family policy (family policy measures as birth and child benefits, day care etc. provided only by the local municipality) to local fertility level. All policy actions are calculated as total investments per one child. Data from a longitudinal survey about child friendliness of local municipalities from 2005-2008 is used to analyse interaction between family policy and fertility. All together information about changes from more than 200 local municipalities was analysed. Results demonstrated interaction between direct support and fertility, but interaction with other local support forms demonstrated more controversial results.

#### **85-2. DIFFERENT WORLDS OF WELFARE IN A HETEROGENEOUS COUNTRY: THE BRAZILIAN CASE**

*Helena Cruz Castanheira and Eduardo L. G. Rios-Neto*

*EMail: helenacastanheira@gmail.com*

This paper applies a typology derived from the technique Grade of Membership (GOM) to define profiles of social policies and family structure among Brazilian individuals studied from a Brazilian Consumption Expenditure Survey conducted in 2008-2009. It draws on Esping-Andersen's framework to the analysis of welfare state regimes, but it incorporates the context of a heterogeneous country with high income inequality and truncation of coverage of social policies in the areas of health, education, and social security protection. Three main variables theme were used based on Esping-Andersen (1990 and 1999). The first one refers to "decommodification" and it says in what extent the family do not depend of the market. We use the following variables: public conditional cash transfer program, public retirement fund, public education and public health. The theme "commodification" is related to what extent the individual is a commodity and depends of the market. Variables used: type of occupation, private health, education and social security. Finally, we use the "familization" concept and analyze in what extent the family has a traditional bread



winner model measured by the family arrangement and women occupation. Four latent profiles were identified in each age group (0-5, 6-17, 18-24, 25-59 and 60 or more). The application of the GOM technique shows that social coverage, the public and market divide, and income inequality interact with the individuals' life cycle to display a complex web of coverage (and lack of coverage) of the relevant social risks. The paper shows the relevance of Esping-Andersen's typology, but also the need to complement it with other measures well suited to a society that is highly unequal.

### **85-3. COUNTRY DIFFERENCES IN THE GENDERED EFFECT OF WORK-LIFE BALANCE ON WELL-BEING: THE ROLE OF LEGAL AND POLICY ARRANGEMENTS**

*Pearl Dykstra and Babette Pouwels*

*EMail: dykstra@fsw.eur.nl*

Increasing the number paid working hours, either by increasing labour market participation or by increasing the number of working time of part time workers, is a central policy issue in many European countries. A common view among policy makers is that working more hours is necessary to maintain living standards in the context of ageing societies (Collewet and De Koning, 2011). Whether working more hours influences individual's well-being, is hotly debated. The present paper focuses on the gendered relationship between work-life balance and individual well-being across Europe. Does paid work increase individual well-being? Are men happier working in full time jobs and women in part time jobs? Does this (gendered) relationship between paid work and well-being vary across European countries? If so, to what extent can this be explained by variations in national level legal arrangements and social policies? Taking a multi-level approach, we use data from the third round of the European Social Survey (ESS) and a unique set of national level legal and policy indicators from the MULTILINKS database (Dykstra, 2011) to examine whether individual and policy arrangements can explain the gendered relationship between work and well-being.

### **85-4. SOCIAL NORMS VS. POLICY INFLUENCES ON COHORT FERTILITY TRENDS: A NATURAL EXPERIMENT STUDY ON THE GERMAN MINORITY IN EASTERN BELGIUM**

*Sebastian Kluesener, Karel Neels and Michaela Kreyenfeld*

*EMail: Kluesener@demogr.mpg.de*

A few countries in Europe – such as France, Sweden or Belgium – still report cohort fertility rates close to two children per women, while in other countries, particularly in the German-speaking area, cohort fertility is only around 1.5-1.6 children. In order to explain these country differences in fertility levels, scholars increasingly refer to the role of the social policy context, while others point to existing differences in value structure which may also account for country specific variations in fertility levels. However, due to the mutual interdependence of the two, it is cumbersome to isolate the impact of social/cultural norms and institutional factors on fertility decisions. In our study we attempt to disentangle the two by drawing on a natural experiment. After World War I two German districts were ceded to Belgium. The population in this area retained its German linguistic identity, but has, since then, been subject to Belgian social policies. Our study uses (micro)-census data to compare fertility behavior of the German minority in Belgium with data for western Germany and the Flemish and French Language Communities in Belgium, controlling for individual-level characteristics. Our findings indicate that the overall fertility outcomes of the German minority in Belgium resemble more the Belgian pattern than the German one.

This provides support for the view that institutional factors are relevant for understanding the fertility differences between Belgium and Germany.

#### **85-5. THE CONSEQUENCES OF THE DECENTRALIZATION OF PRE-SCHOOL CHILD CARE IN SWEDEN – NATIONAL BALANCE AND LOCAL IMBALANCES**

*Nathalie Le Bouteillec and Anders Ögren*

*EMail: nathalie.lebouteillec@wanadoo.fr*

We study how laws implemented on the national level since the early 1990s have affected the local supply and quality of pre-school day care in Sweden. As local governments have quite large autonomy on how to provide services it is on the local level one has to seek the results of these law changes. Since these law changes were ideologically based we also ask if differences in the pre-school child care services between different local governments can be traced to ideological grounds or if they are consequences of local socio-economic structures. We use data from Statistics Sweden (SCB) for the socio economic structure and the association for local governments (Statens kommuner och landsting SKL) for the management of the day care system (funding, staff per child, the educational level of the staff, number of children per section, private vs. public day care, the ratio of children in day care etc.)

#### **86-1. GENDER AND OCCUPATIONAL PERSPECTIVES ON ADAPTATION TO CLIMATE EXTREMES IN THE AFAM PLAINS OF GHANA**

*Samuel N. A. Codjoe, Lucy K. A. Adzoyi-Atidoh and Virginia Burkett*

*EMail: scodjoe@ug.edu.gh*

Although sub-Saharan Africa does not contribute significantly to greenhouse gas emissions, significant adverse impacts of climate change are anticipated in this region. Countries in West Africa, which are heavily dependent on rain-fed agriculture, are projected to experience more frequent and intense droughts, altered rainfall patterns and increases in temperature through the end of this century. Changes in hydrology and temperature are likely to affect crop yields, thereby placing pressure on scarce resources in a region that is characterised by limited social, political, technical and financial resources. The success with which communities cope with the impacts of climate change is influenced by existing conditions, forces and characteristics which are peculiar to each of these communities. This paper assesses the preferred adaptation strategies during floods and droughts of males and females in three different occupations (farming, fishing, and charcoal production). Findings are based upon an analysis of focus group discussions and a ranking of preferred adaptation options in three communities in the Afam Plains of Ghana. Assessments of this nature should aid in the selection and implementation of adaptation options for communities and households, which is the level at which climate change adaptation is likely to occur in West Africa.

#### **86-2. EFFECTS OF EDUCATIONAL ATTAINMENT ON CLIMATE RISK VULNERABILITY**

*Anthony Patt, Wolfgang Lutz and Erich Striessnig*

*EMail: patt@iiasa.ac.at*

In the context of still uncertain specific effects of climate change in specific locations we stress that education should be seen as a central factor that both increases coping capacity with regard to particular climatic changes and improves the resilience of people to climate risks in general. Our hypothesis is that investments in universal primary and secondary education around the world are the most effective strategy for preparing to cope with the

still uncertain dangers associated with future climate. The empirical evidence presented for cross-country time series of factors associated with past natural disaster fatalities since 1980 in 108 countries confirms this overriding importance of education in reducing impacts. We also present new projections of populations by age, sex and level of educational attainment to 2050 which provide an appropriate tool for anticipating societies' future adaptive capacities based on alternative education scenarios associated with different policies.

### **86-3. CHOICE AND CONSTRAINT DURING NATURAL DISASTER EVACUATION: THE CASE OF HURRICANE KATRINA**

*Brian C. Thiede and David L. Brown*

*EMail: bct42@cornell.edu*

This paper uses data from the baseline year (2006) survey of Harvard Medical School's Hurricane Katrina Community Advisory Group to examine evacuation behavior among the population affected by Hurricane Katrina across the US Gulf Coast. Our analysis centers on the question of whether non-evacuation reflected individuals' choices or social and economic constraints among persons who would have liked to evacuate. This study stands in contrast to previous research on Katrina and environment-related migration in general, which has been limited by comparing only evacuees and non-evacuees. Our approach yields the first evidence that some social groups were systematically less able to evacuate from their residences before the storm struck. We discuss the implications of these findings for research on environment-related migration, which is increasingly important in the context of global climate change.

### **86-4. INTER-LINKAGES OF FORCED MIGRATION, HUMAN RIGHTS AND POVERTY: APPLICATION OF SOCIO-LEGAL MODELS**

*George Odipo and John Oucho*

*EMail: geodipo@hotmail.com*

**Abstract:** This paper provides evidence of migration-vulnerability-poverty linkages. The paper begins by (i) Section one highlighting the background, data and methodology (ii) Section two discusses Refugees-Human Rights-Poverty Inter-Linkages by analysing appropriate: theoretical and conceptual frameworks; conceptualisation of forced migration, and; forced migration models, namely: The Social Development Model and The Legal Institutional Model (iii) Section three analyses refugee situation in Kenya (iv) Section four discusses policy implications (v) Section five provides a conclusion and proposes recommendations on how to alleviate poverty among refugees. The paper has established that majority of refugees are from Kenya's contiguous states of Somalia, Sudan and Ethiopia; the majority hosted in North Eastern and Rift Valley provinces in Kenya. It further notes that age, sex, educational attainment, marital status and economic status impact in heightening refugees' vulnerability thereby increasing their risk to poverty in Kenya. It has also established that there is migration policy incoherence in Kenya that partially explains violation of refugees' human rights, which contributes to poverty. The principal recommendation is for Kenya to ratify the international conventions and treaties on the rights of refugees and develop strategies, guidelines and policies that protect the rights of refugees to try and reduce poverty among refugees.

## 87-1. TRENDS AND PATTERNS OF CHILDHOOD MORTALITY CLUSTERING IN NIGERIA

*Joshua O. Akinyemi, Olusola Ayeni and Afolabi Bamgboye*  
*E-Mail: odunjoshua@yahoo.com*

Though some progresses have been made in improving child survival, however, the childhood mortality rates are still high in Nigeria and many developing countries. Child deaths can be concentrated / clustered at the level of the mother/family, households, community and region. Such correlated observations violate the assumption of independence during statistical analyses and they will result in biased and inconsistent estimates. Majority of studies that have explored the phenomenon in the past used frailty models which account for both death clustering and unexplained heterogeneity (unmeasured covariates) in childhood mortality. The concept of unexplained heterogeneity is quite different from death clustering, so using a single model to suggest both is conceptually questionable. In this paper, a nationally representative data is used to exclusively explore childhood death clustering in Nigeria. This study is based on data from the Nigeria Demographic Health Survey (NDHS) rounds of 1990, 2003 and 2008. Three measures of childhood mortality clustering were derived. These measures were computed for each of the NDHS and bivariate and multivariate analyses was done to elucidate the pattern of mortality clustering according to selected background characteristics. Preliminary results showed that the overall level of childhood mortality clustering is high and seems not to have changed much between 1990 and 2008 NDHS. The proportion of women losing two or more children merely moved from 24% in 1990 to 22.7% in 2008. Child losses among these women accounted for 77% and 75% of all child deaths in 1990 and 2008 respectively. Though, the 2008 NDHS report indicated that childhood mortality is on a decline, mortality clustering levels has not changed in a commensurate manner. This is suggestive of inequitable distribution of health-related resources or existence of problems specific to some families/communities.

## 87-2. TRENDS AND CAUSES OF CHILD MORTALITY IN RURAL TANZANIA: EXPERIENCE FROM RUFJI HEALTH AND DEMOGRAPHIC SURVEILLANCE (HDSS)

*Malick Kante, Mrema Sigilbert and Stephane HELLERINGER*  
*E-Mail: amk2213@columbia.edu*

This paper examines the trends and the causes of death of child mortality in Rufiji, whose population has been followed for over twelve years. Between 1999 and 2010 under five mortality (0q5) declined by 52% (from 133 to 64p.1000). We determine if trends changes affected the contribution of specific causes of death. The verbal autopsy study conducted with Rufiji HDSS provides an opportunity to assess these changes in child causes of deaths. We used decomposition techniques to assess the contribution of each cause of death between 1999-2002 and 2003-2010. Prematurity/low birth weight remained the leading cause of death for the neonates. Though malaria is declining, is remaining the leading cause of death for the post neonates followed by pneumonia. However, malaria contributed to 52% to the decrease of child mortality and the neonatal causes contributed only 23%. To achievement of MDG 4, the health programs are more interested to improve newborn survival.

### **87-3. TOBACCO CONSUMPTION DURING PREGNANCY IN BANGLADESH: LEVEL AND BURDEN AMONG SLUM WOMEN IN DHAKA DISTRICT**

*Sadananda Mitra and Kabita R. Bhadra*

*EMail: mitra2kbd@yahoo.com*

The level of tobacco consumption has been increasing in Bangladesh, in particular the marginal class who are engaged in manual labour. Tobacco is responsible for more deaths than any other risk factors than high blood pressure. It also increases the burden of diseases during pregnancy and childbirth. A cross-sectional study of the 549 women from Dhaka district reveals that the use of tobacco or tobacco products during pregnancy was 10 percent, on an average. But there was significant difference of users among slum households, older women with higher order of parity and illiterate women. There was significant difference in use of tobacco by settlement pattern. Forty percent women had tobacco habit from slum households compared to eight percent from the non-slum settlements. The multivariate analysis shows that the chance of complicated pregnancy including hemorrhage was higher for women who consumed tobacco during pregnancy or have tobacco chewing habit. Utilization of medical care during pregnancy had reduced the likelihood of tobacco consumption habit. Mothers with tobacco habits suffered multiple complications during pregnancy and delivery. The product limit method shows that the mean duration of illness during childbirth was higher for these women. To reduce the burden of tobacco, health education programme at the community level could be launched through preconception and prenatal care for the socially backward women in the slum areas.

### **87-4. SOCIO ECONOMIC INEQUALITIES IN INFANT MORTALITY IN LATIN AMERICA: THE IMPACT OF INCOME, EDUCATION AND SOCIAL CLASS**

*Andres Palacio*

*EMail: andres.palacio@ekh.lu.se*

Data from DHS in 4 Latin American countries are used to test the impact of income, education and social class on the SES gradient in infant mortality over time. Bolivia, Dominican Republic and Peru belong to a cluster of late beginners of the modern demographic regime, which have caught up with Colombia, initially the closest to the more modern Latin American countries such as Chile, Costa Rica or Uruguay. Using a pooled sample of 171,311 children born between 1981 and 2010, the findings confirm that the relationship between SES and infant mortality is similar enough to think that the SES gradient is flattening out across countries, contravening recent studies claiming the opposite. Likewise, preventive measures (contraceptive use) and nutrition (exclusive breastfeeding) mediate the relationship between SES and infant mortality across countries, but as independent factors. Hence unless we understand better how nutrition relates to SES, and changes in expansion of health insurance are accompanied with changes in the educational policy, namely preventive measures, infant mortality in these countries will not converge to developed-country standards in the near future.

### **87-5. PREGNANCY CARE IN CAMBODIA: CHALLENGES IN ACHIEVING THE FIFTH MILLENNIUM DEVELOPMENT GOAL**

*Marguerite L. Sagna and Thankam S. Sunil*

*EMail: msagna@ualberta.ca*

Despite Safe Motherhood being a high priority in Cambodia, reproductive-ill health still remains a salient public health concern. The current levels of maternal and child mortality in Cambodia are disconcerting and call for an examination of the usage of appropriate care

during pregnancy and childbirth by women of reproductive age. Using data from the 2005 Cambodia Demographic and Health Survey, we examined the influence of individual- and community-level factors on (1) the receipt of four or more antenatal care visits, (2) receipt of antenatal care within the first trimester of pregnancy, (3) delivery in a health facility and (4) delivery by trained medical professional. The results demonstrate that age at birth, parity level, educational attainment, household wealth, occupation, media exposure, and counseling about pregnancy complications are significant determinants of pregnancy care. Evidence from this study also shows that some community-level factors have significant influence on the use of maternal health care services. Programs to improve maternal health outcomes must take into account covariates at multiple levels of influence to better address the needs of women of reproductive age in Cambodia.

#### **88-1. DETERMINANTS OF WOMEN'S MIGRATION IN TURKEY**

*Ayşe Abbasoglu-Ozgoren, Mehmet Ali Eryurt and Ismet Koc*

*E-Mail: ayse.ozgoren@hacettepe.edu.tr*

Women's internal migration in the developing world has been rarely studied before last two decades, mainly due to lack of data and its dynamics different from men's internal migration in general. In Turkey, the situation has not been different from the rest of the developing world. Women are more likely to move due to marriage and familial reasons making it more "associational". The aim of this paper is to examine the determinants of internal migration of ever-married women in Turkey. In the study, transitions to first and second migrations are studied separately since the reasons that underlie first and subsequent migrations differ. This paper makes use of migration history data of ever-married women, which were collected for the first time in TDHS-2008. The method of analyses is event history analysis, specifically piecewise constant proportional hazard regression model. Differentiating between urban and rural residence of origin/destination is crucial since the dynamics and reasons of migrations differentiate across these flows. Therefore we control for type of place of residence of origin and destination, which will allow us to measure the impact of push and pull factors on probability to migrate. To the best of authors' knowledge, no event history analysis on timing and patterns of female migration in Turkey has been carried out. This paper will attempt to fill this gap in the literature by employing event-history analysis to analyze the impact of various motives on first and second migrations of women in Turkey taking into account both time-varying and time-constant variables.

#### **88-2. PARTNER (DIS)AGREEMENT ON MOVING DESIRES AND THE SUBSEQUENT MOVING BEHAVIOUR OF COUPLES**

*Rory Coulter, Maarten van Ham and Peteke Feijten*

*E-Mail: rcc28@st-andrews.ac.uk*

Residential mobility decisions are known to be made at the household level. However, most empirical analyses of residential mobility relate moving behaviour to the housing and neighbourhood satisfaction and pre-move thoughts of individuals. If partners in a couple do not share evaluations of dwelling or neighbourhood quality or do not agree on whether moving is (un)desirable, ignoring these disagreements will lead to an inaccurate assessment of the strength of the links between moving desires and actual moves. This study is one of the first to investigate disagreements in moving desires between partners and the subsequent consequences of such disagreements for moving behaviour. Drawing on British Household Panel Survey (BHPS) data, we find that disagreement about the desirability of moving is most likely where partners also disagree about the quality of their dwelling or neighbourhood. Panel logistic regression models show that the moving desires of both

partners interact to affect the moving behaviour of couples. Only 7.6% of couples move if only the man desires to move, whereas 20.1% of shared moving desires lead to a subsequent move.

### **88-3. PRODUCING AND REPRODUCING ETHNIC RESIDENTIAL SEGREGATION. IS "WHITE FLIGHT" ENOUGH TO CAPTURE THE MOBILITY MOTIVES OF NATIVES?**

*Lina Hedman and Emma Holmqvist*

*EMail: lina.hedman@ibf.uu.se*

Residential segregation is currently perceived as one of the main urban problems in the Western World. In a comparative research project in four Nordic welfare states, we look into this issue focusing on mobility in and out of (immigrant-dense) neighbourhoods and especially the role of natives. Natives are generally more resourceful than minorities and have thus better opportunities to fulfil their housing preferences. This makes natives the potentially most important actor in the production and reproduction of residential segregation patterns. Most existing research studying natives' mobility in relation to ethnic segregation do so based on white flight theory or similar approaches where the ethnic population composition of the neighbourhood is seen as the key issue. We argue such an approach is too simplistic since it ignores other aspects of housing and neighbourhoods that are likely to contribute to the mobility decision. Furthermore, it implicitly assumes that movers from certain types of neighbourhoods behave differently from other movers. In this paper, we aim to explore the logic behind native Swedes' mobility decisions. Using a unique stratified survey in which we have selected natives moving from immigrant-dense and other types of neighbourhoods, we are able to look at two different groups of movers and compare their preferences and mobility motives. Do those moving from immigrant-dense neighbourhoods have similar mobility motives as those moving from other neighbourhoods? How important is the ethnic population composition of neighbourhoods in relation to other factors, such as dwelling characteristics, local service provision, relative location and visual beauty? Are there differences in housing and neighbourhood aspirations regarding the new destination among those moving from immigrant-dense neighbourhoods compared to those moving from other neighbourhoods? This study represents a first step in the comparative Nordic analysis and focuses on movers within the Stockholm region.

### **88-4. LOCAL TIES AND FAMILY MIGRATION**

*Clara H. Mulder and Gunnar Malmberg*

*EMail: c.b.mulder@rug.nl*

The migration of couples and families has thus far been mainly approached from human-capital and gender perspectives. In this paper, we investigate the role of the male and female partner's local ties in the likelihood of family migration. Our hypotheses are that local ties to work and family strongly decrease the likelihood of migrating; that given the dominating gender structures ties to the man's work are more influential than ties to the woman's work; and that ties to the woman's family are more influential than ties to the man's family. We use data from the unique ASTRID micro database for Sweden, based on administrative information about the entire Swedish population. The method is logistic regression analysis of moving a distance exceeding 50 kilometers, for two-gender couples who did not separate between December 2004 and December 2005. We find marked negative associations of working close to home, the presence of parents and siblings nearby, and whether someone lives near the place of birth, with the likelihood of migrating. The man's ties to work seem to be more important to the likelihood of migrating than the woman's, but we find hardly any gender differences in the impact of ties to family.

## **88-5. INTER-REGIONAL MIGRATION IN TANZANIA: THE ROLE OF SOCIO-DEMOGRAPHIC AND ENVIRONMENTAL FACTORS**

*Cristina Ocello, Alessandra Petrucci and Maria Rita Testa*  
E-Mail: ocello@ds.unifi.it

By using data from the first wave of the Tanzania National Panel survey (TZNPS) conducted in 2008/2009, we aim to investigate the relationship between environment and internal migration flows in Tanzania. In the TZNPS survey 16709 individuals nested in 3265 households (and 126 districts) were asked to report the three heaviest environmental shocks experienced in the last five years. We model the inter-regional migration flows occurred in the five years before the time of the survey by assessing the relative importance of socio-demographic and environmental determinants. The main hypothesis is that inter-regional migrations are influenced by environmental shocks at the origin and favorable environmental and socio-economic conditions at the destination. First, we run logistic models with the aim to figure out the most relevant individual predictors of migration. Second, we run Poisson regression models to identify the most important directions and the distance of the migration flows as well as the determinants of these spatial patterns in terms of push and pull factors. Results show that environmental shocks are an important driving force of inter-regional migration flows. However, other factors related to the individual's socio-demographic characteristics as well as to the socio-demographic conditions at the origin and destination region do also play an important role.

## **89-1. AGEING AND EMPLOYERS' PERCEPTIONS OF LABOUR COSTS AND PRODUCTIVITY: A SURVEY AMONG EUROPEAN EMPLOYERS**

*Wieteke Conen, Hendrik P. van Dalen and Kène Henkens*  
E-Mail: W.S.Conen@uu.nl

This paper examines employers' perceptions of changes in the labour cost-productivity gap due to the ageing of the workforce, the effects of tenure wages and employment protection on the perceived gap, and whether a perceived labour cost-productivity gap affects employers' recruitment and retention behaviour towards older workers. We analyse surveys administered to employers in Denmark, France, Germany, Italy, the Netherlands, Poland and Sweden. The results show that approximately half of employers associate the ageing of the personnel with a growing gap between labour costs and productivity. Both the presence of tenure wages and employment protection rules increase the probability of employers perceiving a widening labour cost-productivity gap due to the ageing of their workforce. A counterfactual shows that even when employment protection and tenure wage systems are abolished, 40 percent of employers expect a net cost increase. The expected labour cost-productivity gap negatively affects both recruitment and retention of older workers.

## **89-2. EVERYBODY WORKS: GENDER, AGE AND ECONOMIC ACTIVITY**

*Gretchen Donehower and Iván Mejía-Guevara*  
E-Mail: gretchen@demog.berkeley.edu

Much progress has been made in understanding the generational economy – how people produce, consume, share and save resources across age groups. A natural extension of this work is to add gender as a characteristic of interest. Using data from the United States in 2009, this paper presents the first systematic integration of gender into the study of economic activity by age. It includes not just the market economy represented in national income accounts, but also the household economy, estimated using time use and imputed wage data. The results indicate how much value is produced in the household and how



gender roles persist in household and market production in the US today. This comprehensive view of the economic life cycle, including household production, shows us men's and women's total economic contributions and gives the true cost of inputs to dependents.

### **89-3. AGEING, PRODUCTIVITY AND WAGES IN AUSTRIA**

*Bernhard Mahlberg, Inga Freund, Jesús Crespo Cuaresma and Alexia Fürnkranz-Prskawetz*  
Email: mahlberg@iwi.ac.at

Current demographic developments in industrialized countries and their consequences for workforce ageing challenge the sustainability of intergenerational transfers and economic growth. A shrinking share of the young workforce will have to support a growing share of elderly, non-working people. Therefore, the productivity of the workforce is central to a sustainable economic future. Using a new matched employer-employee panel data set for Austrian firms spanning the period 2002-2005, we study the relation between the age structure of employees and labour productivity as well as wages at the firm level. These data allow us to simultaneously account for socio-demographic characteristics of the employees as well as firm heterogeneity in order to explain labour productivity and earnings. Our results indicate that firm productivity is not negatively related to the share of older employees in the firm. We also cannot find evidence for an overpayment of older employees. On the contrary, for the service sector the results show a negative association between wages and the share of elderly. Furthermore, we find a negative relationship between the share of young employees and labour productivity as well as wages, which is more prevalent in the industry and construction sector.

### **89-4. THE IMPACT OF SOCIOECONOMIC CHARACTERISTICS ON OLDER EMPLOYEES' INTENTIONS TO CONTINUE WORKING IN RETIREMENT AGE**

*Frank Micheel and Ines Wickenheiser*  
Email: frank.micheel@destatis.de

This paper aims to explore the question of whether and to what degree information on socioeconomic status (SES) – measured by professional status and disposable household income – can make reliable statements on older employees' intentions to continue working in retirement age. These observations are controlled for professional and individual characteristics. The data basis is constituted by a sample survey entitled "Weiterbeschäftigung im Rentenalter (Continuing in employment in retirement age)" with N = 1,500 dependent employees aged from 55 to under 65 in Germany. Results of logistic regressions show that information on SES make a statistically significant contribution towards explaining willingness to continue working in retirement: In comparison to employees with a lower or medium professional status, those individuals who have a high professional status tended to be significantly more willing to remain in working life for longer. There is a negative connection between disposable household income and willingness to remain in employment in retirement age. The significant effects that were found are however restricted to the respondent women.

### **89-5. PREVALENCE AND INCIDENCE OF MEMORY COMPLAINTS IN WORKERS COMPARED TO NON-WORKERS AGED 55-64 YEARS AND THE ROLE OF JOB CHARACTERISTICS**

*Kelly Rijs, Hannie Comijs, Tessa Van den Kommer and Dorly J.H. Deeg*  
Email: k.rijs@vumc.nl

Among older workers, memory complaints (MC) may be noticed sooner than in unemployed age peers because of their responsibilities in work. The goal of our study is to

examine (1) the prevalence and incidence of MC in Dutch older workers (55-64 years), (2) whether employed respondents are more likely to have MC (cross-sectional) or to develop MC after three years (longitudinal) compared to unemployed age peers and (3) whether job characteristics are associated with having or developing MC. Subjects were participants of the Longitudinal Aging Study Amsterdam (LASA), between age 55-64, who were employed (paid job of = 8 hours per week; n=626) or unemployed (no job or paid job of <8 hours per week; n=1311) at baseline. Job characteristics studied were hours of work per week, job prestige, job class and job demands. Logistic regression analysis was applied. The confounding influence of age, sex, education, MMSE, depressive symptoms (CES-D), mastery, self-efficacy, neuroticism, number of chronic diseases and cardiovascular diseases was examined. At baseline 20.7% reported MC. At three year follow-up, 14.3% of those who reported no MC at baseline had developed MC. No cross-sectional or longitudinal association was found between employment status and MC. Adjusted analysis revealed that individuals who performed a job with a high compared to low job class or high compared to low mental job demands at baseline are more likely to have MC at baseline. Job characteristics did not show to predict MC at follow-up. Individuals with occupations with a high job class and high mental job demands were more likely to have memory complaints, which might suggest that higher stress and multitasking levels cause memory problems. Job class and job demands may be useful to determine who is at risk for memory complaints and therefore may benefit from a cognitive intervention.

#### **90-1. WHAT'S BIOLOGY GOT TO DO WITH IT? PARENTAL LEAVE USE AMONG ADOPTIVE AND BIOLOGICAL PARENTS**

*Ann-Zofie Duvander and Ida Viklund*

*E-Mail: ann-zofie.duvander@sociology.su.se*

Sweden is one of the fore-runners regarding gender equal parental leave use. The remaining inequalities are often explained by biological differences between mothers and fathers. Sweden is also a main recipient of internationally adopted children. In this study we attempt to bring more clarity to the impact of the biological dimension of childcare, specifically the division of parental leave use between parents, by focussing on the difference between biological and adoptive parents. Swedish parental leave benefits add up to 16 months at high earnings-related replacement that can be used during the child's preschool years. Two months of the leave is reserved for each parent and fathers use almost one quarter of the total leave. There are only minor differences in regulations for parents to adoptive and biological children. We use Swedish register data for the period 1993 to 2007 and we compare the leave use for 13 426 internationally adopted children to the use for biological children born in the period. Results so far show that fathers to adoptive children use more leave than fathers to biological children, also when controlling for individual and couple specific characteristics such as age, education, income and family composition that have been found to influence parental leave use in earlier studies. Nevertheless, parents to adoptive children follow the general trend of sharing of leave in the period and distinctive gender differences remain also for this group of parents.

#### **90-2. POLICY CHANGE AND FATHERS' USAGE OF PARENTAL LEAVE IN GERMANY – AN ANALYSIS OF THE YEARS 1999-2009**

*Esther Geisler and Michaela Kreyenfeld*

*E-Mail: geisler@demogr.mpg.de*

Fathers and their contribution to the care of children have become more and more a focus of media and research in the last years. In Germany, particularly the reform of the parental

leave benefit system in 2007 has launched discussions about fathers' and mothers' roles in the family. We study the use of parental leave among fathers for the years 1999-2009 using data from the German microcensus. The main research question is: How has the introduction of an income-related parental leave benefit in 2007 changed fathers' leave-taking behaviour in Germany? We examine how far employment characteristics as the type of sector and the type of contract as well as education influence men's decision to use parental leave after they have become fathers and how these relationships changed with the reform. Previous studies for the Scandinavian countries have shown that fathers who work in the public sector are more likely to use leave. Regarding education the findings are mixed. On the one hand, it can be assumed that highly educated men are more likely to use leave due to their more gender-egalitarian values but on the other hand they have also higher opportunity costs for leaving the labour market temporarily. Our analysis shows that before the reform men's education did not have a significant impact on behaviour. After the reform, men from all educational groups have become more likely to be on leave. However, the increase was strongest among highly educated men.

### **90-3. THE ECONOMIC IMPACT OF TAKING SHORT PARENTAL LEAVE: EVALUATION OF A FRENCH REFORM**

*Olivier Joseph, Ariane Pailhé, Isabelle Recotillet and Anne Solaz*  
Email: joseph@cereq.fr

Many young women leave the labour force when their children are born. Although this withdrawal is usually temporary, it can have repercussions on the rest of their careers. Family policy plays a part, through replacement benefits for parents who choose to look after their children full-time or part-time for a specified period. Initially available after the birth of a second or subsequent child, the reform of the *prestation d'accueil du jeune enfant* (PAJE) in 2004 extended the benefit to the first child. The PAJE represents supplementary income for new parents, usually mothers, who interrupt their careers. This article, based on data from the fourth round of the Generation 98 survey conducted by Céreq, the French education ministry's centre for research on qualifications, proposes an evaluation of the impact of the reform on the occupational trajectories of new mothers. It reveals that, since the 2004 reform, more young women choose either to stop working completely or to work less after the birth of their first child, and that, although their labour force participation is largely unaffected, the impact on their earnings is negative up to two years after the birth.

### **90-4. MOTHERS' LABOUR MARKET TRANSITIONS IN SPAIN: THE ROLE OF PART-TIME PARENTAL LEAVE**

*Irene Lapuerta*  
Email: irene.lapuerta@unavarra.es

This paper examines the labour market transitions mothers make in Spain after having their first child, with special attention paid to the part-time parental leave (also known as 'reduced working hours'). Until now, most studies have largely neglected this option, and those that do include part-time parental leave, have not usually distinguished it from part-time work. This results in a lack of knowledge about the causal mechanisms behind mothers' labour decisions and, even more seriously, the confounding of two choices with very different constraints, especially in Southern Europe where part-time jobs have very poor protection, social benefits and earnings. This paper attempts to clarify these issues. I use a competing risks event history analysis to investigate the likelihood of mothers, who are employed full-time at the birth of their first child, to transition thereafter to any of the following destination states: 1) part-time parental leave; 2) full-time parental leave; 3)

part-time work; or 4) inactivity or unemployment. The analysis is based on a subsample of 16,902 women from the 'Muestra Continua de Vidas Laborales' (waves 2005-2008). The results show support for the opportunity cost hypothesis for high-wage earners but, contrary to initial expectations, do not show a lower opportunity cost associated to transitions to part-time parental leave in comparison to full-time parental leave. Only those mothers with middle-range wages, very high job security and working in the private sector have part-time parental leave as a real labour market alternative, while those in more vulnerable positions in the labour market appear to be pressured into part-time work or, more frequently, withdraw from the labour market altogether.

#### **90-5. FATHERS ON PARENTAL LEAVE: WHAT HAPPENED SINCE THE RECENT REFORMS IN GERMAN FAMILY POLICY?**

*Heike Trappe*

*EMail: heike.trappe@uni-rostock.deIn*

2007, a reform of the parental leave act was introduced in Germany. Among other goals the reform aimed at encouraging men to share in child care more intensively than in the past. Official statistics show that within four years, fathers' take-up rate increased greatly from around three percent to almost 20 percent. Additionally, it can be shown that the great majority of fathers do not take more time off than the two 'daddy months'. However, much less is known about the characteristics of couples within which fathers take parental leave. Therefore, this paper aims at answering two questions: What are the main determinants of men's parental leave decisions? What are the driving forces of men's decisions to take more time off than the 'daddy quota'? The two competing ideas behind both questions are value change versus economic constraints. The questions are pursued by following a two-step research design. First, representative survey data for recent parents are used ('Junge Familien 2008', collected by the RWI Essen) to analyze men's take-up of parental leave. The major finding is that economic factors have more explanatory power than value-related aspects. In a second step, attention is called to the economic determinants for the duration of fathers' leave. To do so, register data are used for all births between 2007 and 2009 where parental leave was requested (provided by regional authorities) in two select Northern federal states of Germany. It can be shown that employment status of the couple as well as women's and men's relative earnings have a slightly different impact on the duration of fathers' leave in both of the German states. Overall, fathers are most likely to take parental leave and to use it extensively if they have relatively poor economic resources.

#### **91-1. SOCIAL AND ETHNIC INEQUALITIES IN ALL-CAUSE AND CAUSE-SPECIFIC MORTALITY AMONG ADOLESCENTS AND YOUNG ADULTS LIVING IN THE BRUSSELS-CAPITAL REGION**

*Hannelore De Grande and Patrick Deboosere*

*EMail: hannelore.de.grande@vub.ac.be*

This paper examines social and ethnic differences in adolescent and young adult mortality and if this varies between the period of 1991-1995 and 2001-2005 in the Brussels-Capital Region (BCR). Having a diverse population, who rejuvenated over the last decades and contains approximately 170 different nationalities, makes the BCR an interesting location to analyse these trends. The situation of the Brussels' youth and young adults is alarming: early school dropout and unemployment is high, especially among ethnic minorities, and they are less healthy compared to their peers of other Belgian regions. The data consists of the censuses of 1991 and 2001 linked to the national registry of death and emigration records of 01/03/1991-01/01/1996 and 01/10/2001-01/01/2006 accordingly. The Belgian,

Maghreb, Turkish and Southern European population aged 15-34 and living in BCR are included in the analysis. ASMRs are calculated through direct standardization, as well as Mortality Rate Ratios using Poisson regression. The Relative Index of Inequality (RII) is measured in order to compare educational inequality trends over time. All-cause mortality for men has almost been halved between 1991-1996 and 2001-2006: from 46.7 [43.7-49.8] (per 100,000 PY) to 26.2 [23.6-28.7]. Mortality rates dropped in all socio-economic groups, but the social gradient still exists among men. This pattern is less clear among women, and the RII confirms rather little inequalities (RII=1.29) for this group. Concerning cause-specific deaths, there are differences according to nationality of origin, e.g. lower suicide rates and higher other external mortality rates among Turkish and Maghrebin men than among native Belgians; and higher cancer mortality among South-European men. Although education and activity status are important contributors to these differences, other explanations have to be sought. Risk behavior more peculiar to some nationality groups and belonging to communities who are more group oriented may also be underlying causes of these differences.

## **91-2. PECULIARITIES OF THE HEALTH CRISIS IN BELARUS AS REFLECTED BY LONG-TERM MORTALITY TRENDS BY CAUSES OF DEATH**

*Pavel Grigoriev*

*EMail: Grigoriev@demogr.mpg.de*

Compared to the other countries of the former USSR, mortality trends in Belarus have received very little attention. The situation in this country does, however, deserve scrutiny, as mortality trends in Belarus have exhibited some peculiarities both in the past and at present. This paper provides an assessment of the changes in epidemiological situation in Belarus over the last half century. The analysis is based on the detailed cause-specific mortality data which were harmonized using the method of reconstruction. Its results suggest the persisting nature of the health crisis. While in the 1990s the relatively moderate mortality increase in Belarus could be interpreted as demonstrating the merits of the 'quasi-socialist' Belarusian model, now, it is clear that this small 'success' was really temporal, and the root problems were not resolved. High mortality from cardiovascular diseases and excessive violent and alcohol-related mortality have still remained the major public health threats.

## **91-3. ECONOMIC STRESS IN THE SHORT AND LONG TERM AND THE ONSET OF ISCHEMIC HEART DISEASE**

*Tina Hannemann and Jonas Helgertz*

*EMail: tina.hannemann@ekh.lu.se*

Cardiovascular diseases are today the main causes of death in developed countries, accounting for more than 40 percent of all deaths. The main motivation for the study is the link repeatedly found in empirical research between income and Ischemic Heart Disease (IHD), typically explained as the result of a stress related effect originating from a poorer labor market performance. Previous studies have already emphasized the importance of a lagged measurement of income. Otherwise, due to sickness absence and recuperation following an IHD event income, measured during the same year as the IHD event, would have high probability of being affected by the event itself. This study exploits a longitudinal dataset consisting of about 50,000 Swedish men and women during the years 1992-2001, and examines the short and long effect of income on the risk of experiencing their first IHD event using logistic random effect regression. The focus on the onset of IHD is cancelling out the effect from the degenerative nature of the disease, which is increasing the risk for

another IHD event massively after an initial event. More specifically, the study examines whether the individual's absolute or relative income deprivation is more important. In the paper, relative deprivation is measured as the share of the individual's earnings compared to what they should earn, given their gender, age and educational level and type. The study is taking advantage of a large dataset and a very precise as well as long-term measurement of absolute and relative income. The study finds no strong indications that a significant difference exist between the risk of experiencing the first IHD event between the highest and lowest category of earners.

#### **91-4. GENDER DIFFERENCES IN LIFE EXPECTANCY IN RUSSIA: TRENDS AND CAUSES**

*Alla E. Ivanova and Elena V. Zemlyanova*

*E-Mail: ivanova-home@yandex.ru*

Long-term mortality dynamics in Russia was accompanied by life expectancy (LE) gender differences. During the years of minimal mortality rates (LE 69.6-70.1 years) the gender differences were minimal as well (9.2-9.5 years). Contribution of age groups into gender gap in life expectancy is almost the same during favorable (1965 and 1987), unfavorable (1994 and 2005) and moderately unfavorable (1980 and 2009) years. Shifts in death causes determining gender differences turns out to be significant. Increased contribution of cardio-vascular diseases into gender difference in life expectancy (from 2 years in 1965 to 4.3 years in 2009) and rejuvenation of its age profile (from 7% of total losses due to cardio-vascular causes in the ages 20-44 years in 1965, to 18% of the same age groups in 2009) became a long-term trend. It points out more negative trends in male self-protective behaviour. The other trend is reduced contribution of neoplasms in gender differences in life expectancy (from 1.4 years in 1965 to 1.0 years in 2009) related to less positive mortality dynamics in females predominantly due to neoplasms of the female reproductive system. Local trends manifest themselves in increased contribution of death causes highlighting marginalization of population: infections, diseases of digestive system due to alcohol component and symptoms, signs (ICD10: R00-R99) within the working ages that disguise violent death causes. Despite notable achievements in mortality reduction in Russia during the last 5 years the share of such causes in 2009 remains higher (1.6 years) compared to the end of the "Soviet" period (0.8 years). Current difference in life expectancy between males and females is determined by accumulated ill-being of the "Soviet" period and consequences of political reforms that Russia is still to overcome. Such dual pressure prevents fast bridging of the gender gap retarding growth in life expectancy of the general population.

#### **91-5. EDUCATIONAL INEQUALITIES IN MORTALITY IN THE NETHERLANDS**

*Ivana Kulhánová, Rasmus Hoffmann, Terje A. Eikemo and Johan P. Mackenbach*

*E-Mail: i.kulhanova@erasmusmc.nl*

Social inequalities in health are substantial in most European countries. The reduction of these inequalities is a major challenge for public health. Interest in researching social inequalities in health is increasing. In the Netherlands, however, the scarcity of data sources has led the magnitude of these inequalities to be neglected. We linked the registries of deaths (1998-2007) with the Dutch Labour Force Surveys (1998-2002). We focused on adult population aged 30 years and more at the baseline. We used educational attainment as a measure of socioeconomic position. The final dataset contained 345267 individuals, including 14697 deaths. The magnitude of educational differences in mortality was estimated by means of the Cox proportional hazard model. Furthermore, we calculated age-standardized mortality rates by education and cause of death, and life expectancy at

age of 30 years. We applied the technique of life expectancy decomposition in order to obtain cause-specific contributions to the difference between the least and the most educated people. This opened new opportunities to research social variations in mortality in the Netherlands.

#### **92-1. EFFECT OF EDUCATION ON SECOND BIRTHS IN HUNGARY. A TEST OF THE PARTNER EFFECT HYPOTHESIS**

*Tamás Bartus, Livia Murinkó, Ivett Szalma and Bernadett Szél*

*EMail: bartus@demografia.hu*

The effect of education on the transition to second births is examined using three waves of the Hungarian Gender and Generations Survey data. We hypothesize that higher education increases the hazard of second conception and this effect is due to the presence of highly educated partner. Parity-specific survival models are estimated using the sample of women born between 1946 and 1983. We find that higher education decreases the time to second conception, and the partner's education reduces the waiting time to second conception. The results remain robust after controlling for sample selection. The findings support the partner effect hypothesis (Kreyenfeld 2002)

#### **92-2. UNSKILLED MAYORS AND GRADUATE FARMERS: EDUCATIONAL FERTILITY DIFFERENTIALS BY OCCUPATIONAL STATUS AND INDUSTRY IN SIX EUROPEAN COUNTRIES**

*Rachel Durham and Bilal Barakat*

*EMail: rdurham@wu.ac.at*

As education's relationship to fertility is confounded by education's relationship to social status, a necessary study would disentangle education and occupational status. We achieve this by examining educational fertility differentials within occupational groups and industries and making cross-country comparisons for Austria, Greece, Hungary, Romania, Slovenia and Switzerland. We use the recently-released individual-level census samples from the IPUMS. A key advantage of IPUMS is that samples are large enough to contain sizeable numbers of unusual combinations, e.g., university graduates in low-status jobs or primary school dropouts in professional categories, allowing us to determine whether education directly affects fertility net of occupational status. Analyzing pseudo-cohorts, we also examine the ways these factors affect fertility timing. Results show that education has a strong, direct, consistent impact on fertility, net of occupation/industry, even within presumably "family-friendly" industries. We also find country-specific differences in terms of fertility timing, with the relationship primarily related to education rather than occupation.

#### **92-3. DOES FAMILY BACKGROUND INFLUENCE EDUCATIONAL DIFFERENCES IN FINNISH WOMEN'S COMPLETED FERTILITY?**

*Jessica Nisén, Mikko Myrskylä, Karri Silventoinen and Pekka Martikainen*

*EMail: jessica.nisen@helsinki.fi*

The role of family background for women's educational differences in fertility has been discussed but still remains unclear. Preferences towards having children, educational attainment, and occupational career may be influenced by characteristics that are clustered in the families of origin. This study explored the role of family background for educational level differences in Finnish women's completed fertility. The data consisted of 35,222 women born in 1940–1950 who were living in households sampled (10%) from the Finnish Census of Population in 1950 with an extensive register follow-up until 2009. Adjustment

of measured socio-demographic family background characteristics and family fixed effects were employed to study the effect of family background on the association between educational level and the completed number of children. Having any children and the number of children beyond the first one were analyzed as secondary outcomes. Analysis methods were Poisson and logistic regression. The level of education was categorized as basic, lower secondary, upper secondary, and tertiary level of education. As expected a negative association between the level of education and the completed number of children was found: year of birth -adjusted relative risk (RR) with 95% confidence interval (CI) of the tertiary educated was 0.89 95%CI 0.87–0.91 as compared to the basic educated. Adjusting for parental education and occupational status of the family head moderately attenuated the association (tertiary educated: RR 0.91 95%CI 0.89–0.94). In the fixed effects model no statistically significant association between the two variables was found (tertiary educated: RR 0.98 95%CI 0.92–1.05), but the sample selection in the analysis called for cautiousness of interpretation. All in all family background seemed to have a moderate contribution to educational differences in Finnish women's completed fertility, the larger part of the association being caused by other reasons than family background.

#### **92-4. THE EFFECT OF EDUCATION ON FERTILITY: EVIDENCE FROM A POLICY EXPERIMENT IN VIETNAM**

*Thuan Thai and Mikko Myrskylä*

*EMail: thai@demogr.mpg.de*

The inverse association between female education and fertility is well known. Empirical evidence of the causality of the association is, however, limited and particularly so in developing countries. We exploit a policy change in universal education which mandates an increase of lower secondary education by one additional grade in the Northern Vietnam in 1989 to study the causal effect of female educational attainment on fertility. Using household survey data, we first evaluate the effectiveness of this policy in terms of the change in age of leaving school. We then investigate the policy impact on fertility using the 2009 Census data and a reduced form approach. We find that the policy does result in higher age of leaving full time schooling, especially among women with high school education. We also find that the policy caused changes in key fertility outcomes. Women who were affected by the policy experienced higher age at first birth and lower cumulative fertility by age 30. This fertility impact of increasing education due to the policy however varies by the level of educational attainment.

#### **93-1. DO UT DES: DO ELDERLY BENEFIT FROM GRANDPARENTING IN TERMS OF COGNITIVE ABILITIES?**

*Bruno Arpino and Valeria Bordone*

*EMail: bruno.arpino@upf.edu*

Mental abilities naturally decline as people become older. However, maintaining good cognitive skills is vital for a good quality of life in old age and how this could be attained is a topic of high interest in ageing societies. We explore to what extent grandparenting, i.e. taking care of grandchildren without the presence of the children's parents, acting as a protective factor, can help elderly in preserving good cognitive abilities. Drawing empirically causal conclusions on the link between grandparenting and grandparents' cognitive skills is a difficult task because of possible confounding effects and reverse causality. We address the endogeneity issues by using an Instrumental Variable approach. Results show that grandparents benefit from taking care of grandchildren in terms of better cognitive skills than non-grandparents.



### 93-2. IS RETIREMENT REALLY BAD FOR HEALTH? FURTHER EVIDENCE ON THE HEALTH-EFFECTS OF RETIREMENTS IN EUROPE

*Philipp Hessel*

*E-Mail: p.hessel@lse.ac.uk*

Whereas researchers of many disciplines have devoted much attention to the question how health affects individuals' retirement-behaviours, very little conclusive evidence exists on the question how retirement itself affects health. At the same time, the hypothesis that retirement would be detrimental for individuals' health remains widespread in the public as well as scientific discourse. Besides anecdotal evidence that retirement as a so called 'stressful life-event' would negatively affect the health of individuals, much of existing research on the topic may largely overestimate these potential negative effects as only a few recent studies explicitly address the issue of 'endogeneity' caused by the reciprocal relationship between health and retirement. In this background, by using longitudinal data for 15 Western European countries (EU-SILC), this paper addresses the question if retirement has a significant effect on individuals' health. More precisely, this study uses country-specific (early-) retirement ages as 'instruments' to adjust for retirement. The dependent variables of health are self-reported health, ADL as well as chronic conditions. In contrast to the 'simple' random- or fixed-effects models, the results of the instrumental variables models suggest that for men and women retirement has no negative effects on health. Thereby for men retirement leads to significant improvements in self-rated health as well as to fewer limitations in ADL.e.

### 93-3. WORK STRESS AND FRAILTY IN LATER LIFE: COMPARISON OF TWO CONCEPTUAL FRAMEWORKS

*Lucie Kalousova and Carlos Mendes de Leon*

*E-Mail: luciekal@umich.edu*

There is wealth of research on how work-related stress influences both physical and mental health outcomes. However, surprisingly little attention has been devoted to the study of how work-stress influences later life health experiences once we exit the labor force. This study explores the relationship between work stress during working years and frailty in later life after retirement. We use the SHARE 2 and SHARELIFE dataset for our analysis. We apply two different conceptual frameworks to assess the level of stressfulness experienced by the worker – reward-effort model and demand-control-support model. The frailty measure is constructed by combining self-reported health measures and biomarkers. We present preliminary results that suggest a relationship between the levels of stress experienced at work and later life frailty.

### 93-4. FAMILY RESOURCES AND COGNITIVE DECLINE AMONG ELDERLY IN ITALY

*Fausta Ongaro, Stefano Mazzucco and Silvia Meggiolaro*

*E-Mail: ongaro@stat.unipd.it*

Family ties may play an important role in the wellbeing of the elderly. In this paper, we examine the association between living arrangements and the cognitive decline among people over 65 in Italy in the hypothesis that living with others (i.e. children and/or spouse) vis-à-vis living alone may have positive effects on cognitive functioning. To this end we used data from the first two waves of the Survey of Health, Ageing and Retirement in Europe (SHARE), which provides five indicators of cognitive functions: orientation, memory, recall, verbal fluency and numeracy. Cognitive decline was measured considering the dif-

ferences between the first and the second wave in each of these five indicators. Preliminary results rejected the hypothesis of a protective effect of living with others and slower cognitive decline in the different dimensions. In particular, elderly living with children seem to worse their cognitive abilities more than elderly living alone, net of other confounding covariates. Further analyses taking into account the potential bias due to the “re-test effect” suggest that a similar result could be expected even for old people living with the spouse (a significant re-test effect was indeed found for couples regards verbal fluency and orientation). However, more in depth analyses are needed to consider other potential bias connected with selection provided by attrition between the first and the second wave.

### **93-5. THE POWER OF THE MIND: EMOTIONAL WELL-BEING AND MORTALITY RISK AMONG OLDER MEN AND WOMEN IN JAPAN**

*Yasubiko Saito and Yuka Minagawa*

*EMail: saito.yasubiko@nihon-u.ac.jp*

This research examines the relationship between emotional well-being and all-cause mortality among older persons aged 65 and over in Japan. We pay particular attention to how the three positive items from the Center for Epidemiologic Studies Depression Scale (CES-D) – feeling happy, enjoying life, and feeling hopeful about the future – are associated with the risk of mortality over the four-year study period. Analyses of three waves of data from the Nihon University Japanese Longitudinal Study of Aging (1999, 2001, and 2003) lead to several important conclusions. First, positive affect is inversely associated with mortality risk in the overall population. Yet, the effects of feeling happy and enjoying life disappear with the addition of health status, sociodemographic, behavioral, and relational factors. On the other hand, the protective effects of feeling hopeful continue to be robust, net of all controls. Second, the impacts of psychological factors considerably differ by gender. A sense of hope offers protection against mortality for men, but this pattern is not shared by women. Overall, our findings highlight the important role of emotional well-being, particularly feeling hopeful about the future, in determining the physical health status of the Japanese elderly. Efforts toward maintaining emotional well-being of the elderly population are needed.

### **94-1. RELATIONSHIP DYNAMICS AND PREGNANCY: SERIOUSNESS, INSTABILITY, AND PARTNER CHANGE**

*Jennifer S. Barber, Yasamin Kusunoki, Heather H. Gatny and Jennifer Yarger*

*EMail: jebbarber@umich.edu*

This paper uses data from the Relationship Dynamics and Social Life (RDSL) project. Using longitudinal data from a weekly survey of 1,000 young women spanning 2.5 years (130 weeks), we examine the types of relationships that lead to pregnancy. We focus on the dynamics of these relationships, specifically examining three dimensions (time spent together, commitment, and cohabitation) during four time periods (current week, past month, entire history with current partner, and history with prior partners). Time-intensive and/or committed weeks, months, and relationships are associated with a higher pregnancy rate than other weeks, months, and relationships. In addition, having a history of committed and/or cohabiting relationships with prior partners is associated with pregnancy, net of the current relationship's character. The first week with a new partner (but not getting back together with a prior partner) is associated with over three times higher odds of pregnancy. Further, changes in seriousness (i.e., instability) increase pregnancy risk. For example, the first week a respondent considers her relationship “committed” is associated with nearly four times higher odds of pregnancy than relationship weeks that remain “uncommitted.”

Finally, a history of instability in terms of cohabitation – moving in and out with prior partners – is associated with an increased risk of pregnancy. Overall, our analyses suggest that understanding both seriousness and instability, and particularly the ways they operate independently and in tandem, are important pieces of the puzzle of early pregnancy.

#### **94-2. SAME OUTCOME, DIFFERENT NARRATIVES. A COMPARATIVE MICROSIMULATION STUDY OF FERTILITY CHANGE IN BULGARIA, POLAND AND RUSSIA**

*Dora Kostova, Marta Styrc and Martin Spielauer*

*EMail: kostova@demogr.mpg.de*

Before the political and economic transition at the end of the 1980s, Bulgaria, Poland and Russia showed very similar and remarkably stable demographic patterns characterized by early and universal marriage and fertility around the replacement level. This era of demographic stability was followed by a sharp drop of period fertility reaching its lowest point at the end of the millennium. While this experience was shared by all three countries, the behavioral changes leading to the fertility decline followed very distinct patterns. The aim of this study is to quantify the individual contributions of the various changes in union formation, union stability, and fertility risks in different life-course constellations to the overall drop in fertility. For this end we have developed a microsimulation model based on event history models estimated from the 2004 Bulgarian and Russian Generations and Gender Surveys and the 2002 Polish Fertility Survey. The results indicate that the postponement of first union formations is the main driver of the fertility decline in Bulgaria. This change is almost absent in Poland where the drop of fertility is predominantly an effect of declining first birth intensities within unions. In Russia on the contrary, it is the decrease of the second birth hazard which contributes most to the drop in fertility. Interestingly, the steep increase of union dissolution risks observed in Russia has no effect on fertility: the low second birth risk within the same union is compensated by the new partner effect.

#### **94-3. PARTNERS' FERTILITY INTENTIONS: A NOTE OF DISCORD AND INCONSISTENT CONTRACEPTIVE USE**

*Monika Mynarska*

*EMail: m.mynarska@uksw.edu.pl*

It is a truism that reproductive behavior involves – at least in the vast majority of cases – two partners. Nonetheless, studies on fertility that involve couple's perspective are still scarce. Available evidence shows that in case of partners' disagreement, active steps towards conceptions cannot be taken, leading to fertility postponement. The partners seem to maintain the status quo until they reach a consensus about their childbearing plans. The current study explores this process in depth. We use qualitative data on 23 young Polish couples (semi structured interviews with male and female partners) to illustrate different patterns of partners' disagreement and its consequences for their reproductive behavior. We show that under some circumstances a note of discord in partners' intentions may lead to an inconsistent use of contraception and hence increase a probability of pregnancy, even though no active trying to conceive takes place.

#### **94-4. WILL CONTRACEPTIVE USE GO UP IF PAKISTANI COUPLES KEEP TALKING?**

*Syeda Saman Naz and Batool Zaidi*

*EMail: snaz@popcouncil.org*

Pakistan's latest demographic and health survey shows a slowdown in the rate of fertility decline and a stagnant contraceptive prevalence rate. At the same time the proportion of ever users of contraception is accelerating which is translated by high discontinuation rates among contraceptive users. All the major reproductive health surveys show an increasing proportion of women reporting 'husband disapproval' as the primary reason for not using any contraception, largely ignoring husbands' response on fertility desires. This paper uses a nationally representative survey from 5,208 couples and 2,345 contraceptive episodes contributed by these couples in four years prior to the survey. Using multiple logistic regressions and multinomial discrete-time hazard regression models, it will analyze the influence of inter-spousal communication on couples' perceptions and fertility preferences and how these factors in turn influence adoption of contraception and then persistent contraceptive use. Including the influence of these factors on contraceptive discontinuation, failure and switching. Preliminary results show that wife's perception of husband's fertility is the strongest predictor of contraceptive use. Therefore the obstacle is not so much men's disapproval but the lack of communication on fertility preferences and attitudes between the couple that lead to inaccurate perceptions.

#### **94-5. COUPLE DISAGREEMENT AND REPRODUCTIVE DECISION-MAKING RULES IN ITALY**

*Alessandro Rosina, Laura Cavalli and Maria Rita Testa*

*EMail: alessandro.rosina@unicatt.it*

Using couple data from a longitudinal study conducted in Italy between 2003 and 2007 we examined the effect of couple disagreement on childbearing behavior and compare the predictive power of couples' short-term childbearing intentions for partners who have concordant and discordant views. We tested four different decision rules that might be used by couples in disagreement to resolve their conflict: sphere of influence rule, power rule, golden mean rule and social drift rule. We started from the hypothesis advanced in an earlier study that women prevail in reproductive decision-making because childbearing lies mainly in their sphere of influence in Italy. We found that either both partners have equal power in negotiation about having a child or women tend to have a greater influence on the final decision, and moreover, their prevalence seems to be not strictly responsive to couple gender equality in terms of division of housework and child-care tasks and intra-family distribution of bargaining power. The disagreement is shifted more toward not having a child than toward having a child among couples at parity two or above who adopt a symmetrical veto power model but produces an intermediate childbearing outcome at lower parities which also depends on which of the partners has a stronger child intention among childless couples. Results suggest that the predictive power of short-term fertility intentions strongly improve both partners' view is considered in the fertility model and support the adoption of a couple approach in fertility research.

## 95-1. UNION DISSOLUTION AND INTERNAL MOBILITY: A COMPARISON AMONG NATIVES AND MIGRANTS

*Helga A. G. de Valk, Didier Willaert and Maaike Jappens*  
*E-Mail: valk@nidi.nl*

In this paper we first study patterns of separation and divorce among natives and migrants of different origin in Belgium. Second we link the divorce to internal mobility and test whether previous documented residential mobility patterns of divorced also apply for migrant populations. This study is novel in at least three respects. First of all only few studies have addressed levels and characteristics of divorce among migrant groups compared to the majority group population. We even go beyond a simply dichotomy and address the diversity in divorce among different origin groups living in Belgium. Second, our analyses not only cover divorce among married couples but we will just as well address separation among unmarried cohabiting couples. Third, we test what mobility patterns are predominant after divorce/separation among migrants and the majority group. Our multivariate analyses include factors of importance at the individual, couple and neighbourhood level and cover both levels and direction of moves. The analyses are based on the 2001 Belgian census, linked with population register data for 2006. All individuals who were part of a couple in 2001 are studied and we assess the levels of breakup of married and unmarried unions four years and three months later (in 2006). The data have rich information on individual and couple characteristics that will be taken into account in the multivariate analyses. For migrant origin we distinguish between six different (regions of) origins including both European and non-European migrants. We analyse the level of mobility linked to the divorce and study the direction of the residential moves of the partners as well as its determinants in more detail.

## 95-2. FAMILY REUNIFICATION, MIGRATION STRATEGIES AND TRANSNATIONAL MARRIAGE MARKETS

*Andreu Domingo, Xiana Bueno and Juan Galeano*  
*E-Mail: adomingo@ced.uab.es*

Legislation in many European countries usually entails a shared misunderstanding in the field of family reunification. These, used to take for granted that family formation took place before than the migratory movement of one of the couple members did. Nevertheless, Is well known that family reunification involve, not only families which were conformed before migration, but also those families created after the migration of one of its members. This difference becomes significant when, taking into account the specific migration strategies of some national groups, theirs family and migratory cycles, we attempt to perceive the possible emergence of transnational marriage markets. Our aim is twofold. Firstly, discriminate among the family reunification strategies throughout original administrative registered data in Catalonia between 2004 and 2010. Secondly, explore and characterize, trough Demographic Survey of Catalonia from 2007, those family reunifications that are non-reflected in the previous dataset, which are the ones conformed even after migration take place.

### **95-3. FAMILY STATUS, LABOR MARKET INTEGRATION AND REMITTANCES. BOLIVIAN FAMILIES IN SPAIN**

*Rafael Grande Martín and Luis Alberto Del Rey Poveda*  
*EMail: rgrande@usal.es*

The aim of this paper is to analyze the transfer of remittances by immigrant families taking into account the labor market integration and family status in the country of destination. Our main hypothesis is that the migrant-family status affects both the labor market integration and the transfer of remittances to the country of origin. In this study we focus on analyzing the case of Bolivian families in Spain. This is an immigrant group highly feminized, with a lower time of residence, and it presents a weak family reunification process. These features define a particular framework for the study of remittances. The data used in this study are mainly from National Immigrant Survey 2007 from de Spanish National Statistics Institute. Using logistic regression models we estimate two relative risks: the labor market integration and the transfer of remittances considering socio-demographic, family and employment characteristics of migrants. The results indicate from one hand that the Bolivian labor integration is very weak compared to other immigrant groups because of its recent arrival and their individual and family socio-demographic conditions. On the other hand, given their particular family status, with many married women with children, but living alone, the flow of remittances is much more intense than other immigrant groups with better labor market integration. The main finding of this study is to see that family status of immigrants, marital status and residential status, are more important than labor market position in order to send remittances.

### **95-4. DIVIDED FAMILIES IN SPAIN**

*Miguel Requena, David Reher and Maria Sanchez-Dominguez*  
*EMail: mrequena@poli.uned.es*

International migratory movements often produce at least temporarily the reality of divided families that are located in at least two different places. The literature on divided or transnational families and family reunification movements has shown how the socio-demographic determinants in origin and the socio-economic and institutional factors in destination drive these processes. Assuming that migratory movements are due, at least in some measure, to specifically familial dynamics and strategies, in this paper we are interested in exploring whether other elements associated to country of origin and to the relationship between country of origin and country of destination have a discernible influence on the family results of migration and on the separation and subsequent reunification of the families of immigrants. This complex set of elements builds the playing field where migratory decisions are taken. The Spanish case, with the sudden explosion of an intense migratory flows between 2000 and 2007, and a very significant number of Latin American migrants arrived at the country during these years, is a particularly suitable scenario to investigate this phenomenon. The empirical analysis will be mainly based on the National Immigrant Survey of Spain (2007)

### **95-5. IS THE BOOMERANG GENERATION OF YOUNG ADULTS A REAL PHENOMENON? RETURNING HOME IN YOUNG ADULTHOOD IN THE UK**

*Juliet A. Stone, Ann M. Berrington and Jane C. Falkingham*  
*EMail: j.stone@soton.ac.uk*

Young adults in the UK have tended to leave the parental home earlier than their European peers (Aassve et al. 2002; Billari et al. 2001) but are also more likely to return (Iacovou

and Parisi 2009). Recent cross-sectional evidence (Stone et al. 2011) showed an increase in co-residence between parents and young adult children. There has been discussion in the British media about “boomerang children” (Bingham 2009; Waite 2008) but nationally representative, longitudinal data are required to disentangle the relative importance of postponement in first leaving and increased returns to the parental home. The British Household Panel Study includes individuals from 5500 households interviewed annually from 1991 to 2008. We pool data for individuals aged 16-34 with data from two consecutive waves who are living away from their parents in the first wave ( $t_0$ ), then calculate the proportion returning one year later ( $t_1$ ). We use individual-level, household-level and contextual variables in binary logistic regression analyses to investigate the determinants of returning home (Davanzo and Goldscheider 1990; Ermisch 1999; Goldscheider and Goldscheider 1998). We additionally use a cohort-based approach including young adults aged 16-17 years and living with their parents at baseline. We follow up these individuals for five years to investigate patterns of leaving and returning to the parental home. The paired-years analysis shows men are more likely to return home than women but over time, women have become more likely to return. ‘Turning-points’ such as union dissolution and becoming unemployed show strong, positive associations with returning home. The cohort-based approach indicates young adults living in a family with two natural parents are least likely to leave the parental home. For those with step-families or living with a lone parent, we see more complex patterns of leaving and returning, indicative of more chaotic pathways out of the parental home (Ford et al. 2002).

#### **96-1. RULES IN CHANGE? BIRTHS, MIGRATIONS, COHORT REPLACEMENT AND HOMEOSTASIS IN WORLD POPULATION: 1950-2100**

*Gianpiero Dalla Zuanna and Francesco C. Billari*

*E-Mail: gpdz@stat.unipd.it*

How do contemporary populations evolve through the replacement of successive cohorts, via the dynamics of the components of demographic change? Can we observe important relationships, such as for instance homeostasis, between how these components evolve? In this paper we focus on birth-cohort size, and on the comparison between the sizes of successive cohorts, in particular in the space of a generation. A very simple approach indeed, but it relates fundamentally to the following key question: will people aged e.g. 30 at time  $t$  be “replaced” by a larger, equal or smaller number of people aged 30 at time  $t+30$ ? We take a global approach by analyzing world- and regional-level cohort replacement as affected by the key components of population dynamics, i.e. fertility, survival and migration for 1950-2010, using UN data for the whole world (UNPD 2011). Moreover, we document that during this period, the relationship between the components of demographic change has followed, at least partially, a homeostatic principle. Finally, we analyze the medium variant of UN World Population Prospects (2010 revision) to assess the potential future of cohort replacement and the presence of a homeostatic logic behind the assumptions embedded in projections.

#### **96-2. MIGRATION, RETIREMENT, AND AGING IN STABLE POPULATIONS**

*Fernando Riosmena, Maria E. Winkler-Dworak, Alexia Fürnkranz-Prskawetz and Gustav Feichtinger*

*E-Mail: Fernando.Riosmena@colorado.edu*

Immigration has drawn attention as a potential contributor to solve some of the problems associated with population ageing. However, previous studies have deemed it as an inefficient way to rejuvenate the population, and one that would generate unrealistic growth

levels in many ageing nations. While this literature as a whole highlights the trade-offs between the rejuvenating and growth effects of immigration, most studies look at either of these effects, rarely concentrating on the actual trade-off between them. Further, these studies have used a stable population model with fixed migrant inflows or, in one study, tying migrant flows to a share of the birth flow. We argue that a fixed inflow or a target tied to the number of births may not yield an optimal or realistic solution to the aforementioned trade-off and propose the use of an immigration regime in which the number of migrants is tied to labour market needs, approximated by the difference between retirees and new labour force entrants in a given year. Guided by prior work on the optimal age composition of intake into organizations, aimed to reduce ageing while curbing growth, we also propose the use of a bimodal age distribution of immigration that includes members both just entering the labour force in addition to older individuals close to leaving it. In addition to being optimal in terms of its rejuvenating/growth effects on the mean age, we study the implications of using such a schedule in terms of its effects on dependency ratios vis-à-vis more commonly-used age distributions of immigration. We illustrate these effects using the case of eleven European, East Asian, and North American nations with varying levels of below replacement fertility, with all also undergoing substantial ageing, and which have had sizable immigration in the recent past.

### **96-3. MINIMIZING THE DEPENDENCY RATIO IN A POPULATION WITH BELOW-REPLACEMENT FERTILITY THROUGH IMMIGRATION**

*Christa Simon, Anton Belyakov and Gustav Feichtinger*

*EMail: christa.simon@oeaw.ac.at*

Many industrialized countries face fertility rates below replacement level, combined with declining mortality especially in older ages. Consequently, the populations of these countries have started to age. One important indicator of age structures is the dependency ratio which is the ratio of the nonworking age population to the working age population. In this work we find the age-specific immigration profile that minimizes the dependency ratio in a stationary population with below-replacement fertility. It is assumed that the number of immigrants per age is limited. We consider two alternative policies. In the first one, we fix the total number of people who annually immigrate to a country. In the second one, we prescribe the size of the receiving country's population. For both cases we provide numerical results for the optimal immigration profile, for the resulting age structure of the population, as well as for the dependency ratio.

### **96-4. INTERNATIONAL MIGRATION. A PERSPECTIVE FROM COMPLEXITY SCIENCE**

*Frans Willekens*

*EMail: willekens@nidi.nl*

In this paper a perspective is proposed that explains international migration in terms of actors rather than factors or variables. The what question ("What influences migration and shapes migration flows?") is replaced by the who question ("Who influences migration and shapes migration flows?"). Actors have traits or attributes (the variables) but more importantly, they are embedded in a multilevel context and interact with other actors, near and distant. Embeddedness and interaction (interconnectedness) are key features of the proposed perspective. It is rooted in complexity science. A complex system is a network of autonomous and heterogeneous agents at different levels of operation that interact and give rise to emergent system behaviour. The interactions usually follow simple rules and they determine how a system evolves. The challenge is to identify the agents and the rules



of the game. Changes in the system are usually initiated by random events, such as technological innovations or political events. These events may be small or local. The system's response determines its trajectory. Feedback mechanisms (adaptation) are important drivers of systems behaviour. Negative feedback is necessary to maintain the characteristics and stability of the system. Positive feedback leads to change but may also lead to system disintegration and collapse. Complexity science models complex systems from the bottom up. Aggregate patterns arise out of the interactions of agents with each other and an environment, without any central controller or other outside influence. Models that describe and predict the behaviour of a system as an outcome of actions and interactions of individual agents are known as agent-based models (ABM). A simulation of migration flows between ten countries with private and public agents illustrates the operationalization of the complexity science perspective.

#### **97-1. THE GENDER WEALTH GAP IN FRANCE: DECIPHERING THE INFLUENCE OF FACTORS**

*Carole Bonnet, Benoît Rapoport and Alice Keogh*

*EMail: carole.bonnet@ined.fr*

There exists an extensive literature analyzing the gender wage gap. More recently, many studies have sought to examine the gender pension gap. On the other hand, wealth inequalities are still a relatively unexplored topic (Deere & Doss, 2006), mainly due to lack of adequate data. Unlike income, wealth is often described at the household level, thereby leading to a focus on the distribution across, as opposed to within, households. Nevertheless, wealth is a central aspect of individual wellbeing, and its distribution between genders a relevant topic. Assessing the wealth allotment within couples could contribute to the literature on the intra-household allocation of resources and its influence on bargaining power. Here, we investigate the question of a gender wealth gap in France, relying on adequate data. The 2003 and 2009 French wealth surveys render feasible the task of precisely identifying who owns what within the household (for housing and financial assets). The gross wealth of men is 15% higher than that of women; the gap is noticeably larger for financial assets (roughly 37%) than for main residence (4% to 8%). The results are similar in both surveys. To better identify the contributions of specific factors (demographic, economic...) to the overall wealth gap, we use the semi-parametric decomposition method by DiNardo, Fortin & Lemieux (1996) [aka DFL decomposition]. We show that the gender wealth gap is predominantly explained by the existing differences in the distribution of observed characteristics, in particular those linked to the labour market. Emphasis should be placed, however, on the unexplained part, which is high and negative. This means that the gap ought to be even higher given the observed characteristics: it is reduced by the better "remuneration" that women are awarded for their characteristics. Indeed, women derive more wealth from their characteristics than do men

#### **97-2. BANFIELD OR WILSON? EVIDENCE ON FAMILY TIES AND CIVIC VIRTUES**

*Martin Ljunge*

*EMail: martinljunge@gmail.com*

Are family ties a complement to or a substitute for social capital? I establish a positive relationship between family ties and civic virtues, as captured by disapproval of tax and benefit cheating, corruption, and a range of other dimensions of exploiting others for personal gain. I find that family ties are a complement to social capital, using within country evidence from 83 nations and data on second generation immigrants in 29 countries. Strong families cultivate universalist values and produce more civic individuals. This contradicts

notions of 'amoral familism' which argue that strong families promote parochial values and the narrow family interest.

### **97-3. SOCIAL RISKS, FAMILY VALUES AND DEMAND FOR WELFARE**

*Dominique Meurs and Claudio Lucifora*

*EMail: dominique.meurs@ined.fr*

Family values and family ties have been shown to be associated to important economic decisions both in labour and credit markets. Different types of social risks are also pooled within the family. This paper investigates the links between social risks, family values and the demand for welfare assistance using data from the 2005 French "Generation and Gender Survey" (GGS). We measure demand for welfare, as opposed to help within family, with respect to both financial support and provision of care services. We define the relevance of family relationship using individuals' self assessed measures of family values (such as duties and responsibilities of parents and children and reciprocal financial support) and construct various indicators of family values. We find a positive association between both traditional values within the couple and intergenerational family links with the pooling of social risks and services provided within the household. We show that there is substantial heterogeneity across different groups with respect to the demand for welfare assistance. We investigate causality using long term cultural determinants of selected population as instruments for family values. Results show that demand for welfare is mainly affected by the intergenerational dimension of family values, while the effect of values within couple is no longer statistically significant

### **97-4. LOOKING INWARDS: TOWARDS A GEOGRAPHICALLY-SENSITIVE APPROACH TO OCCUPATIONAL SEX-SEGREGATION**

*Francisco Perales and Sergi Vidal*

*EMail: jfpera@essex.ac.uk*

In this article we question implicit assumptions in the literature and explore the issue of occupational sex-segregation from a geographical standpoint. First, we examine the degree of variation in patterns of occupational sex-segregation across regions and districts in England and Wales. Specifically, we investigate whether the proportion of workers in each occupation who are women and the Index of Dissimilarity vary across local labour markets, operationalized as Government Office Regions and Local Authority Districts. Second, we explore whether using indicators of occupational feminization calculated from aggregated national-level data biases estimates of the effect of occupational sex-segregation on wages. Results suggest that both occupational feminization and occupational dissimilarity vary widely across regions and districts, that little bias is introduced to estimates of the impact of occupational feminization on wages when indicators of sex-segregation derived at the national level are used, and that such effect varies significantly across districts.

### **98-1. DYNAMICS OF SINGLE MOTHERHOOD. PARTNERSHIP TRAJECTORIES IN EARLY PARENTAL BIOGRAPHY**

*Sonja Bastin*

*EMail: bastin@demogr.mpg.de*

This study uses data of the German Family Panel (pairfam) to investigate the partnership trajectories of single mothers. In line with previous research, we define a single mother as a woman who does not coreside with a partner. The focus of the investigation is on women who were single mothers at the birth of their first children. Thus, we concentrate on single mothers who already were living alone with their children when their children were

very young. Using event history analysis, we investigate the duration until a single mother moves in with a partner. Our analysis shows that many of the mothers who do not coreside with a partner at first birth have a partner who does not live in the same household. These women behave very differently from single mothers who do not have a partner. Around half of the women in each of the two groups leave the single parent status within the first five years. But single mothers with a non-residential partner leave single motherhood more quickly and more often move in with the father of the child. We also show that children of those women more often experience fluctuated motherly partnership trajectories than children born to partnerless women. Also differences by level of education are discussed.

#### **98-2. CHANGING THE FACE OF POOR MOTHERS: UNDERSTANDING HOW ALTERNATIVE POVERTY DEFINITIONS CHANGE THE COMPOSITION OF MOTHER-ONLY FAMILIES LIVING IN POVERTY**

*Misty L. Heggeness and Laryssa Mykyta*

*EMail: misty.l.heggeness@census.gov*

This paper uses the Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC) to analyze how changes in poverty measurement affect the poverty rate of mother-only families. It compares new supplemental poverty measures to traditional poverty thresholds within the United States. Mother-only families are defined as those families where the father is absent and children are present. Mother-only families include both families where the mother is the head of household, as well as those subfamilies residing in someone else's household (usually the parent(s) or other relative(s)). This paper adds to the literature on mother-only family composition and dynamics by analyzing an expanded definition of mother-only family (one that is not limited to mothers that are heads of household) and provides critical comparisons of the real impact on poverty rates to changes in poverty definitions and units of analysis for this group. Since the supplemental poverty measure allows for inclusion of governmental support programs focused on alleviating poverty for children, we expect to see a decrease in the poverty rate for mother-only families.

#### **98-3. THE PARENTING PRACTICE OF SINGLE MOTHERS IN TURKEY: CHALLENGES AND STRATEGIES**

*Serap Kavas and Ayse Gunduz-Hosgor*

*EMail: serapkavas@gmail.com*

The purpose of this study is to examine single parenting experience of divorced professional women in Turkey. Drawing on 24 interviews to single mothers, the study probes into the various cultural and structural factors facing single mothers and the strategies they devise to handle all the hardship managing to bring up a child alone as well as standing up for themselves as single mothers in a patriarchal society. Based on this qualitative sample, results demonstrate that single mothers in this study face numerous challenges ranging from the hardship of maintaining authority in the new family setting they formed; struggling to keep the sense of a complete family; handling negative attitudes to single mothers and to their children. We argue that through the strategies they devised these mothers rebuild their families in line with traditional Turkish family system. As well, while they are constantly re-forming their families they also have to cope with additional challenges as well as ambivalence. We draw on the literature on boundary ambiguity and role ambiguity, as theoretical framework for understanding these women's ambivalence in the process. The shortage of data and research attention has made it difficult to document many of the dimensions of single mother families living in Turkey. The current study, thus, aims to fill

this gap by providing a starting point for subsequent research as well as implications to create policies to help change many of the negative circumstances that are facing these women. Finally, the sample and context of this work allows us to generate cross-cultural discussion on the issue of single parenting. Through qualitative study of one landmark society we hope that some new light will be shed on the current condition and future of changing family structures in developing countries. Keywords: single mothers; professional women; qualitative method; challenges & strategies

#### **98-4. FAMILIES "ALL'ITALIANA": 150 YEARS OF HISTORY**

*Alessandra De Rose*

*EMail: alessandra.deroose@uniroma1.it*

In this paper we trace the evolution over time of definitions, data sources, conceptual frameworks and strategies of analysis of family structures and behaviours in Italy since 1861, date of the country Unification. Then we focus on trends in family patterns at beginning of the new Millennium, and compare the Italian case with the other European countries. We mainly concentrate on data on unions formation and dissolution and show many figures which suggest a growing flexibility of unions and a rising breaking-down of the Italian marriage. We thus contribute to the discussion about the delay and specificity of the "new" family models in Italy, providing a dynamic picture in a context of institutional constraints and lack of welfare aids.

#### **99-1. PRACTICAL STRATEGIES FOR MINIMIZING SAMPLING AND NON-SAMPLING ERRORS IN TELEPHONE SURVEYS: A CASE STUDY USING THE "SAMPLE SURVEY ON BIRTHS"**

*Cinzia Castagnaro, Antonella Guarneri, Sabrina Prati and Francesca Rinesi*

*EMail: cicastag@istat.it*

It is well-known that Italy is one of the Countries with the lowest fertility level in Europe, therefore surveys devoted to this topic are particularly relevant. Starting from October 2011, a new edition of the Istat "Sample Survey on births" has been going on: it is a computer assisted telephone survey, where 15.000 mothers are interviewed. The advantages of C.A.T.I. survey versus different data collection techniques are well known, as well as their limits. In this paper we focus on specific strategies that can be adopted for minimizing both the sampling and the non-sampling errors when telephone survey method is adopted. As a matter of fact, C.A.T.I. surveys represent a cost and time saving way to collect socio-demographic data. At the same it is becoming increasingly difficult to ignore that less and less households have a fixed phone number and this can lead to an under-representation of selected population subgroups. By exploiting a previous Istat face-to-face survey and applying decision trees procedures we compared the characteristics of household with/without phone. Those results deserve high consideration in sample weights' calculation to produce not-biased estimates across all groups, under-represented populations included. An other crucial aspect that must be considered is the "interviewer effect" that impacts both the response rate and data quality. Several tools are used to monitor and correct the interviewers' behaviour. Particularly, a set of standardized indicators are daily computed both at aggregate and interviewer level. Moreover a continuous supervision of interviewers' performance over a set of key-questions is assessed by multilevel regression analysis. If we recognize that interviewee are nested within interviewers, an intercept-only model can be estimated and the intra-class correlation coefficient represents the interviewer effect. Interviewers that show a random effect that significantly differs from zero are detected and further trained in order to raise data quality.

## **99-2. NON-RESPONSE BIAS IN STUDIES OF SURVEY DATA WITH AN APPLICATION TO RESIDENTIAL MOBILITY**

*Paul Clarke, Fiona Steele and Elizabeth Washbrook*

*E-Mail: paul.clarke@bristol.ac.uk*

We consider the issue of non-response or attrition bias in binary outcome models when the response mechanism takes a particular form: the probability an outcome is observed depends causally on the realized outcome. Our analysis is motivated by the study of residential mobility, in which movers are more likely to drop out of the study because of loss of contact, but is also relevant to applications such as the effects of a treatment of health outcomes. A simple modelling framework incorporates the response mechanism of interest and is contrasted with the more standard two-equation selection model approach. We use simulations to characterize the nature of the biases and the detection of non-ignorable non-response under different estimation approaches. We explore the sensitivity of the estimates to the normality assumption and the imposition of exclusion restrictions. The model is applied to an analysis of residential mobility in the British Household Panel Study.

## **99-3. DOES THE MODE OF DATA COLLECTION MATTER IN DEMOGRAPHIC RESEARCH? INSIGHTS FROM A GGP MODE EXPERIMENT STUDY**

*Andrej Kveder, Joop Hox, Katja Lozar Manfreda, Gregor Petric, Jernej Berzelak and Rok Platinovsek*

*E-Mail: kveder@nidi.nl*

Current survey taking climate is challenging for researchers in demography and social sciences in general. Response to surveys has been in constant decline in the past decades making the collection of new data increasingly costly. Developments in survey methodology and especially the feasibility of web surveys offer new opportunities for social science research. However, different data collection modes can yield substantively different results. The aim of this paper is to investigate to what extent mode (CAPI, CATI, WEB) differences exist in a large-scale demographic survey, and explore the feasibility of web implementation of a questionnaire that is both long and complex (with retrospective histories, prospective elements and social network measures). Although considerable amount of research has been accomplished studying mode effects (de Leeuw, 1992, 2005), there is no scientific evidence relating to large-scale demographic surveys such as the Generations and Gender Survey, the survey analysed in this paper. The design of the study employs a randomized design into three selected modes of data collection. Each individual stayed with the assigned mode and was not offered a switch in order to keep the modes "clean". The analysis focuses on the comparison of modes in terms of data quality (item nonresponse) and measurement equivalence (distribution comparisons). The comparative analysis of modes aggregates questions using a customized question typology based on general characteristics of questions as well as linguistic constructs that tap into respondents' cognitive processing. The use of such a typology will provide answers as to which types of questions are sensitive to different mode effects. The results of the proposed paper will provide insights into the possibility of conducting large-scale demographic surveys using web mode of data collection, contribute to the discourse on the quality of demographic data and open avenues for even more innovative demographic research.

#### **99-4. DO LOW SURVEY RESPONSE RATES BIAS RESULTS? EVIDENCE FROM JAPAN**

*Ronald R. Rindfuss, Minja K. Choe, Noriko Tsuya and Larry Bumpass*  
*EMail: ron\_rindfuss@unc.edu*

Response rates to government and scientific surveys have deteriorated in most developed countries. This has been a growing concern among those in the survey research field, but has received limited attention from demographers who still tend to hold the view that survey data with low response rates should not be used. In this paper we examine the bias that might be associated with two survey efforts in Japan in 2009. The first was a cross-sectional national survey of the Japanese population aged 20-49. The second was a longitudinal follow-up in 2009 of a 2000 national survey of the population aged 20-49. Both the new cross-sectional survey and the follow-up had relatively low response rates. For both data collection efforts, we examine evidence for bias across a wide range of measures: fertility intentions, family and gender attitude items, measures of marital happiness, reports of hours spent on various household tasks, and reports of knowing people who had engaged in such family behaviors as using child care, having a non-marital birth, cohabiting, and planning not to marry. Evidence of bias varies across the two survey efforts, across items, and across methods to assess bias. In general, there is less bias than might be expected given the low response rates and for most items is effectively removed with proper controls in multivariate analyses.

#### **99-5. INTERVIEWER EFFECTS AND RELIABILITY OF RETROSPECTIVE EVENT HISTORIES WITHIN THE GERMAN GENERATIONS AND GENDER SURVEY**

*Lenore Sauer, Kerstin Ruckdeschel and Robert Naderi*  
*EMail: lenore.sauer@destatis.de*

The life-course perspective is crucial for the explanation and understanding of demographic behaviour – especially of family formation. Therefore one of the main objectives of the Gender and Generations Programme (GGP) was to provide researchers with the information on individuals' life course. There are two main approaches to gather this kind of information: either a prospective approach including a panel design or retrospective questions. Both possibilities have been applied in the GGS, but obviously, in the first wave only the retrospective part could be used for event analyses. However, there are known problems concerning the quality of retrospective data, especially a full recollection of past events. In the German national sample such problems evolved in the retrospective part of the survey dealing with fertility histories and marital status. The results differ considerably from vital statistics and the state of the art. Childlessness is generally and especially in older cohorts overreported and the results concerning ever married women are implausible – their share in older cohorts is too low. In this paper we investigate different reasons for this problem. First of all we identify the main distortions and the most affected groups. We then try to identify possible sources of distortions: the sampling procedure, the instrument and the interview situation. We are using several sources of comparison for this undertaking: GGS data of other countries and a second supplementary GGS sample of Turkish nationals living in Germany. Special attention is given to an extensive interviewer control taking into account several kinds of "learning effects" to shorten parts of the interview which could result in the contamination of the data. Finally we discuss possible solutions in order to provide the users of the German GGS with recommendations how to deal with these problems when analysing related questions.

#### 100-1. INDIVIDUAL, HOUSEHOLD AND COMMUNITY LEVEL CORRELATES OF INTERNAL MIGRATION IN IRAN: APPLICATION OF A MULTILEVEL MODEL

*Tavakkol Aghayari Hir, Maryam Fallah Toule Kolaei, Hossein Mirzaei, Aliyar Ahmadi and Mahmoud Ghazi-Tabatabaee*

*EMail: aghayarih@yahoo.com*

Migration, like any other socio-demographic phenomenon, basically known as a multifaceted and multidimensional experience. Mostly, it is regarded as a long-standing social problem of many developed or developing societies, in a way or other. On the one hand, decision to move could be affected by a series of individual-level characteristics, such as age, sex, education, and etc, on the other, wider community-level factors are in place, mediating those effects of individual-level variables. This is why, entering these variables altogether into regression models without taking necessary strategies to separate the effects of variables at different levels, leads usually to complicated and some times so mixed results, which really prevent them from being used for policy making purposes. This paper, discussing some general issues regarding Iranian Population's recent migratory experiences during 1996-2006, tries to shed light into correlates of internal migration at three Individual, Household, and Community levels. To this end, migratory experiences of over 1360000 individuals (over 345000 households), including 2 percent of all population enumerated at country's 2006 Census, released by the Statistical Center of Iran, investigated. Preliminary estimates show that, in average, over 16 percent of total population of the country (ranging from 9 to 34 percent at lowest and highest cases regarding different provinces) has changed their place of residence during 1996-2006. Utilizing a multilevel model, this paper aimed at studying different factors encouraging or discouraging people to/from moving at three individual, household, and community levels. Policy implications are discussed further with reference to correlates of recent internal migration in the country.

#### 100-2. FUTURE PATTERNS OF REGIONAL LABOR FORCE AND URBANIZATION FOR TURKEY: COMPARATIVE ANALYSIS WITH THE MAIN DEMOGRAPHIC OUTPUTS OF THE REGIONAL AND SUB-REGIONAL POPULATION PROJECTIONS

*Mehmet Dogu Karakaya*

*EMail: dogu\_karakaya@yahoo.com*

The scope of this study is to view the labor force age groups of Turkey by the new provincial and regional urban/rural population projections for the centenary of the Republic of Turkey, based on Address Based Population Registration System (ABPRS) database, with contributions of Turkey Demographic and Health surveys (1993, 1998, 2003 and 2008), UN-World Population Prospects and General Population Censuses. This is the first trial-study for provincial based cohort-component population projection with regional and provincial assumptions, and is also the first one of ABPRS based projections except of national projections of TurkStat. According to the results of the study, different demographic patterns will be followed in sub-regions of Turkey. Population ageing will be occurred in western localities. Percentage of urban population will usually rise in some provinces and regions although the decreasing population sizes due to negative net migration or low fertility levels. Turkey's total population will reach a value between approximately 81-83 million until 2023 with decelerating growth rate. It is seen that the population will become dense in cities and high population areas. Deviation from final phase of demographic transition appears when mainly going to eastern regions from western regions. There are deep differences between the demographic structures of the regions. Western regions are in an advanced level than the average in Turkey; they nearly reach to the end point of the

demographic transition process or have reached. Percent values of 15-64 population will increase almost in everywhere. But its pattern have relationship with the internal migration. The eastern regions and rural areas will feed the western and more urbanized ones by young and dynamic migrants, by the higher fertility rates. Percent values of elderly (65+) population have linear proportion with the percent of 15-64 age groups.

### **100-3. A MIGRATION MODEL FOR INTERNAL MOVEMENTS WITHIN A COUNTRY APPLIED TO PORTUGUESE DATA**

*José Martins, Carlos Silva, Maria Cristina S. Gomes and Eduardo Anselmo Castro*  
*Email: jmm@ua.pt*

There are a significant number of NUTS III regions of Portugal (about half) undergoing a human desertification process. In order to provide support to policy makers, the Demospin project is developing a joint demographic-economic model to describe the trends and allow for the evaluation of policy impacts. The estimation of the number of migrants in these regions proved to be one of the main difficulties to be surmounted. From the census information of 1991 and 2001, a specific model was developed to estimate migration based on socioeconomic factors: the creation or destruction of employment, the relative GDP per capita between the region and the national level and the relative demographic potential of the region compared to the regions average. A highly significant dependence of migration on the creation or destruction of employment is observed for the age groups between 20 and 40 year olds. Gender is not relevant in this analysis of patterns of employment dependence, even if for some regions the migration by gender is clearly different. The GDP per capita difference between the region and the nation has a significant impact on the 20 to 29 year olds. A lower-than-average GDP per capita is significantly related to an outgoing migration of youngsters. For older age groups, the relation with the economic dynamics is weaker. The proposed model is statistically significant in explaining the migration of younger age groups – up to 40 years old – mainly dependent on the creation or destruction of jobs. However, in spite of the weaker relation with the economic dynamics of older age groups, reasonable agreement is obtained between modelled results and observations.

### **100-4. THE CONTRIBUTION OF DEMOGRAPHIC MOMENTUM AND COMPONENT ASSUMPTIONS TO PROJECTED POPULATION CHANGE: AN EXTENSION OF THE BONGAARTS-BULLATEO ANALYSIS TO SUBNATIONAL ETHNIC GROUPS**

*Philip H. Rees and Pia N. Wohland*  
*Email: p.h.rees@leeds.ac.uk*

The first question that users of population projections ask is what is driving the results presented. Part of the answer lies in the assumption made for future mortality rates, future fertility rates and future migration rates and flows. But future populations also depend on the age-sex structure of the starting populations: it takes 70 to 80 years for the effect of the starting structure to work itself out. The contribution of the existing age structure to the future population is termed demographic momentum. We adapt and extend a methodology used by Bongaarts and Bullateo (1999) to projections in which both international and internal migration components are influential for population sub-groups whose starting age structures are very diverse. The paper reports on the methods, assumptions and results of running a systematic series of scenario projections which enable us work out the drivers of future ethnic population change for the UK's local areas over the time horizon 2001 to 2051. For the UK population as a whole, between 2001 and 2051, international migration adds 14.8 millions to a population of 59.1 millions. Below replacement fertility subtracts



6.1 millions, while declining mortality adds 5.9 millions and demographic momentum adds 2.2 millions. Internal migration reduces the total population by 0.1 million through shifting populations to local areas with slightly lower growth potential. When we shift the perspective to individual groups, there is a wide range of different outcomes. The largest addition to the White British population is declining mortality followed by immigration; at the other extreme the largest contribution to the Mixed ethnicity groups is from demographic momentum. Full details of component contributions to future population changes in 16 ethnic groups across 352 local areas in England are presented in the paper.

#### **100-5. JOB-RELATED SPATIAL MOBILITY TRAJECTORIES AND THEIR ASSOCIATION WITH SOCIAL STRUCTURE: EVIDENCE FROM GERMANY**

*Thomas Skora, Gil Viry and Heiko Rüger*

*EMail: thomas.skora@destatis.de*

Job-related spatial mobility has become a widespread phenomenon in contemporary European societies. In the „Job Mobilities and Family Lives in Europe” study dealing with a broad concept of mobility that involves types of circular mobility (e.g. long distance commuting, frequent stays overnight) as well as types of relocation mobility (migration, residential relocation), job-related mobility presents itself as a very common element of occupational life in Europe: 16% of people working for pay are currently mobile for job reasons. All in all, around half of the people working for pay have gained experience with mobility. The research on migration and mobility has been enriched by placing it within the framework of the life course. However, regarding the state of mobility research in a life course perspective, two desiderata can be stated. Firstly, the majority of mobility research focuses on discrete events in life course, neglecting to capture and describe whole trajectories. Secondly, to our knowledge there are no studies up to now focusing on job-related spatial mobility trajectories, considering different types of relocation and circular mobility. Our aim is to fill this gap by extracting entire trajectories of occupation and job-related spatial mobility, applying sequence analysis techniques on data from Germany providing detailed information about past job events and experiences with different types of job-induced spatial mobility. Subsequently, associations between mobility trajectories and socio-structural characteristics are analyzed, complementing existing findings of cross-sectional research by applying longitudinal information. For example, the traditional assumption that spatial mobility is positively associated with economic gain can only be partly confirmed. According to our results, it depends on the length and continuity of employment and spatial mobility periods, as well as on the dominant form of mobility in the life course.

#### **101-1. TRENDS IN DIFFERENTIAL BREAST CANCER MORTALITY, BELGIUM 1991-1995 – 2004-2005**

*Sylvie Gadeyne, Patrick Deboosere and Hadewijch Vandenheede*

*EMail: sgadeyne@vub.ac.be*

This study investigates trends in differential breast cancer mortality in Belgium and the role of reproductive factors herein. Several studies have shown that the association between breast cancer and educational level has changed during the last decades, moving from a positive association to a non-existent or a negative association. Reproductive factors have often been held responsible for the relationship and changing patterns, but their effects have seldom been quantified. The Belgian data show that in 1991-95, lower educated women have higher mortality rates for breast cancer, at least among postmenopausal women. The association can mainly be explained by reproductive factors, i.e. mean number of children and age at first birth. In 2004-05, the situation has changed, educational differences no

longer being significant. Among premenopausal women there is even a tendency towards an inversion of the 1991-95 pattern, specifically after control for reproductive factors.

## **101-2. DIAGNOSIS BASED LIFE EXPECTANCY AND ITS DETERMINANTS AMONG ESTONIAN NATIVE AND IMMIGRANT POPULATION**

*Kati Karelson and Luule Sakkeus*

*EMail: kati.karelson@gmail.com*

Estonia, with a total population of slightly more than 1.3 million in 2011, offers an interesting opportunity to investigate the health transition and its determinants. This country has been among the forerunners of the demographic transition (Coale et al. 1979; Katus 1994). This implies that the so-called epidemiological transition follows the trends of that of Northern and Western Europe (Omran 1971; Caselli 1995). Significant changes in life expectancy (LE) and the nature of the causes of death that have occurred in the last decade lead us to focus on two main health challenges in the Estonian population: until recently, an ever-widening gender gap in LE, comprising one of the highest proportions of male excess mortality in Europe, and a persistent gap in LE between the immigrant and native populations. In this study we focus on remaining life expectancy related to specific causes of death. Two subpopulations – immigrants and natives – will be analysed separately. The interest is to find out whether population groups that live in the same society and have similar socio-economic backgrounds will experience different remaining life expectancies from the time point when chronic diseases were diagnosed. The analysis is retrospective and bases on the event-history approach. We will focus on two big groups of diseases, those of circulatory system and cancer. In addition, the third main group of causes of death of our interest is external causes. We will use three datasets for this analysis: Estonian Health Interview Survey 1996 (Est HIS 1996), Estonian Health Interview Survey 2006 (Est HIS 2006) and death certificates. Survey data and death information will be linked in the Causes of Death Registry. Both surveys involved partly life-course approach. Therefore, information about chronic conditions are available from the retrospective point of view. Data analysis is presently under way.

## **101-3. LUNG CANCER IN FRANCE: WILL WOMEN'S MORTALITY LEVELS EVER REACH THOSE OF MEN?**

*France Meslé and Jacques Vallin*

*EMail: mesle@ined.fr*

For several decades, highly contrasting trends in male and female lung cancer mortality have been observed in most developed countries. The decrease in lung cancer mortality has contributed significantly to male life expectancy improvement, while its increase among women has prevented female life expectancy from improving as far as expected. First observed in England, and then in the USA, the phenomenon has spread to European countries. In France, the reversal of male mortality occurred at the turn of the 1990s, while female mortality is still increasing and has even accelerated recently. Is it reasonable to predict that female lung cancer mortality will overtake male mortality within a few decades? Thanks to the cause-of-death time series reconstructed under a constant medical definition, it is possible to analyse long-term trends in age-specific mortality rates by cause, both by period and by cohort. To forecast female lung cancer mortality, taking account of cohort trajectories, different hypotheses will be discussed. The first one relies on the fact that 1956-1960 female cohorts are rather close to the level reached by 1906-1911 male cohorts with the same slope by age. These cohorts and the next ones could experience the same trajectories as successive male cohorts. Such a hypothesis is probably unrealistic since for

the three previous groups of female cohorts the rise in mortality with age had already been slowed down by the anti-smoking policies, at levels of consumption much lower than male ones. A second extreme hypothesis is given by modelling female trajectories decelerating at younger ages than those of males, considering that the initial cohort effects among females will be counterbalanced by the period effect sooner and sooner across cohorts. Finally, on the basis of this range of hypotheses, the impact of lung cancer on life expectancy will be estimated for the coming decades.

#### **101-4. TRENDS IN CVD MORBIDITY, MORTALITY AND SURVIVAL, AMONG 85+ IN SWEDEN**

*Karin Modig, Sven Drefahl and Anders Ahlbom*

*EMail: karin.modig@ki.se*

Cardiovascular diseases, CVD, are a major cause of death and account for a substantial part of hospitalization events as well as fatal events in Sweden and worldwide. However, the age-standardized CVD trends, both disease and mortality trends, have declined in most western countries since the 1960-ies. The reasons for this decline are several but both advances in medical care as well as declines in several important risk factors come into play. CVD trends have been published almost exclusively for populations up to 85 years of age why little is known about the trends for the oldest part of the population. As the incidence of CVD increases heavily with age it is of interest to study the trends also for the oldest. In some publications the oldest ages are included but compressed into one group, often 85+. These trends are difficult to interpret as the mean age in this group has increased over time. Increasing incidence trends (as have been shown for MI in the Swedish population of 85+) can thus be stable or even decreasing if they had been age adjusted. We used Swedish national Registries of Hospitalizations and Mortality for the total population to study age adjusted trends in CVD among 85+. Our study shows that the trends in CVD have been slightly decreasing the past 15 years in Sweden for the oldest. Trends in mortality show a somewhat larger decrease than do trends in incidence. Further, analyzing the relative effect of birth year over time in a Discrete Time Model revealed that the effect seemed to be similar over time, i.e. all age groups have benefitted equally from the decreasing CVD trends over time.

#### **101-5. CANCER PREVALENCE AND SURVIVAL IN AUSTRIA – RESULTS FROM THE AUSTRIAN NATIONAL CANCER REGISTRY**

*Nadine Zielonke and Monika Hackl*

*EMail: nadine\_zielonke@yahoo.de*

Every year about 38.000 persons are diagnosed with cancer, half of them getting the diagnose cancer of the large bowel, lung-, breast- or prostate cancer. The aim of the present paper is to illustrate and comment on the results of cancer prevalence and survival analyses for Austria by year of diagnosis, follow-up interval, sex, age and stage at diagnosis. 284 281 persons were alive in Austria at the end of 2009, thereof 149 735 women and 134 546 men. This means that 3.4 out of 100 Austrians alive on the reference day have had a prior cancer diagnosis. Women affected by cancer survive their diagnosis for a considerably longer time span than men. This is mainly caused by breast cancer, which is not only the most frequently diagnosed cancer in women but also characterized by good survival chances. The cancer survival analysis detected several crucial trends, which are widely in line with international findings. In the last 25 years a markedly gain in cancer survival was observed, but we have to consider that all cancers combined represent a broad variety of cancer diseases. The current analysis shows an improvement in 5 year cumulative relative

survival from diagnoses in 1985 to diagnoses in 2005 increasing from 44% to 62% (+18 percentage points) for both sexes together, from 38% to 61% in men, and from 49% to 63% in women.

#### **102-1. THE FUTURE OF LOW FERTILITY: FIRST RESULTS FROM A GLOBAL SURVEY OF EXPERTS**

*Stuart A. Basten, Tomas Sobotka, Bilal Barakat and Wolfgang Lutz*

*EMail: stuartbasten@gmail.com*

In Summer 2011 an Internet survey on the likely future trends in fertility, mortality, and migration and the main factors behind them has been conducted among the members of major population associations. The survey, organised as a collaboration of IIASA and Oxford University, will become a basis for new global probabilistic population forecasts by age, sex, and level of education. By allowing a large number of experts to participate and by providing an argument-based underpinning of numerical estimates about future fertility trends, the survey addresses two common weaknesses of population projection-making: 1) very limited or no theoretical foundation and 2) a participation of a small and often closed group of experts in formulating the parameters of projection scenarios. Our study presents first results of the survey module on low fertility, which focuses on countries that are relatively rich and have at present low fertility. The experts were offered 46 arguments potentially relevant for the future trends in fertility, and clustered into six groups of factors. They have selected a country or a group of countries, to which their assessment pertains, and also provided numerical estimates of the likely range of the period total fertility rates in 2030 and 2050. Altogether, 184 experts have assessed the low-fertility module of the survey. These experts represented 41 low-fertility countries on 6 continents. We cluster these countries into regions and analyse the responses along several key dimensions: numerical estimates of future period TFR, the relevance and impact of individual arguments, and the relative importance of the clusters of arguments. We pay special attention to the arguments where experts gave contrasting views about their likely importance and impact on fertility. These diverging views either indicate existence of region-specific factors, or they signal considerable disagreement about the likely impact of some factors on future fertility trends.

#### **102-2. RE-EXAMINING THE FERTILITY ASSUMPTIONS IN THE UN'S 2010 WORLD POPULATION PROSPECTS: INTENTIONS AND FERTILITY RECOVERY IN EAST ASIA?**

*David A. Coleman, Baochang Gu and Stuart A. Basten*

*EMail: david.coleman@socres.ox.ac.uk*

This paper is about the future of reproduction in the modern world and the validity or otherwise of the assumptions made about it in the most recent World Population Prospects of the United Nations. Convergence of fertility is a core component of almost all international population projections. In this paper, we consider the inclusion of the 'fertility recovery in East Asia' as a justification for the model. As well as questioning the extent to which the fertility has, indeed, recovered in East Asia, we examine data concerning fertility intentions – which is, perhaps, one possible justification for assuming a fertility recovery – and find the evidence unconvincing. In particular, we present novel findings of a systematic review of fertility intentions in China over the past 30 years.

### 102-3. THE FUTURE OF FERTILITY IN LATIN AMERICA: WHAT CAN A COMPARISON WITH SOUTHERN EUROPE CONTRIBUTE TO UNDERSTANDING CONTEMPORARY LATIN AMERICAN FERTILITY CHANGE?

*Fiona L. Willis-Núñez*

*EMail: fionawillis@berkeley.edu*

Latin America tends to fall into a gap between two branches of literature on fertility: the 'developing country' branch focusing on declines from high to moderate fertility; and the 'industrialised country' (primarily European) branch focusing on the drivers of sub-replacement and 'lowest-low' fertility. While levels and rates of change differ widely across Latin America, all the region's countries have experienced declines in fertility, bringing many of them into or close to the realm of low fertility. Rather than declaring these countries' demographic transitions to be over, this paper proposes that we must ask what trajectory fertility change will take next, and what its principal driving forces will be. The paper investigates the hypothesis that the future of fertility in some parts of Latin America will resemble the current 'lowest-low' fertility scenarios of Southern Europe. In particular, the paper focuses on the concept of 'familism'—drawing on the argument that a strong culturally-embedded sense of obligation to family, with sharply gender-delineated roles in family duties, when placed in a newly-emerging setting of increased gender equity in the public sphere (education, labour force participation), leads to postponement of and/or withdrawal from childbearing. This argument is commonly applied to the Mediterranean case, but here its applicability to Latin America is explored. Data from the Latinobarómetro, Eurobarometer and World Values Surveys are analysed to investigate how values and attitudes indicative of 'familism' are related to fertility outcomes (both timing and quantum) at the individual level. Relationships between societal variables linked to familism and national fertility levels are also examined. These analyses suggest that the 'paradox' of strong family values and a retreat from family-building may well come to characterise some countries, such as Chile, Argentina and Costa Rica, and that their fertility may indeed fall to very low levels in the future.

### 102-4. PROJECTION OF POPULATION BY LEVEL OF EDUCATIONAL ATTAINMENT, AGE, AND SEX FOR TURKEY, 2000-2050

*Mustafa Murat Yücesahin and Samir KC*

*EMail: mmyucesahin@yahoo.com*

Turkey is a geographically diverse country, and an important component of that diversity is demographic. Regions of the country vary markedly in the age structure of the population and even more conspicuously in such characteristics as fertility and infant and child mortality. Spatial differences in demography (fertility, infant/child mortality, and migration) by education can be discussed and explained in terms of both demographic. In such a framework of analysis, it may be possible to demonstrate that there are significant and intriguing geographical differences in demography, and to evaluate the extent to which these differentials can be accounted for on the basis of different spatial levels. Population estimates make up one of the most widely used products of demographic analyses, and these estimates for states, counties, provinces, and other places are important for planning what types of services to offer and the future structure of populations. Using demographic multi-state, cohort-component method, we produce projection for Turkey by five-year age groups, sex, and five levels of educational attainment for the years 2000-2050. In this study, taking into account differentials in fertility, mortality and migration by education level, we present educational attainment projections.

## **102-5. PRO-EGALITARIAN FAMILY POLICY ON THE SUPRANATIONAL EUROPEAN LEVEL – AN ANSWER TO THE FERTILITY DECLINE IN AGEING WELFARE SOCIETIES?**

*Heike Kahlert*

*EMail: mail@heike-kahlert.de*

Reflections on the fertility decline and the ageing of European welfare societies are not new on the supranational European agenda but now since the turn of the millenium they have started to become more visible. In these discussions economic, demographic and equality oriented arguments are mutually connected. In the paper I will discuss how the EU-European strategy of gender mainstreaming is supposed to solving the causes and consequences of demographic change and how it is interwoven with attempts to develop a supranational European family policy. Indeed, this may sound strange because family policy in the European Union still is a policy topic in national responsibility. However, on the supranational European level attempts to develop a common European family policy have started in the 1980s and been discussed in the light of putting gender equality into action. A main topic in these discussions is the problem of reconciling work and family that in European politics still is mainly presented as a problem of women. But gender equality politics on the European level also takes the problem of the gendered division of labour in public and private spheres into account. According to official papers of the European Commission of the European Union this gendered division of labour should be changed to enable women to work and to become and be mothers. So changes in gender relations in the direction of more gender equality in public and private spheres are supposed to heighten women's participation in the labour market (as the Lisbon-Agenda requests) and to heighten the fertility rate as well. My paper is based on the results of a qualitative content analysis of the main documents by the European Commission and the European Council that deal with demographic change and gender equality on the supranational European level.

## **103-1. ECONOMIC SUPPORT RATIOS AND THE FIRST AND SECOND DEMOGRAPHIC DIVIDEND IN EUROPE**

*Alexia Fűrnkranz-Prskawetz and Jozse Sambt*

*EMail: afp@econ.tuwien.ac.at*

Low fertility rates, increasing survival to old age and moderate levels of migration are rapidly changing the population age structure in Europe towards the elderly. To measure the challenge of population ageing for economic development, the dependency ratio or support ratio are often applied. Both of these indicators are based on a comparison of the working age population with the dependent population (elderly and young) where fixed age limits are used to distinguish between those population groups. However, not all people of certain age group are productive and the remaining ones unproductive. Furthermore, not all productive individuals are equally productive. On the other hand, not all individuals consume the same, which is implicitly assumed in the dependency and support ratio. The National Transfer Accounts (NTA) provide a new method for comprehensively analysing economic flows across age groups. In particular NTA provide detailed profiles of consumption and labour income by age. By combining these age profiles with population projections we simulate the development of an NTA based support ratio and its growth rate (the first demographic dividend) from 1960 through 2050. Depending on how elderly finance their consumption an increasing share of elderly in an economy can elevate savings, which through capital deepening increases the productivity in the economy (second demographic dividend). Based on estimates of NTA wealth flows we show that the second demographic

dividend is negligible in most of the European countries we consider, except Germany, Spain and the UK.

### **103-2. INTERGENERATIONAL TRANSFER SYSTEMS AND COHORT-CROWDING**

*Thomas Lindb*

*EMail: thomas.lindb@framtidsstudier.se*

Previous studies indicate that cohort-crowding effects found in the United States are absent in some European countries, among these Sweden. It is likely that this may be due to differences in the institutions that mediate intergenerational resource flows, but comparative data on these resource flows have been scarce and difficult to analyse from an institutional perspective. In the global National Transfer Accounts project resource flows across generations are tracked within the standard System of National Accounts using a common methodology. Introducing age into the National Accounts maps changing transfer flows; through the asset markets as well as public and private transfers. It thus provides new tools for analysing the sustainability of these systems as well as the average effects for different cohorts. National Transfer Accounts for a given year yields a cross-section age profile of the resource flows from one cohort to another. In an ideal steady-state model this would be equivalent to the life cycle age profiles of each cohort adjusted for growth. Tracking the cohort profiles in a time series of NTA shows, however, that the cohort life cycle profiles tend to change systematically over time. In the real world some cohorts will fare better than others due to cohort-crowding, differential effects from crises or policy reforms depending on the life stage at which they occur and so on. This paper makes a comparative analysis of cohort-crowding effects in Sweden and the US. Institutional differences in the financing of life cycle deficits are important for the outcomes of large and small cohorts. The US transfer system differs considerably from the Swedish system.

### **103-3. OLD-AGE SUPPORT AND DEMOGRAPHIC CHANGE IN DEVELOPING COUNTRIES. A CULTURAL TRANSMISSION MODEL**

*Javier Olivera*

*EMail: javier.olivera@econ.kuleuven.be*

We model intergenerational old-age support within the context of a developing country that faces demographic changes: declining fertility and increasing life expectancy. We attempt to answer if agents will be able to support their parents during the next generations and under what conditions. For this purpose we use a three period overlapping generations model and a cultural transmission process, in which agents may be socialized to different cultural family models (old-age supporters and non-supporters). As life expectancy increases, we find conditions under which a reduced fertility rate is compatible with the expectation to be supported during old-age. This offers an additional explanation for persistency of family old-age support in developing countries with demographic change.

### **103-4. INTERGENERATIONAL TRANSFERS IN FORM OF UNPAID WORK IN SLOVENIA**

*Joze Sambt and Janez Malacic*

*EMail: joze.sambt@ef.uni-lj.si*

Recently the new method called National Transfer Accounts (NTA) has been developed to measure economic flows across age groups. The NTA comprehensively analyse economic flows from age groups with lifecycle surpluses to age groups with lifecycle deficits. Among the private transfers only the production and consumption that are paid are taken into account. By omitting unpaid work from the analysis we are missing a large part of the pro-

duction and consequently the transfers between age groups. In this article we supplement basic NTA results for Slovenia with the unpaid work. We build on the micro data from the latest time use survey for Slovenia conducted in 2000 2001. Preliminary result show that people in Slovenia spend in average about 4 hours per day on unpaid work, which is close to the amount of time that people spend on paid work. The decomposition by gender shows that women in Slovenia provide about three times as much unpaid work as men. This is surprising result in light of high employment rates of women in Slovenia that is inherited from socialist times. Therefore we would expect smaller differences between male and female regarding the unpaid work. However, it turns out that females' higher enrolment in unpaid work is compensated through considerably less leisure in age 25 to 50 years. The results confirm our hypothesis that beside the paid work also the unpaid work is very important component of the total production and consumption and therefore it should not be ignored in the NTA analysis. Results also confirm that unpaid work is not uniformly distributed across all ages. There are large transfers of unpaid work flowing from adults to the children, especially the youngest ones, and in smaller extent also to the elderly in highest age groups.

### **103-5. ECONOMIC LIFE CYCLE DEFICIT AND INTERGENERATIONAL TRANSFERS IN ITALY**

*Marina Zannella and Graziella Caselli*

*E-Mail: marina.zannella@uniroma1.it*

Italy has one of the most significant aging process in the world and this situation is expected to become even more serious in the future. Economic implications of population aging are still not clearly defined. However, some relations between different ages and economic conditions are generally valid: and the economic lifecycle is a key concept in order to understand them. In this paper, we estimate the economic lifecycle for Italy using National Transfer Accounts methodology. In particular, we control the existence of a lifecycle deficit and we identify which ages contribute to its formation. This allow us to state the directions of economic reallocations across ages. Then, given the peculiar Italian family model (characterized by close intergenerational ties, cohesiveness and solidarity), we focus our analysis on intra-family reallocations. We seek to quantify intra-household intergenerational flows and to give an insight of their role in the current Italian socio-economic environment.

### **104-1. RECENT TRENDS IN MALE AND FEMALE DISABILITY-FREE LIFE EXPECTANCIES IN FRANCE: TO WHAT EXTENT IS THE "GENDER HEALTH PARADOX" REINFORCED?**

*Emmanuelle Cambois*

*E-Mail: cambois@ined.fr*

In France, as in most countries, female advantage in life expectancy (LE) is balanced by a larger number of unhealthy years. Furthermore, recent trends in male and female disability-free life expectancies (DFLE) appear less favourable than in previous decades and especially for women. This paper further explores trends in DFLE in France using several dimensions of the disablement process to identify possible gender-specific health and disability patterns. An increasing number of surveys in France allow computing a full range of DFLE at age 50 estimations which can be classified according to various disability dimensions: 7 different French population surveys conducted over the 1990's and the 2000's period are used. Meanwhile, except for 3 of these surveys, inconsistency in questionnaire and design prevent from building robust time series on disability. Trends were therefore (1) assessed through a mortality/disability decomposition of the DFLE changes based on



the 3 repeated surveys and (2) consolidated by a linear regression on the DFLE using the 7 surveys DFLE estimations, classified by disability dimensions. The unfavourable trend in recent years in DFLE at age 50 is due to a decrease in the 50-65 age group for women's physical limitations and activity restrictions and for men's cognitive limitations. At age 65, trends in DFLE were more favourable, except for physical and sensory limitations and general activity (for men exclusively in the decomposition vs for both sexes with the regression) as observed in previous decades. The two approaches both highlight an unexpected increasing gender gap for a selection of disability dimensions in the 50-65 cohorts. Possible reasons for these findings range from change in sex-specific health exposure and behaviours, but also change in social, family and work situations in these cohorts which could differently affect women's and men's health, self-perception of health and consequences on functioning.

#### **104-2. GENDER-SPECIFIC DIFFERENCES IN PHYSICAL AND MENTAL HEALTH ACROSS EUROPEAN COUNTRIES: VARIATION IN LEVELS AND EXPLANATORY FACTORS AT OLDER AGE**

*Dorly J.H. Deeg*

*EMail: djh.deeg@vumc.nl*

Gender differences in health are well-established. Studies of factors explaining these differences have not done justice to the different importance such factors may have for men and women across cultures. This study focuses on gender-specific differences in health across six countries, and explanatory factors for observed inter-country differences. Data were harmonised in the framework of the Comparison of Longitudinal European Studies on Aging (CLESA) project, which included population-based studies from Finland, Sweden, the Netherlands, Spain, Italy and Israel with common agegroup of 75-84 years. Indicators of health were disability, depressed mood, and self-rated health. Potential explanatory factors included socio-demographics, diseases, lifestyle, and social engagement. The findings show inter-country differences for men and women in all three health indicators. These differences persisted after accounting for explanatory factors. Disability showed a North-South gradient, in that men and women in Northern countries showed less disability than those in Southern countries. Depressed mood showed similar country differences, although the prevalence in Finland was closer to that in Southern countries for both men and women, and in Spanish men lower than in men in other Southern countries. Self-rated health was poorer in Southern countries than in the Netherlands, with levels in Finland in-between. Among the explanatory factors, chronic morbidity showed the most consistent associations. The role of lifestyle and social factors varied across countries and genders. Lifestyle, especially exercise and walking, was most often associated with health in men, but in women, social factors were more prominent. Among these, active involvement in religion appeared to have a favourable role, whereas the role of living arrangements differed across physical and mental health indicators. Gender differences suggest that a gender-specific approach to the prevention of poor health is warranted. Cross-national differences suggest both cultural differences and country differences in the facilitation of healthy lifestyles. Acknowledgement: the CLESA-group.

### 104-3. LIVING ARRANGEMENTS, HEALTH STATUS AND MORTALITY RISK AMONG THE AGED IN BELGIUM, 2002

*Anne Herm, Michel Poulain and Jon Anson*

*EMail: anne.herm@gmail.com*

Mortality in the institutionalized aged population is generally recognized as being considerably higher than among those living in private household; whereas among the latter population, there is a greater risk of mortality among those living alone than among those living with other adults (generally with spouse and / or children). However, given that the institutionalized population is generally in poorer health compared to the independent-living population, it is unclear whether the higher mortality risk among the institutionalized population results from their poorer health, or from other causes associated with institutionalization. The Belgian Census of 2001, coupled with a near-complete follow-up of deaths over the subsequent year (2002), enables us to compute a reasonable measure of health at the time of the census and thus separate out the effects of health status and living arrangements on mortality. Taken across the entire Belgian population (Belgian nationals only) aged 65 and above at the time of the census ( $N = 1.64$  million cases with full data), and controlling for background characteristics including education, we find that: i) men have higher mortality than women; ii) the logit of the mortality risk increases linearly with age; iii) the mortality risk declines as health status improves; iv) the mortality risk decreases as the level of education increases; v) those living in institution have a higher risk of mortality than those living in private housing, irrespective of health status. This last conclusion is prominent: even if much of the apparently higher mortality of the institutionalized aged population may be attributable to the generally poorer health of those living in institution, there is nonetheless a higher mortality risk in institution. In the discussion, we suggest the existence of a salutogenic effect of living independently in private housing, whatever the individual's health status.

### 104-4. LIVING ARRANGEMENT AND TREATMENT SEEKING BEHAVIOR OF THE ELDERLY IN INDIA

*Barsharani Maharana and Debasis Barik*

*EMail: barsha.iips@gmail.com*

Elderly-hood is characterized by various chronic and multiple morbidities. There is a dearth of studies which look into economic condition and living arrangement simultaneously to explain treatment seeking among elderly. The present study explains intra-economic group differential in treatment seeking due to living arrangement using NSS 60th round (25.0 sub-round) data. MPCE and place of residence have direct influence on treatment seeking behavior of the elderly. But, with the similar level of MPCE, elderly living with spouse or with children receives treatment higher than those living alone or in old age home or with other relatives and non-relatives in both rural and urban settings. Treatment rate is significantly higher among elderly living with spouse than living alone in low MPCE households. Elderly of age 65+ years are less likely to receive treatment than those in age group 60-64 years. Elderly women are neglected in treatment seeking in low MPCE households.

#### 104-5. SOCIAL DETERMINANTS OF HEALTH RESILIENCE AMONG THE ELDERLY: EVIDENCE FROM THE GERMAN SOCIO-ECONOMIC PANEL

*Andreas Mergenthaler*

*E-Mail: andreas.mergenthaler@destatis.de*

The objective of the study is to examine whether distinct forms of health lifestyles as well as individual and collective social capital predict the probability of health resilience among a cohort of men and women aged 65 and older from lower social strata. The method employed a longitudinal study design based on data from four waves (2002 to 2008) of the German Socio-Economic Panel. The study cohort included 2,075 participants. Analyses were performed using hierarchical-linear models and binary logistic regressions. The two main outcome measures were health-related quality of life, based on a modified form of the SF12, and a dichotomised measure for health resilience based on the SF12 scores. A health gradient was observed for the physical health of men and for the mental health women, respectively, with participants from lower social strata reporting lesser scores of health-related quality of life compared to participants with higher socioeconomic status. Regarding the physical resilience of elderly men, a moderate health-conscious lifestyle was the most pronounced predictor (OR=9.5, 95%-CI: 5.9-15.4). Compared to men with a health-risk lifestyle, even the group with a moderate health-risk lifestyle had 4.7 (95%-CI: 3.1-7.1) times the odds of being physically resilient. Social capital did not elevate the probability of physical resilience among men. Mental resilience of women was strongly associated with a health-conscious lifestyle (OR=4.2, 95%-CI: 3.0-5.9) as well as a moderate health-risk lifestyle (OR=4.1, 95%-CI: 2.9-6.0). Quantitative aspects of social capital, like an above-average number of friends and close relatives, were positively associated with mental resilience of elderly women (OR=1.9, 95%-CI: 1.5-2.5 and OR=1.3, 95%-CI: 1.0-1.7, respectively). The data provides evidence that health-conscious as well as moderate health-risk lifestyles and quantitative aspects of individual social capital serve as protective factors for health resilience among older men and women with low socioeconomic status.

#### 105-1. LOVE, MARRIAGE, THEN THE BABY CARRIAGE? MARRIAGE TIMING AND CHILDBEARING IN SWEDEN

*Elizabeth Thomson and Jennifer A. Holland*

*E-Mail: elizabeth.thomson@sociology.su.se*

Some scholars claim that marriage is an outmoded institution, decoupled from the childbearing process in Sweden. Indeed, more than half of all Swedish children are born outside of marriage. However, it is likely that the presence of children is still linked to marriage, as the vast majority of children born to cohabiting couples will experience the marriage of their parents. The temporal ordering of childbearing and marriage may be informative as to the meaning of marriage. Marriage timing is structured around four possible meanings of marriage as a Family Forming, Legitimizing, Reinforcing and Capstone institution. An analysis of register data covering those born in Sweden between 1950 and 1977, residing in Sweden, and unmarried and childless at age 18 (N = 2,984,757) reveals that Family Forming marriage (prior to a birth) is the dominate marriage type across cohorts, although there is an emerging trend toward Capstone marriage (after the birth of two or more children). Results demonstrate a continued link between childbearing and marriage, although the ordering of these events may be changing for some subpopulations.

## 105-2. CLOSER THAN EXPECTED: COMPARING CHANGING FAMILY PATTERNS IN ITALY AND POLAND

*Irena E. Kotowska, Gustavo De Santis and Silvana Salvini*

*EMail: iekoto@sgh.waw.pl*

Italy and Poland have been chosen for a comparative study on family change following the comparative framework suggested by Neyer and Andersson (2008). Despite their geographical distance, the two countries share several similar traits: low fertility, delayed diffusion of cohabitation and non-marital childbearing, strong attachment to Catholic and family values, weak public support for working parents, traditional gender norms, rigid working hours. However, one should not neglect some differences in both timing and pace of family changes, labour market developments, especially women's labour force participation, as well as living conditions. These differences appear to be strong to the extent that the question arises: are Italy and Poland similar 'enough' to be used for a comparative study on family changes which follows the framework referred? In this paper we will try to answer that question by applying a two-stage procedure. Firstly, we will show that Italy and Poland are distant from other members of the EU and close to each other in terms of some background variables to be selected for the comparison purpose. Next, we will present family changes in both countries, referring also to their socio-economic and cultural contexts, to demonstrate that similarities and differences make it possible to search for their causes needed to understand ongoing family change. Neyer Gerda and Andersson Gunnar (2008). Consequences of family policies on childbearing behavior: effects or artifacts? Population and Development Review 34 (4): 699–724.

## 105-3. THE INFLUENCE OF REGIONAL CONTEXT ON CHILDBEARING IN COHABITATION IN EUROPE

*Trude Lappegård, Sebastian Kluesener and Daniele Vignoli*

*EMail: trude.lappegard@ssb.no*

Premarital cohabitation and transition to parenthood within cohabiting unions have increased across Europe. Beside, patterns of union formation and childbearing have developed differently across countries where social, economic, and ideational forces have created variation over time and space. Our research contributes to this debate about the interrelationship between contextual cultural norms and attitudes and family formation. We investigate the influence of regional context on childbearing in cohabitation in Europe, emphasizing cultural values such as gender egalitarianism, family values, secularism, as well as general trust in a society. Making use of a multilevel approach, we focus on the transition to parenthood and explore contextual influences on whether a first birth of a couple occurs within cohabitation or within marriage. Our preliminary results show that contextual cultural values and attitudes play a pivotal role in whether children are born within cohabitation.

## 105-4. PARTNER RELATIONSHIPS AT THE DAWN OF THE 21ST CENTURY: THE CASE OF THE NETHERLANDS

*Jan Latten and Clara H. Mulder*

*EMail: jltn@cbs.nl*

As in many western countries, partnership formation has changed profoundly and rapidly in The Netherlands. In the past few decades marriage has lost its role as a sine qua non not only for partnership formation but also for parenthood. Divorce has become widespread and has been supplemented by the break-up of unmarried unions. Unmarried cohabita-

tion has developed from a rare phenomenon into the almost general way of entering a co-residential partnership, and has become a long-term living arrangement for many. Registered partnerships and gay marriage have been introduced. Childbirth among unmarried couples is no longer rare but quite common and two-mother families are now part of the spectrum. Some women choose to have children without having a partner and adoption by singles has been legislated. Societal discussion has shifted to such themes as the financial risks of unmarried people breaking up their relationships. In this paper, we describe and interpret the main trends in the formation and dissolution of partnerships in The Netherlands until 2010. Furthermore, we address the question what future trends can be foreseen, and to what extent changes in the Netherlands could indicate parallel changes in other countries. We argue the socio-demographic changes can be seen as part of a broader process of socio-economic and cultural transformation that incorporates many aspects of daily life and of which the informalization of partnerships and families forms an important characteristic. We conclude that, in the Netherlands and probably also in other countries, the Second Demographic Transition has by no means reached its end but continues in new, unprecedented ways.

#### **105-5. TRANSITIONS OF NON-MARITAL UNIONS WITHIN THREE YEARS IN COMPARISON BETWEEN TURKISH NATIONALS IN GERMANY AND GERMANS WITHOUT MIGRATION BACKGROUND**

*Robert Naderi and Jürgen Dorbritz*  
*E-Mail: robert.naderi@destatis.de*

In the past ten years the existence of non-marital relationships increased over 30 percentage points and is one of the most important alternative living arrangements in Germany. Although the vast majority is married many couples start their relationship unmarried and remain for a longer period in that status than in former times. This leads to important and interesting questions: What makes a non-marital union durable and what circumstances lead to transition to marriage (or dissolution)? Is the non-marital union more or less a pre-stage or an option and for whom? The hypotheses in this paper are following the idea that attitudes are mainly explanatory for the durability of non-marital unions in the way that certain respondents dismiss marriage. Those attitudes are at the same time influenced by cultural factors whereby Turkish citizens have more often positive attitudes towards marriage and lower acceptance of non-marital living arrangements compared to Germans without migrations background. Additionally certain circumstances have an impact on the decision to stay unmarried as a couple or not. Those factors are for instance the birth of a child what will lead most likely to marriage or changes in job status and income level. This paper aims to analyze the factors for transition of non-marital unions in a longitudinal and comparative way. Using the two waves of German Generations and Gender Survey (GGS) for both groups of respondents (Turkish citizens and Germans without migration background) unmarried respondents from the first wave and the development in the second wave will be analyzed as dependent variable. The main independent variables are the migration background, attitudes, values, birth of children and socio-economic variables.

#### **106-1. EARLY CHILDBEARING AND SUBSEQUENT ECONOMIC WELL-BEING: A CROSS-NATIONAL COMPARISON**

*James Raymo, Marcia J. Carlson, Brienna Perelli-Harris, Miho Iwasawa and So-jung Lim*  
*E-Mail: jraymo@ssc.wisc.edu*

This cross-national comparative study describes relationships between early childbearing and women's subsequent economic well-being in a wide range of low-fertility countries.

Building on a large body of related research in the U.S., we posit that early childbearing is associated with subsequent economic disadvantage across countries, but that the degree of disadvantage is inversely associated with the generosity of public policies to support children and facilitate women's work-family balance. We also estimate the extent to which cross-national differences in the relationship between early childbearing and subsequent income is explained by selection into early childbearing and linkages between early childbearing and subsequent fertility and union stability. In preliminary analyses we have used data from 14 countries, most of which are included in the Generations and Gender Survey program. In subsequent extensions, we will incorporate data from 5 or 6 additional countries. This is an understudied area outside of the U.S. and this extension to a wide range of countries has the potential to shed important new light on the generality of findings from the U.S. and to provide new insights into the ways in which linkages between early family formation and subsequent economic well-being are shaped by context. This evidence will, in turn, facilitate informed speculation about the ways in which changes in family behaviors across a wide range of countries may be increasing stratification and inequality, both within and across generations.

#### **106-2. TEENAGE MOTHERHOOD AMONG DISADVANTAGED GIRLS: A STRATEGY TO IMPROVE OR WORSEN BAD ODDS IN LIFE OUTCOMES?**

*Doreen Huschek and Mioara Zoutewelle-Terovan*

*Email: dhuschek@nscr.nl*

In the Netherlands, teenage fertility rates are among the lowest in developed countries. However, among disadvantaged girls there are still very high rates of teenage pregnancy. We analyze the life outcomes of 270 women that have been institutionalized in their youth for behavioral or family problems. 34% of them gave birth before age 20 and 48% of them before age 22. It is debated whether adverse outcomes are caused by teenaged motherhood or whether teenaged motherhood is itself caused by adverse outcomes and the subsequent adverse outcomes are thus spurious. We go around this issue by comparing teenage mothers with other women that are similar to them in disadvantaged background characteristics. Giving birth may be a particular strategy for these girls, and may offer more stability and help and may improve their life chances compared to other girls of deprived and difficult backgrounds. We study their life outcomes for criminal behavior, employment success and welfare state dependence from age 16 to 36.

#### **106-3. DECOMPOSITION OF TRENDS IN NONMARITAL CHILDBEARING IN RURAL AND URBAN AREAS IN POLAND, 1985-2009**

*Anna Baranowska*

*Email: anna.baranowska@sgh.waw.pl*

The aim of this paper is to decompose the increase in the share of out-of-wedlock births in Poland into a component attributed to the changing structure of conceptions according to the marital status before the birth and a component related to the dropping propensity for shotgun weddings. Shotgun weddings used to be quite common in Poland, so the proportion of out-of-wedlock births observed in this country would have been much higher than reported in the official statistics if it wasn't for legitimating pregnancies among unmarried women via marital contracts. The results of analysis of data from Birth Register 1985-2009 show that a decline in propensity to marry among single pregnant women played an important role for diffusion of nonmarital childbearing especially in the last decade. In urban areas the impact of declining propensity for shotgun weddings was relatively larger than in rural areas. This is consistent with the notion that rural areas constitute more

traditional context for family formation. It seems that in villages, the social pressure still prevents diversification of family forms to larger extent than in towns.

#### **106-4. WITH OR WITHOUT YOU. PARTNERSHIP CONTEXT OF FIRST CONCEPTIONS AND BIRTHS IN HUNGARY**

*Julia Mikolai*

*EMail: mikolai.julia@gmail.com*

In this paper, we first study how the risk of a first conception within different union types (single, cohabitation, marriage) is influenced by education and family values in Hungary and how these influences changed after the societal transition in 1990 using discrete time competing risks analysis. Then, we examine how education and family values are related to the probability of marriage before the birth of the first child for a woman, who experience non-marital conception applying logistic regression. Furthermore, we investigate whether and how partnership and fertility experiences influence changes in family values over time. For the first two analyses, we use retrospective information collected in the second wave of the Hungarian Turning Points of the Life-Course survey. The third analysis is based on a change model comparing data from the second and third wave. We find that traditional and higher educated women are more likely to conceive within marriage while liberal and lower educated women are more likely to experience a cohabiting conception. More liberal women are more likely to conceive while being single compared to their married counterparts. The influence of education on the risk of a cohabiting conception differs before and after the transition; before the transition, education has a positive gradient. Increased education and more traditional values are associated with a greater propensity to marry before the birth. Women who experience a birth within cohabitation between the two waves become more liberal than those who stay married and do not experience a birth, even when controlling for family values before these events.

#### **106-5. MULTI-PARTNERED FERTILITY AND CHILD SUPPORT**

*Terry-Ann Craigie*

*EMail: tcraigie@conncoll.edu*

Parents having children with more than one partner or multi-partnered fertility, has been rising steadily in recent decades, particularly among unmarried parents. As divorce and remarriage become more mundane, it is without question that multi-partnered fertility will have increased relevance on a global stage. While this phenomenon has important implications for child welfare overall, one outcome likely to be acutely influenced is child support. Child support transfers are an important source of income for improving and sustaining child wellbeing, and it is therefore important to investigate whether it complicates or thwarts the child support process. This study therefore examines the effects of male and female multi-partnered fertility on child support transfers, focusing specifically on the transfers made by non-resident fathers. It clearly distinguishes between child support payments made when there is a formal court-established child support order and child support payments made when no child support order has been formally established. This distinction is critical to the child support debate given that some parents eschew formal child support orders in lieu of "informal" child support arrangements, which allow for more flexibility in payments and for which there is no court interference. Exploiting individual-level data from the Fragile Families and Child Wellbeing Study (FFCWS), the study confirms a robust adverse effect of male multi-partnered fertility on child support transfers in general; the effect of female multi-partnered fertility however, remains inconclusive. The study also uncovers novel evidence that a mother's decision to establish a formal child support order

is actually a non-random process based primarily on her comparative advantage in child support receipts. Child support policies for these complex families should subsequently be revisited and potentially reformed.

#### **107-1. SECOND GENERATIONS IN THE PAST: THE FATE OF FRENCH MIGRANTS' CHILDREN IN THE BARCELONA AREA AT THE 17TH CENTURY**

*Anna Cabré and Joana-Maria Pujadas-Mora*

*EMail: anna.cabre@uab.es*

The population of Catalonia increased from 200.000 in 1553 to 475.000 in 1623. This demographic revival is explained by historians by an extraordinary flow of French migrants during the 16th and early 17th centuries. Among the near 40.000 marriages celebrated from 1581 to 1641 in the Barcelona area, over 9000 involved a French husband. The object of our contribution is analyzing the fate of the Frenchmen's children, the second generations of the past, in the sense of their social and occupational promotion using the data of the Barcelona Historical Marriage Database. The BHMD is being built with the information in the books of marriage licenses conserved at the Barcelona Cathedral, detailing the occupation of the husband and his social status measured by the amount of the fee paid for the license. For a period of 70 years ending in 1641, the register offers as well the occupation of the respective fathers of groom and bride. As migrants' children cannot be recognized as such in their marriage license, we will undertake the first attempt to link individuals of different generations made with the data of the BHMD. We will identify the children of the couples married in 1581-1583, French or other, by the search of matches in the marriage licenses from 1597 to 1623, to be extended later until 1643. In our presentation at EPC we expect to confirm our first findings from a experimental sample. The main result is that the status of the sons depended highly on the status of the fathers at the moment of the son's marriage rather than at the moment of the father's marriage. That means that the changes in status of the father through life, positive or negative, would be inherited by the son. This effect is higher in migrants than in natives.

#### **107-2. INTERGENERATIONAL TRANSMISSION OF INTERETHNIC UNION FORMATION PATTERNS IN SWEDEN AND A CLOSER LOOK AT THE SPOUSE CHOICE DECISIONS OF THE MIXED GENERATION**

*Aycan E. Celikaksoy*

*EMail: aycan.celikaksoy@sofi.su.se*

This paper explores intergenerational transmission of interethnic union formation behavior within families. Using individual based panel register data from Statistics Sweden I find a strong association in union formation patterns between parents and their offspring. This association holds for all levels of individual and parental education and region of origins, whereas the explanatory power of mixed parental background varies by region of origin. In addition, to have an understanding of the mechanisms behind the intergenerational transmission of union formation patterns we test whether there are asymmetries in spouse choice patterns in different dimensions between young individuals with mixed versus non-mixed backgrounds. In other words, we want to see whether young individuals with a mixed background also intermarry in other dimensions such as occupation, income, education, migration histories, etc. when compared to the trends in the marriage market and whether individuals with different backgrounds allocate different weights to certain spousal characteristics.



### 107-3. PARTNER CHOICE OF THE SECOND GENERATION: THE IMPORTANCE OF INDIVIDUAL AND NEIGHBOURHOOD CHARACTERISTICS

*Suzanne Loozen, Helga A. G. de Valk and Elma Wobma*

*EMail: swhc.loozen@cbs.nl*

In many European countries the second generation is coming of age and increasing numbers of those in the marriageable ages are of immigrant descent. The traditional framework for studying marriage patterns among immigrants has therefore to be revisited. With the growing second generation, marriage choices are not only determined by homogamous marriages with a partner of the same origin from the country of origin or heterogamous marriages with a native partner from the country or residence. Increasingly the second generation has the option of choosing a second generation from the same or different origin living in the countries they reside in. In this paper we first study the partner choices of the second generation from the largest immigrant groups in the Netherlands taking this diversity of partner origin options into account. Second, we question to what extent the neighbourhood (as potential meeting place) is important for the partner chosen. Data from the Dutch marriages statistics, including all marriages contracted between 2004 and 2008 are used to study the type of partner and marriage timing among the second generation of Moroccan, Turkish, Surinamese and Antillean origin. The data from the marriage statistics are enriched with individual and neighbourhood characteristics from the Social Statistics Database (SSB) in order to be able to test effects of individual and neighbourhood characteristics for partner choice among the different second generation groups. Bivariate analyses provide insight in the types of partner chosen by those of different origin and by sex. In addition we study whether timing of marriage differs between those with partners of different ethnic origin. Via multinominal regression analyses the importance of the diverse individual and neighbourhood factors on the four partner options are assessed. Finally we build multilevel models to get insight in the importance of neighbourhood for in- or out-group marriages.

### 107-4. FERTILITY ASSIMILATION OF THE SECOND GENERATION

*Kirk A. Scott and Maria A. Stanfors*

*EMail: Kirk.Scott@ekh.lu.se*

This paper makes use of a newly-created multigenerational register to examine the fertility integration of the second generation of immigrants in light of the fertility history of their mothers, their background group, and the native population. The main question answered is to what extent the children of immigrants have assimilated to host-country norms in terms of age at entrance into motherhood. This study will focus upon the role of labor market status of the individual as well as parental characteristics on the process of becoming mothers for groups from varying national backgrounds and native Swedes. Expanding on an earlier study, we exploit sibling pairs to isolate individual effects from family-level frailty effects. The two major results point to a weakening of intergenerational ties among immigrants relative natives, and an increasing tendency towards similar fertility postponement behavior in both groups. Both of these are strong signs of the demographic assimilation of immigrants.

## 107-5. CLARIFICATION AND REPLENISHMENT: MEXICAN-AMERICAN FERTILITY AND INCORPORATION

*Christopher Smith, Susan K. Brown and Frank D. Bean*  
E-Mail: [christsds@uci.edu](mailto:christsds@uci.edu)

The possibility of incomplete fertility incorporation among “third-plus” generation Mexican-American women has been noted for over a decade (Bean, Swicegood et al. 2000; Frank and Heuveline 2005). However, recent questions about the way the “third-plus” generation is measured, especially precisely who is in the group has led to speculation that the category is imprecise and negatively biased (Duncan and Trejo 2007; Alba and Islam 2009; Alba, Abdel-Hady et al. 2011; Duncan and Trejo 2011). The present paper seeks to contribute to research on fertility incorporation by (1) examining Mexican-origin childbearing using data that allow the isolation of a third-only generation, (2) estimating Mexican-origin/Anglo differentials based on these data, and (3) assessing whether “replenishment” effects stemming from recent increases in Mexican immigration may be raising overall Mexican-origin fertility. Using data from the Immigration and Intergenerational Mobility in Metropolitan Los Angeles (IIMMLA) survey, the General Social Survey (GSS) as well as the Current Population Survey (CPS) for Los Angeles and the nation as a whole, we find that, after isolating a third-only generation group, fertility incorporation among the Mexican origin is taking place, and indeed, progressing even faster. Despite this increase in fertility incorporation, it does appear that ethnic replenishment is associated with higher fertility in the Mexican origin population, thus suggesting the possibility of emerging countervailing influences on the fertility of this population.

## 108-1. PARENTS' RELATIONSHIP QUALITY, PARENTAL DIVORCE AND CHILDREN'S WELL-BEING

*Anna Garriga*  
E-Mail: [anna\\_garriga\\_alsina@yahoo.es](mailto:anna_garriga_alsina@yahoo.es)

One of the most important topics in the literature on divorce is the relationship between parental divorce, parents' relationship quality and children's well-being. Some American and Canadian studies have shown that the effect of parental divorce on children's well-being is higher for children from low conflict families than for children from high conflict families. Despite the importance of this finding, to our knowledge no European study has addressed this issue. This paper aims to address this gap using two waves of the Millennium Cohort Study (MCS), a nationally representative, longitudinal study of a British birth cohort. Preliminary results show that the interaction between parental divorce and parents' relationship quality is significant for externalizing problems and cognitive development.

## 108-2. DIVERGING DESTINIES IN EUROPE? EDUCATION, FAMILY STRUCTURE, AND CHILD WELL-BEING

*Juho Härkönen*  
E-Mail: [juho.harkonen@sociology.su.se](mailto:juho.harkonen@sociology.su.se)

In this study, I examine the links between educational attainment, single parenthood, and child wellbeing in Western European countries. I address three specific topics. Firstly, using data from the Eurobarometer surveys, I examine trends in single parenthood by (female) educational attainment levels from the mid-1970s to the 2000s. Secondly, I use panel data from the European Community Household Panel to construct synthetic cohort estimates of children's probabilities of experiencing single parenthood across their childhood (0-15 years) according to mother's educational attainment levels. Finally, I ask whether these

class-biased family structures shape overall levels of and class differences in child disadvantage. I find major cross-national differences in levels, trends, and educational gradients of experience of single parenthood. However, assuming no such differences would change class differences (measured by mother's education) in and overall levels of child well-being only to a limited extent, thus underlying more fundamental sources of child disadvantage.

### **108-3. THE ROLES OF FATHERS' HAVING CHILDREN UNDER TEN YEARS OLD IN CHILD CARE AND HEALTH**

*Burcu Küçük Biçer, Hilal Özcebe, Eren Çetin, Mevlana Yılmaz and Fegan Zakirov*  
Email: drburcubicer@yahoo.com

Introduction: Physical, mental-social development of the children are effected by participation of the fathers in child care. This study aims to learn the roles of fathers' in child care and development in the family. Method: Descriptive study was conducted in a middle socio-economical level region of Ankara. The target group is mothers having children under 10 years old and attending primary health care centre. 119 mothers were interviewed by using "face to face interview technique" between the dates 02-05.02.2010. Results: Mean age of the mothers was 30.73 (SD 5.747) and 55.4% of the mothers were graduated from high school/college. According to mothers' answers: fathers' mean age was 33.88 (SD 5.888) and 62.2% of them graduated from high school/college. Almost all fathers have the jobs which needs high education levels. Most of the fathers have long working hours, and work in stressfull environments (83.2%). 78.2% of the fathers prefer staying at home after work. 82.4% of the fathers paid attention to children' feeding, 39.5% of them help diapering and 75.6% went to the child's bed during his crying at night. 38,7% of fathers read book to children before sleeping, 39,5 percent watch children programmes, 51.2% went to parks, 48.7% played games at home together. 60% of the fathers didn't take any information about child education-care. Main source is media for fathers who had information on child care. Fathers' contribution to child care-education is found higher in the families if the decision about child care shared by mother and father. than the families in which the decision made only by mother or father. Conclusion: Fathers are important for children's social-mental development; therefore information and counselling service on child care should be served to fathers. Keywords: Father, child development, child

### **108-4. FAMILY STRUCTURE, HOUSING, AND CHILD HEALTH**

*Wendy Sigle-Rushton*  
Email: W.Sigle-Rushton@lse.ac.uk

It is well established that children who grow up with married biological parents have, on average, better outcomes than children who experience other family structures. However, it is less clear what this association means and how it should be interpreted. A good deal of debate has centred on whether the association represents something "real" or merely spurious. Although debates about the "causal" effects of family structure have raised important concerns, a preoccupation with self-selection or unobserved heterogeneity bias may have diverted attention from other equally relevant questions about how we should understand the crude relationship between family structure and child outcomes. Why is it that children who live with a single mother two cohabiting parents have poorer health and developmental outcomes than children who live with two biological parents? Differential access to high quality and stable housing circumstances by family structure may be one important factor, especially in countries like the United States where housing costs are high and housing assistance is limited. Because family structure is strongly linked to income, married, two parent families are in a better position to be able to afford appropriate hous-

ing. Dissolution, more likely amongst unmarried parents, is likely to be linked to housing instability and moves into lower quality or public housing projects, both of which have been shown to be negatively associated with child outcomes. Using data from the Fragile Families and Child Wellbeing Study, this paper uses both standard OLS techniques and graphical chain models to identify and explore the inter-relationships between housing, family circumstances and child health. Preliminary findings suggest strong links between family structure and housing. For general health and asthma, in particular, housing tenure, but not residential mobility, appears to explain some of the association between family structure and child health.

#### **108-5. CHILDREN'S PERSONALITY TO EXPLAIN THE LINK BETWEEN JOINT PHYSICAL CUSTODY AND CHILD WELL-BEING: A RISK AND RESILIENCY PERSPECTIVE**

*An Katrien Sodermans, Nele Havermans and Koen Matthijs*  
*Email: ankatrien.sodermans@soc.kuleuven.be*

Recently a Belgian law was installed promoting joint physical custody after divorce. Hence, an increasing amount of children with divorced parents are living alternately in the household of mother and father. Many research has been conducted about the effects of joint physical custody on child well-being, but little attention has been paid to intermediating factors. In this paper, we include the child's personality to explain this link. We rely on five broad universal personality traits (the Big Five) to explain differential coping of children with their residential arrangement. Because personality is supposed to have a genetic base, this paper will contribute to the gene versus environment debate. Concrete, we will compare the emotional well-being of children in three different residential settings (shared, mother, father residence) and investigate the moderating effect of the five personality traits on this association. We have data available from approximately 1600 Flemish pupils with divorced parents, collected within the LAGO-project.

#### **109-1. DEMOGRAPHIC DYNAMICS, LIVELIHOODS AND LAND USE CHANGE IN THE BRAZILIAN AMAZONIA: A LONGITUDINAL STUDY FOR THE MACHADINHO REGION, 1985 TO 2010**

*Alisson F. Barbieri and Gilvan R. Guedes*  
*Email: barbieri@cedeplar.ufmg.br*

This paper discusses how the changing nature of land use and household livelihoods in the Brazilian Amazonia over time may be explained by the changing demographic composition, their access and diversification of sources of income and welfare, and stages of development of frontier settlements. We use as case study a colonization project in the municipality of Machadinho, occupied since 1984. We build on two theories that place key individual and collective decisions at the household level: "household life cycle", and "livelihood approaches". These theories are particularly useful in understanding the many components of colonist's decision-making, individual aspirations of income and welfare, collective needs of familiar group(s) in rural settings, and how they are mediated by the context in which these decisions are made. We use a longitudinal panel of plots and their related households based on field surveys carried out in 1985/ 1986 and 1995 (1,742 farm households); and 2010 (a sample of 259 farm households). We finally discuss how changing livelihood options are impacted and have consequences depending on the scale of analysis (household, communities, the larger political and institutional context), which poses a challenge for public policy interventions regarding sustainable livelihoods and land use in the Amazonia.

## 109-2. POPULATION AND DEVELOPMENT SCENARIOS FOR ELEVEN EU NEIGHBOUR COUNTRIES IN THE MEDITERRANEAN REGION

*George Groenewold, Corina Huisman and Joop De Beer*  
E-Mail: [groenewold@nidi.nl](mailto:groenewold@nidi.nl)

The European Neighbourhood Policy (ENP) was implemented in 2004 at the time of enlargement of the EU, and was followed in 2008 by the establishment of the Union for the Mediterranean (UfM), a multilateral partnership between 26 EU and 16 neighbour countries of which 11 are Mediterranean Basin countries (MED11). ENP and UfM goals are to avoid emergence of new dividing lines between the EU and neighbour countries and instead strengthen prosperity, stability and security of all countries. Realization of these goals is influenced by demographic factors and pressures in both EU and neighbour countries, and focus of this paper. Objective is to present four population growth scenarios for the intermediate (2010-2030) and long term (2030-2050) of MED11 countries (Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Occupied Palestinian Territory, Syria, Tunisia, and Turkey). Scenario results were obtained in the following manner. In a first step, four qualitative economic-political scenarios were composed as narrative summaries describing plausible futures in terms of economic development (increase vs. decrease) and political/economic cooperation between EU and MED11 countries (strong vs. weak). Scenarios were labelled Reference, Integration, Alliance, and Stress. In a second step, four qualitative demographic scenarios were composed reflecting different behavioural responses (fertility, health and mortality, international migration) of people to living in different macro-economic and political contexts. Demographic scenarios account for sociopolitical changes after the start of the 'Arab Spring' in 2010. In a third step, the qualitative demographic scenarios were operationalized leading to quantitative assumptions about expected trends in fertility, health and mortality, and international migration. The latter were used to actually make scenario projections for MED11 countries. The paper concludes by reflecting about implications of the scenario projections for the labour market, pensions, and educational system in relation to expected demographic changes in EU populations for the period 2010-2050.

## 109-3. COMPARING CANADA WITH SWEDEN: ENERGY USE, POPULATION AND THE ENVIRONMENT

*Don Kerr*  
E-Mail: [dkerr@uwo.ca](mailto:dkerr@uwo.ca)

There are many similarities between Canada and Sweden, as both are northern nations, with diverse modern economies, a relatively high standard of living and long democratic traditions. Both have witnessed substantial economic growth over recent decades, with export-oriented economies featuring a highly skilled labor force, excellent internal and external communications, a modern distribution system, and a similar industry/service breakdown in terms of employment. Yet in terms of their respective records on green house gas emissions, there is a stark contrast between the two, as Sweden is often considered a world leader in terms of reducing emissions whereas Canada has been widely criticized for its failure to meet international commitments. The current paper is one systematic attempt to delineate some of those factors responsible for the situation as observed in the two countries, while also providing some international context. More specifically, how has Canada and Sweden performed relative to elsewhere in the OECD, and what are some of the factors responsible for Sweden's relative success and Canada's comparative failure? In terms of methodology, this paper examines trends in environmental impact (CO2 levels)

by applying a modified and updated version of what is widely known among demographers as Ehrlich's "IPAT Equation". Borrowing from demography and industrial ecology, IPAT is an acronym used to emphasize the utility of investigating environmental impact (I) as a direct function of population change (P), affluence (A) as well as technological change (T). Yet technology (T) is often viewed as particularly fundamental in understanding environmental impact (I), and in elaborating on this point, this paper borrows from a growing literature of energy-related carbon emission studies that extends IPAT in the decomposition of GHG emissions.

#### **109-4. REGIONAL ISSUES OF POPULATION DEVELOPMENT AND ENVIRONMENT IN INDIA: AN OVERVIEW**

*CM Lakshmana*

*EMail: lakshmana@isec.ac.in*

Increasing population and the consequent spurt in infrastructure development have had significant impact on environment in India. High population growth, urbanization and rapid economic growth have been resulting in environmental problems of serious dimensions. Notably, persistence of poverty and the consequent scramble for fast depleting resources have been resulting in irreversible environmental degradation in most of the countries in Africa. On the other hand, rapid population growth and continued economic development are the major environmental concerns in the Asia Pacific region including the Indian sub-continent. It is universally accepted that environmental degradation is taking place at a faster pace in developing countries than in developed countries. Despite this, environmental issues get more academic and policy attention in the developed countries of the world. For instance, the higher use of energy and resources per capita in the United States (US) has been widely debated in the academia and policy platforms, as a result of which, there is now greater awareness among policy makers and masses alike about the urgency of conserving resources. The acute stress on environment as also on human health in the U S and across its contact regions is also widely debated. The present study investigates the relationship between population increase and environmental issues in India. regions. Rapid population growth and persistence of poverty have caused much higher environmental damage in east, north-east and central regions of India also.

#### **110-1. STOCHASTIC POPULATION FORECASTING BASED ON A COMBINATION OF EXPERTS EVALUATIONS AND ACCOUNTING FOR CORRELATION OF DEMOGRAPHIC COMPONENTS**

*Francesco C. Billari, Rebecca Graziani and Eugenio Melilli*

*EMail: francesco.billari@unibocconi.it*

We suggest a method for deriving expert based stochastic population forecasts, by combining evaluations of several experts and allowing for correlation among demographic components and among experts. Evaluations of experts are elicited resorting to the conditional method discussed in Billari et al. (2010) and are then combined resorting to the supra-Bayesian approach (Lindley, 1983) so to derive the joint forecast distribution of all summary indicators of the demographic change. In particular, the elicitation procedure makes it possible to elicit evaluations from experts not only on the future values of the indicators and on their expected variability, but also on the across time correlation of each indicator and on the correlation (at the same time and across time) between pairs of indicators. The central scenarios provided by the experts on future values of each summary indicator are treated as data and a likelihood function is specified by the analyst on the basis of all additional information provided by the experts, such likelihood been parametrized in terms of

the unknown future values of the indicators. Therefore the posterior distribution, obtained on the basis of the Bayes theorem and updating the analyst prior opinions on the basis of the evaluations provided by the experts, can be used to describe the future probabilistic behavior of the vital indicators so to derive probabilistic population forecasts in the framework of the traditional cohort component model.

## **110-2. PROBABILISTIC HOUSEHOLD FORECASTS BASED ON REGISTER DATA: THE CASE OF DENMARK AND FINLAND**

*Solveig Christiansen and Nico Keilman*

*EMail: s.g.christiansen@econ.uio.no*

The purpose of this paper is to compute probabilistic household forecasts for Finland and Denmark. We improve on the random share approach of Alho and Keilman by taking advantage of high quality data from population registers and housing registers of Denmark and Finland. Both countries have register data covering the whole populations dating back to the 1980s. We have constructed time series models for household parameters and analysed the empirical prediction errors in those time series models. This allowed us to give an assessment of the expected errors in the household forecasts for the two countries. We forecast, at a 30 year horizon, the number of people occupying the following household positions: dependent child, living with a spouse, living in a consensual union, living alone, lone mother or father, and living in other private household. In addition, the elderly can live in institutional households. Based on probabilistic forecasts of persons broken down by household position, we are able to compute probabilistic forecasts of private households of the following types: one-person households for men and women, cohabiting couples, married couples, and lone fathers and lone mothers.

## **110-3. A STOCHASTIC POPULATION PROJECTION FROM THE PERSPECTIVE OF A NATIONAL STATISTICAL OFFICE**

*Gianni Corsetti and Marco Marsili*

*EMail: giacorsetti@istat.it*

In this paper we expose the first attempts to produce stochastic population projections for Italy in addition to the official deterministic population projections currently released by Istat. The latest (2011-based) official projections have been developed on a set of assumptions about future – until 2065 – levels of fertility, mortality and migration, according to the so called “scenario” approach: a main variant assumed as best performance of the future demographic trends, integrated with two variants, namely the high and low scenario, having the task of defining, albeit in a deterministic approach, the framework for the future uncertainty. Stochastic population forecasts have been produced to overcome the limitations associated with the traditional methodology: the lack of probability attached to the projections and therefore the absence of information about the uncertainty associated with them. To that purpose, two methods have been implemented: a forecast based on the Conditional Expert Opinions (Billari et al., 2010) and a second one on the Scaled Model of Error (Alho and Spencer, 1997). The first method, falling within the so called “random scenario” approach, is built on the use of expert opinions in the definition of probability distributions for terminal vital rates. The second one is based on the extrapolation of empirical errors, where assessment of uncertainty is modelled according to the analysis of past projections errors. In the paper we discuss data and implemented procedures; furthermore, we analyze the results arising from the two stochastic methods; finally we make a comparison between the stochastic and the deterministic approaches.

#### 110-4. MORTALITY PROJECTION INCORPORATING MODEL UNCERTAINTY

*Jonathan J. Forster and Xiaoling Ou*

*EMail: J.J.Forster@soton.ac.uk*

Researchers interested in longevity and mortality projection have available a wide variety of mortality projection models from which to choose. Having been chosen, the favoured model is typically fitted against a suitable dataset and projected forward in time to produce estimated future mortality rates together with an estimate of the associated uncertainty in the form of a prediction interval. However, different models not only yield different best estimates but also generate different prediction intervals. In this paper, we describe a Bayesian statistical approach to the quantification of mortality projection uncertainty that incorporates model uncertainty. Bayesian statistical inference under model uncertainty updates a prior probability distribution over the models to a posterior distribution, in light of observed data. Crucially, this allows predictive probability statements to be made which incorporate model uncertainty. Although the principles of Bayesian inference are straightforward, practical methodology for incorporating probabilistic model uncertainty into mortality forecasts is currently underdeveloped. In this paper, we provide such a methodology. Initially, we focus on individual models, and develop Bayesian methodology for computing the predictive (forecast) distributions for various models. The main contribution of our work is that we demonstrate how to effectively compute probabilistic projections across mortality projection models. We use a computational approach which involves separate Markov chain Monte Carlo (MCMC) generation of parameter values for each model, together with a method which uses the MCMC output to estimate the posterior model probabilities. Our approach is illustrated on data from England and Wales. Using a diverse selection of models, we illustrate how the posterior model probabilities are computed, together with the resulting forecast arising from integrating over the models to account for model uncertainty. The integrated projection uncertainty provides a coherent and more realistic assessment of uncertainty than any corresponding analysis based upon a single model.

#### 110-5. BAYESIAN COHORT COMPONENT POPULATION PROJECTIONS: AN EXPLORATION OF DIFFERENT MODEL SPECIFICATIONS

*Peter W.F. Smith and James Raymer*

*EMail: pws@soton.ac.uk*

In this paper, we explore the use of Bayesian methods for cohort component population projections. The rationale for considering a Bayesian approach is that it offers a more natural framework than traditional probabilistic methods to project future populations with uncertainty measures. We focus on only a small part of the picture, that is, to explore the consequences of choosing different specifications of age-specific fertility and mortality in a closed cohort projection model in terms of its forecasted populations and measures of uncertainty. For illustration, we use a historical time series of fertility and mortality from England and Wales. The data consist of age-specific rates for single years of age going back in time to 1841 for mortality and 1974 for fertility. Finally, we present and compare the projected populations, with associated measures of uncertainty, and evaluate the merits of the various specifications for including fertility and mortality.



### **111-1. 'COMING OUT OF THE CLOSET' IN AFRICA: IDENTITY CONSTRUCTION AND EXPRESSION AMONG GHANAIAN MEN WHO HAVE SEX WITH MEN (MSM)**

*Ama de-Graft Aikins, Paul K. Ayernor and Lord Dartey*

*E-Mail: amaikins@gmail.com*

This paper reports a study that examined identity construction and expression among Ghanaian men who have sex with men (MSM) and the implications for interventions and advocacy. Individual interviews were conducted with 20 MSM and participant observations were conducted in MSM spaces in Accra and Tema, Ghana. Disclosure of MSM identity was partial for many men and was often restricted to carefully selected significant others and within MSM peer groups; disclosure to broader society happened for the most politically engaged. Stigma consciousness and actual stigma undermined full disclosure of MSM identities, compelled men to live 'secretly homosexual and socially heterosexual lives' and created tensions within MSM peer groups particularly with respect to MSM advocacy. Future research needs to focus on the psychological and sexual health of female partners of MSM and particularly for MSM who engage in sex work. Interventions and advocacy must be rights-based and involve conscientized MSM.

### **111-2. GENDER ASPECTS OF MALE PERCEPTION AND ATTITUDES TO OWN INFERTILITY, ITS TREATMENT AND ART USAGE IN RUSSIA**

*Nina E. Rusanova and Olga G. Isupova*

*E-Mail: ner238@rambler.ru*

The paper is concerned with the life experiences of infertile men and their female partners going through male infertility treatment. The study is based on the netnography research of Internet-community of Russian women having the experience of being partners of men with reproductive health problems. Many people find the best support they can receive in the Internet communities. However, it is not at all the case with infertile men in Russia. They almost never share their experiences concerning stated health condition with other men in similar life situation in the web. On the other hand, their female partners do so often, and unite on the special sites in order to discuss the problems of their men. Although there is evidence that male reproductive health state in Russia is problematic, there is no country-wide data concerning its incidence. It is possible to make some evaluations only using the data on those who address reproductive clinics. Among them, male factor of infertility is found in no less than 35% of cases. However, men are unlikely and unwilling to recur to the treatment themselves. Most often, as this study reveals, their health matters, including these of their reproductive health, become responsibility of their female partners, while males withdraw from any activity related to this. Being based on traditional idea of "real man who cannot have any weaknesses", this practice however implies not only additional burden for women (of resolving infertility, which is not their own), but also weakening of men, who culturally are forbidden to actively do something about their infertility, and even to speak about it or even admit it. Further study is needed in order to understand whether it is possible to improve this situation.

### **111-3. CONDOMS AND SEXUAL HEALTH PROBLEMS AMONG MEN IN RURAL INDIA: LESSONS LEARNED FROM A MIXED METHOD APPROACH**

*Minna Säävälä and Arundhati Char*

*E-Mail: minna.saavala@vaestoliitto.fi*

Since the virulence of the HIV/Aids was acknowledged, increased use of condoms has been adopted as a policy objective in developing societies such as India as well as in many

post industrialist societies. Despite this policy interest, popularizing the use of condoms has proved to be far from easy. This paper analyses primary data from rural India from a mixed method study, using two cross-sectional surveys (one among adolescent men and one among married men) and focus group and individual interview data. We have two objectives: first, to examine how rural Indian men see condoms and their role in the context of their sexuality, and second, to make methodological recommendations on how to study male sexual health in starkly patriarchal and traditionalist contexts such as India. The data was collected in the state of Madhya Pradesh in 2005. The data of the paper shows that the unpopularity of the condom relates to the lack of attention and services to men's sexual health problems more generally. Rural men experience a wide range of functional situations which are culturally defined as health problems, such as 'weakness', 'bending of penis', 'nocturnal ejaculations' and 'loss of semen' – issues known to have a wide geographical and social relevance in India. When there is no attention paid on experienced sexual problems, no trust is created between the local health providers and the male clientele. This lack of trust and accountability in turn is reflected in the misinformation and mistrust on condoms. In the methodological side, this paper shows the usefulness of mixing qualitative and quantitative methods in the study of sexual health issues particularly in developing societies. Skeptical preconceptions relating to the study of sexuality in traditionalist societies do not hold: by using inventive and thought-out methods, inhibitions and prudery can be overcome.

#### **111-4. HOMOSEXUAL BEHAVIORS AMONG MALE MIGRANTS IN XI'AN: PERSPECTIVES FROM FEMALE DEFICIT AND INTERNAL MIGRATION**

*Yang Xueyan, Isabelle Attané and Shuzhuo Li*  
*Email: lisayang0311@163.com*

Using the data from “the Survey on Reproductive Health and Family Living of Migrant Forced Male Bachelors in Urban Area” conducted in Xi'an City of Shaanxi Province during Dec. 2009-Jan.2010, this study explores the homosexual behaviors among unmarried male migrants in comparison to married ones. It is found that the prevalence of homosexual behaviors among unmarried males reaches 11%, more than twice the level reported by married but separated married men (who migrate without their spouses): 5.1%, and thrice that of cohabitating married men (who migrate with their spouses): 3.8%. It also appears that the prevalence of homosexual behaviors is significantly correlated with their attitudes toward homosexual behaviors and marriage, their marital status; the frequency of condom use among unmarried men is significantly higher than that among separated married and cohabitating married men; and the condom use frequency was proved to significantly correlate with scores on knowledge of Acquired Immune Deficiency Syndrome (AIDS) and Sexual Transmitted Disease (STDs), homosexual behaviors and marital status. It was suggested in this study that, due to the sex imbalance followed by “marriage squeeze”, among the unmarried male migrants who are forced to stay single and in short of stable sexual partners, there might be a possibility of an increase in male homosexual behaviors; the male homosexual behaviors among unmarried male migrants have characteristics of high risks, which is mainly determined by the shortage of related knowledge.

## PROGRAMME PARTICIPANTS INDEX

Aarnoutse, Rob .....	P1-60	Arata, Heather .....	P1-9
Aassve, Arnstein .....	29,49,61	Arpino, Bruno .....	53,93
Abbasi-Shavazi, Mohammad J.....	37,82,P3-5,P3-74	Arroyave, Ivan I. D.....	34
Abbasoglu-Ozgoren, Ayse.....	88,P3-88	Artanty Nisman, Wenny .....	22
Abel, Guy J.....	P1-1	Ashton, Annemarie.....	P1-10
Abramowska-Kmon, Anita.....	34,45,P1-41	Askari-Nodoushan, Abbas .....	82
Abu-Rmeileh, Niveen M. E.....	36	Åström, Daniel O. ....	57
Adali, Tugba.....	P1-3,P2-89	Attané, Isabelle.....	111
Adebowale, Ayo S.....	P1-4	Atwebembeire, John M. ....	P2-4
Adedimeji, Adebola .....	56	Avdeev, Alexandre .....	43,P3-2
Adedini, Sunday .....	33,49,P2-1	Avdeeva, Maria .....	P1-11
Adepoju, Adunola .....	P1-66	Avendano, Mauricio.....	34
Adiibokah, Edward.....	6	Ayaseh, Ali .....	P2-5
Adzoyi-Atidoh, Lucy K. A. ....	86	Aybek, Can.....	51
Agadjanian, Victor .....	78	Ayeni, Olusola.....	87
Aghajanian, Akbar .....	P2-2,P2-5	Ayernor, Paul K. ....	111,P1-12
Aghayari Hir, Tavakkol .....	100,P1-55,P3-16	Azuh, Dominic E.....	P2-13
Agorastakis, Michail .....	P1-5	Badurashvili, Irina .....	79
Ahlbom, Anders .....	75,101	Bagard, Marcin .....	P2-6
Ahmad, Absar .....	77	Ba-Gning, Sadio .....	38
Ahmadi, Aliyar .....	100,P1-6	Bailey, Ajay .....	64,78
Ainsaar, Mare.....	19,85	Baio, Gianluca.....	P3-46
Ajenjo, Marc .....	60	Baizán, Pau .....	18,64
Akinyemi, Joshua O. ....	87	Bajos, Nathalie .....	17
Akokuwebe, Monica .....	56	Balbo, Nicoletta .....	15
Akresh, Richard .....	P2-3	Bamgboye, Afolabi .....	87
Alagarajan, Manoj .....	77	Bamiwuye, Olusina .....	P2-1
Alalili, Abdulla .....	P1-7	Banens, Maks .....	30
Albani, Mauro .....	P1-8	Bao, Zining .....	P3-98
Albuquerque, Paula .....	14	Barakat, Bilal .....	42,92,102,P1-13
Alexander, Kari .....	46	Baranowska, Anna .....	16,106,P1-70
Alexandre, Mathew.....	58	Barban, Nicola .....	15,36,64
Alfani, Guido .....	32	Barber, Jennifer S.....	94
Alho, Juha .....	110	Barbieri, Alisson F.....	109,P3-76
Alon, Sigal.....	9	Barbieri, Magali .....	P3-3
Alustiza, Ainhoa.....	P3-27	Barclay, Kieron.....	13
Alvares, Raquel .....	42	Barden-Ofallon, Janine.....	65
Ambrosetti, Elena.....	P3-10,P3-55,P3-82	Barik, Debasis .....	29,104
Amiri, Amir .....	76	Bartus, Tamás.....	92
Anacka, Marta .....	18	Baschieri, Angela .....	86
Andersen, Signe Hald .....	40	Basten, Stuart A.....	102
Andersson, Eva K.....	P3-1	Bastin, Sonja .....	98
Andersson, Gunnar .....	3,17,57,84	Battaglini, Marco .....	P2-7
Andrade, Flavia .....	23,68	Bauer, Ramon .....	P2-26
Anson, Jon .....	8,104	Bayona-i-Carrasco, Jordi .....	P1-14,P2-48
		Bazza, Angelica .....	69

Bean, Frank D. ....	107	Brazil, Noli.....	83
Beauchemin, Cris.....	18	Breschi, Marco .....	11
Beaujot, Roderic.....	82,P3-66	Breton, Didier .....	72,108
Beaujouan, Eva .....	80	Broese van Groenou, Marjolein I.....	24,52
Becker, Katharina S. ....	56	Broström, Göran R.....	66
Begall, Katia .....	3	Brown, David L.....	86
Begum, Lutfa.....	P3-4	Brown, Molly .....	P2-27
Beise, Robert .....	P2-8	Brown, Susan K.....	107
Bell, Martin.....	55	Bruckner, Tim-Allen .....	1
Bellani, Daniela .....	72	Buber-Ennser, Isabella.....	80,99
Belyakov, Anton .....	96	Budig, Michelle J. ....	12
Bengtsson, Tommy .....	66	Buehler, Christoph.....	6
Bennett, James.....	79	Bueno, Xiana .....	27,95
Bernardi, Laura .....	35	Buhr, Petra .....	P1-15
Bernhardt, Eva .....	30,63,72,80	Buis, Maarten.....	57
Berntsen, Lisa .....	P1-16	Bumpass, Larry .....	99
Berrington, Ann M. ....	25,38,62,95,106	Burdorf, Alex .....	34
Berzelak, Jernej .....	99	Burgio, Alessandra .....	54
Bese Canpolat, Sebnem.....	P2-9	Burkett, Virginia .....	86
Best, Nicky .....	79	Burnay, Rita .....	P1-27
Bhadra, Kabita R.....	77,87	Busetta, Annalisa .....	P2-54,P3-7
Bhagat, Ram B. ....	55	Bussini, Odoardo .....	76
Bietsch, Kristin .....	58	Bustani, Dariush.....	P2-88
Bignami, Simona .....	78	Cabré, Anna ....	51,107,P1-38,P3-27,P3-90
Bijak, Jakub .....	39	Caetano, André .....	67
Bijwaard, Govert.....	18	Cagiano de Azevedo, Raimondo.....	P3-55
Billari, Francesco C. ....	47,96,110	Cain, Virginia S. ....	6
Billingsley, Sunnee .....	12,105	Caltabiano, Marcantonio .....	69,P2-11
Binstock, Georgina .....	6,P3-5	Cámara, Antonio D.....	P2-28,P3-8
Bitoulas, Alexandros .....	39	Camarda, Carlo G.....	8,32,53
Boamah, Ellen .....	65	Cambois, Emmanuelle.....	68,104
Boardman, Jason D. ....	23,46	Campbell, Cameron D.....	P3-38,P3-38
Boeckmann, Irene .....	12	Canudas-Romo, Vladimir.....	8,75
Boele van Hensbroek, Pieter .....	54	Capacci, Giorgia .....	P2-7
Boeree, Martin .....	P1-60	Caplescu, Raluca Dana.....	5,P3-9
Bohk, Christina .....	75	Capone, Alessandro.....	P3-46
Bonifazi, Corrado.....	P3-6	Cardona, Doris .....	34
Bonnet, Carole .....	97	Carioli, Alessandra .....	47
Bordone, Valeria.....	24,68,73,93	Carlson, Elwood .....	2
Borisova, Ekaterina A.....	P2-73	Carlson, Marcia J. ....	106
Boroumandzade, Mohamadreza.....	P1-6	Caro, Erka .....	P1-16
Bosmans, Kim .....	P2-10	Carol, Sarah .....	31
Botelho, Amália.....	P1-27	Carreras-Torres, Robert .....	P2-20
Botterman, Sarah.....	16	Casaccia, Oliviero .....	76
Bourbeau, Robert R. ....	34,48,66	Caselli, Graziella .....	84,103,P1-93
Braam, Arjan .....	P2-22	Cassani, Benedetta.....	P2-25
Brandén, Maria .....	72	Castagnaro, Cinzia .....	99,P3-19
Brändström, Anders .....	11	Castiglioni, Maria .....	54
Brauner-Otto, Sarah R.....	35	Castro, Eduardo Anselmo .....	100

Castro Martin, Teresa.....	30,98	Cusidó, Teresa Antònia .....	74
Catalano, Ralph .....	1	Cygan-Rehm, Kamila .....	62
Cavalli, Laura .....	40,94	Dako-Gyeke, Mavis ....P1-42,P2-17,P2-32	
Cela, Eralba .....	P3-10,P3-82	Dako-Gyeke, Phyllis .....	P2-17
Çetin, Eren .....	108	Dalla Zuanna, Gianpiero .....	69,96
Chacham, Alessandra S. ....	67	Dartey, Lord .....	111
Chager, Sonia .....	P3-11	Das, Arup.....	P2-18
Chan, Tak Wing .....	81	Dasre, Aurélien.....	P1-19
Chandrasekhar, S.....	P2-12	De Beer, Joop .....	21,76,109
Char, Arundhati .....	111	De Boer, Alice.....	52
Charles, Bimal.....	78	De Broe, Sofie.....	74
Charles-Edwards, Elin.....	55	De Cao, Elisabetta.....	1,53
Charruault, Amélie.....	27	De Grande, Hannelore .....	91
Chellan, Ramesh .....	78	De Pascale, Anna.....	P3-75
Cheng, P. C. Roger .....	37	De Rose, Alessandra.....	98
Cheng, Yen-hsin Alice.....	P1-17	De Santis, Gustavo .....	37,105
Chinedu, Shalom.....	P2-13	De Stavola, Bianca .....	84
Choe, Minja K.....	99	de Valk, Helga A. G.....	
Choi, HwaJung .....	24	..... 17,36,51,59,62,76,95,107	
Christiansen, Solveig .....	110	de Walque, Damien .....	P2-3
Chromková Manea, Beatrice.P2-14,P2-66		De Winter, Tom .....	103
Cifuentes Noyes, Myriam.....	P1-73	Deboosere, Patrick .....	91,101,P1-87
Clarke, Paul .....	99	Deeg, Dorly J.H.....	89,104,P2-22
Coast, Ernestina E.....	24,38,77	Deerenberg, Ingeborg .....	P1-20
Codjoe, Samuel N. A. ....	86	DeGraff, Deborah S.....	28
Coleman, David A.....	102	de-Graft Aikins, Ama .....	111
Comijs, Hannie .....	89	Dekhtyar, Serhiy .....	7
Condon, Katherine M. ....	32	Del Rey Poveda, Luis Alberto.....	62,95
Conen, Wieteke .....	89	Demeny, Paul .....	29
Cong, Zhen .....	14	Demey, Dieter H.....	38,P3-13
Connor, Phillip .....	31,P1-18	Denissenko, Mikhail B. ....	79
Conraux, Estelle.....	P3-1	Dent, Alistair.....	74
Consedine, Nathan.....	P1-52	D'Errico, Alessia.....	54
Constantin, Sandra.....	44	Desesquelles, Aline .....	79,101
Conti, Cinzia .....	P3-6,P3-12	Deslandes, Kim .....	78
Coppola, Lucia.....	P2-15	Deuflhard, Carolin .....	P3-70
Corrêa, Humberto.....	P2-16	Devolder, Daniel.....	15,27,36
Corsetti, Gianni .....	110,P2-7	Di Cesare, Mariachiara .....	79
Corsini, Veronica.....	4	Di Gessa, Giorgio .....	14
Cortina, Clara .....	30	Di Giulio, Paola .....	46
Cotroneo, Rossana .....	54	Dias, José G.....	56
Coulter, Rory .....	88	Diaz, Montserrat.....	P1-21,P2-46
Coutinho, Raquel .....	10	Didonna, Maria Grazia .....	61
Covre-Sussai, Maira .....	61	Diehl, Claudia .....	31
Craigie, Terry-Ann.....	106	Dike, Ezinwanne Christiana .....	65
Creighton, Mathew J.....	83	Dimitrievska, Vera.....	54
Crespo Cuaresma, Jesús .....	89	DiPrete, Thomas A. ....	9
Crialesi, Roberta .....	54	Doblhammer-Reiter, Gabriele.....	68
Cruz Castanheira, Helena.....	85	Domingo, Andreu.....	95,P1-29

Dominguez, Marta .....	60
Dommermuth, Lars .....	73
Donehower, Gretchen .....	89
Donfouet, Hermann .....	6
Dong, Hao .....	P3-38
Dorbritz, Jürgen .....	105
Douillot, Laetitia .....	58
Drefahl, Sven .....	13,37,57,75,84,101
Dribe, Martin .....	2,70,P2-76
Du, Jane-Ching (Jiangqin) J. ....	82
Duarte, Yeda .....	23,68
Dubkova, Natalja .....	1
Dubuc, Sylvie .....	27,67
Duke, Naomi .....	83
Durham, Rachel .....	42,92
Durst, Judit .....	P1-23
Duta, Adriana .....	P3-14
Duthé, Géraldine .....	58,79
Dutta, Mousumi .....	56,P3-31
Duvander, Ann-Zofie .....	7,12,63,90
Dykstra, Pearl .....	24,52,85
Ebenstein, Avraham .....	78
Ediev, Dalkhat M. ....	8,48
Edvinsson, Sören .....	32,57,68
Ecckhaut, Mieke C. W. ....	9
Egidi, Viviana .....	79
Eikemo, Terje A. ....	79,91
Elizarov, Valeriy .....	P1-11
Ellingsaeter, Anne Lise .....	35
Elshof, Hans .....	P1-24
Enayat, Halimeh .....	P1-59
Engelman, Michal .....	1,48
Enumeah, Yeetey A. ....	65
Enwereji, Ezinne .....	67
Eremenko, Tatiana .....	17,39
Ermisch, John .....	81
Erola, Jani .....	63
Eryurt, Mehmet Ali .....	58,88
Esparza, Mireia .....	P1-31,P2-19
Esping-Andersen, Gosta .....	72
Esposito, Massimo .....	11
Essendi, Hildah .....	P3-15
Esteban, Esther .....	P2-20
Esteve, Albert .....	2,16,42,74,P3-11
Evandrou, Maria .....	20,38,52
Evans, Ann .....	30
Exavery, Amon .....	58,P2-50
Ezzati, Majid .....	79
Fabio Massimo, Rottino .....	P3-6

Fadeyibi, Opeyemi .....	P2-1
Fahlén, Susanne .....	3
Falaye, Ajibola .....	65
Falkingham, Jane C. ....	38,52,95,109
Fallah Toule Kolaci, Maryam....	100,P3-16
Fan, Jessie X. ....	83,P1-25,P2-38
Fan, Wen .....	83
Fanghanel, Alex .....	24,38
Farina, Patrizia .....	P1-67,P3-17
Fasang, Anette E. ....	P3-18
Fasano, Alessandra .....	P3-19
Fathi, Laleh .....	P1-55
Faus Bertomeu, Aina .....	P1-26,P2-23
Fazito, Dimitri .....	P3-20
Feichtinger, Gustav .....	96
Feijten, Peteke .....	88
Feldhaus, Michael .....	71
Fernandes, Ana .....	P1-27
Fernandez Calderon, Martha Nayeli .....	P3-21
Fernández-Carro, Celia .....	20
Ferrari, Giulia .....	P1-28
Ferrarini, Tommy .....	5
Ferrer, Ana .....	7
Ferrer, Laia .....	54
Ferro, Andrea R. ....	28
Festy, Patrick .....	16
Fihel, Agnieszka .....	18,P3-22
Findlay, Allan .....	76
Flandorfer, Priska .....	P3-23
Flashman, Jennifer A. ....	16
Fliegenschnee, Katrin .....	80
Florence, Akanle F. F. ....	65
Fokkema, Tineke .....	6,20,P3-10
Fonseca, Isabel .....	42
Ford-Evans, Jennifer .....	74
Forsberg, Bertil .....	57
Forster, Jonathan J. ....	39,110
Fostik, Ana .....	30
Fox, Jonathan .....	P3-24
Franch, Xavier .....	21
Frantsuz, Yuri .....	P3-25
Fratczak, Ewa .....	4,71
Freitag, Nora .....	P1-65
Frejka, Tomas .....	69
Freund, Inga .....	89
Fritzell, Johan .....	81
Frova, Luisa .....	79
Fulton, Ruth .....	74

Fürnkranz-Prskawetz, Alexia.....	Goisis, Alice .....	58
..... 29,89,96,103	Goldscheider, Fran .....	80
Furstenberg, Frank .....	Goldstein, Joshua R.....	6,50,69,102
36	Gomes, Inês.....	P1-27
Fyanka, Bernard B.....	Gomes, Maria Cristina S. ....	100
P3-26	Gómez León, Madelín.....	P2-42
Gabrielli, Giuseppe.....	Gomez-Redondo, Rosa.....	79,P1-26,P2-23
41,P2-21,P3-83	Gonzalez-Ferrer, Amparo .....	
Gadeyne, Sylvie .....	.....18,39,64,P1-53	
91,101	González-José, Rolando .....	P2-19
Gagnon, Alain .....	Gottard, Anna .....	80
48,66	Goujon, Anne.....	P2-26
Gahler, Michael .....	Gourbin, Catherine .....	33
38,82	Grace, Kathryn.....	P1-83,P2-27
Galeano, Juan .....	Grande Martín, Rafael .....	95
95,P1-29	Gray, Edith E.....	30
Galenkamp, Henrike .....	Graziani, Rebecca.....	110
P2-22	Grebenyuk, Alexander A. ....	P2-73
Galezewska, Paulina.....	Grigoriev, Pavel .....	91
P1-30	Grigorieva, Olga G.....	68
Gampe, Jutta .....	Grim, Brian J.....	P2-83
53	Groenewold, George .....	109
Ganeshan, N. ....	Gruber, Siegfried .....	2,43
78	Grundy, Emily .....	20,68,84,104
García González, Juan Manuel.....	Grzenda, Wioletta .....	4
P2-23	Gu, Baochang.....	102
García Pereiro, Thaís .....	Guarneri, Antonella.....	99,P1-8,P3-12,P3-19
61	Guedes, Gilvan R. ....	109
Garcia Roman, Joan.....	Guest, Ross .....	40
16,42,60,P3-11	Guevara, Pilar .....	68
Garcia Soler, Albert .....	Guillot, Michel.....	79
P3-27	Guimaraes, Raquel .....	42
Garcia-Moro, Clara E. ....	Gumà, Jordi .....	P2-28
P1-31,P2-19	Gunduz-Hosgor, Ayse .....	98
García-Román, Joan.....	Gupta, Akshay .....	P3-50
P3-8	Gupta, Ratna Deep .....	P2-29
Garriga, Anna .....	Gutierrez de Mesa, José Luis .....	48
108	Güveli, Ayse .....	31
Garssen, Joop.....	Haandrikman, Karen .....	51,P1-90
P3-93	Haberfeld, Yitchak .....	64
Gatny, Heather H.....	Hacker, J. David .....	2
94	Hackett, Conrad .....	P2-83
Gauthier, Anne H. ....	Hackl, Monika.....	101
85,P2-24	Haeck, Catherine .....	28
Gavrilova, Natalia S.....	Haellsten, Martin .....	28
P1-77	Hall, Wayne.....	5
Gayle, Vernon .....	Halldén, Karin .....	12
76	Hamel, Christelle.....	27,P1-57,P3-28
Gaymu, Joëlle.....	Hanappi, Doris .....	35
16		
Geisler, Esther .....		
90		
Geißler, Ferdinand.....		
P3-60		
Geist, Claudia .....		
35		
Gensel, Jérôme .....		
P2-53		
Ghazi-Tabatabaee, Mahmoud .....		
100		
Ghimire, Dirgha J.....		
P3-5		
Ghio, Daniela .....		
P3-51		
Ghodrati, Hossein .....		
40,P1-6		
Ghodrati, Shafieh .....		
40		
Ghosh, Sriparna .....		
56		
Giambalvo, Ornella.....		
P3-7		
Giannantoni, Patrizia .....		
P3-46		
Gierveld, Jenny.....		
19		
Gil, Paula .....		
P1-27		
Gil-Alonso, Fernando.....		
41,P1-14		
Giles, John T.....		
44		
Ginther, Donna K.....		
19		
Gisser, Richard.....		
69,P2-26		
Giudici, Cristina .....		
P2-25,P3-55		
Glaser, Karen F. ....		
14		
Glikman, Anya .....		
P1-32		
Gödri, Irén .....		
P1-33		
Gogoi, Mousumi.....		
67		

Hannemann, Tina.....	91	Huisman, Martijn .....	P2-22
Haragus, Mihaela.....	61	Hulik, Vladimir .....	P2-31
Haralampiev, Kaloyan.....	P2-30	Hulikova, Klara .....	P2-31,P3-29,P3-30
Hardonk, Stefan .....	P2-10	Hull, Terence H. ....	65
Hargrove, Taylor .....	P2-60	Hummer, Robert A. ....	66
Härkönen, Juho .....	57,63,108	Husain, Zakir.....	56,P3-31
Harmsen, Carel .....	73	Huschek, Doreen.....	106
Havermans, Nele.....	16,108,P1-34	Hutter, Inge .....	22,54
Hayward, Mark D.....	23	Ibáñez Pascual, Marta .....	P2-6
Heath, Sue.....	27	Ibrahim, Ummu .....	P2-32
Hedberg, Charlotta .....	41	Icduygu, Ahmet .....	39
Hedman, Lina .....	88	Ikwuyatum, Godwin O.....	P2-33
Heggeness, Misty L. ....	98	Imasiku, Eunice N. S. ....	33
Heins, Frank .....	P1-8,P3-6	Impicciatore, Roberto.....	73
Heisler, Michele.....	24	Irongo, Costantine .....	P1-60
Hekmat, Mehrnaz .....	P2-88	Isupova, Olga G. ....	5,111
Heleniak, Timothy.....	55	Ivanova, Alla E. ....	26,91
Helgertz, Jonas.....	91,107	Ivanova, Katya .....	63
Helleringer, Stephane.....	87	Iwasawa, Miho .....	106,P1-35
Henkens, Kène .....	89,P3-91	Jacob, Konstanze.....	31
Henretta, John C. ....	52,93	Jagger, Carol .....	P2-98
Henz, Ursula .....	38	Jalovaara, Marika .....	4
Héran, Francois.....	7	Jamal, Amaney .....	83
Herm, Anne.....	104	Jampaklay, Aree .....	P1-36
Hermeto, Ana.....	9,42,P3-42	Janssen, Fanny .....	75
Hernández, Miguel.....	P1-31,P2-19	Jappens, Maaïke.....	81,95
Hertrich, Véronique.....	74	Jarry, Valérie.....	48,66
Hessel, Philipp.....	93	Jasilioniene, Aiva.....	72,P1-37
Hiekel, Nicole .....	61	Jasilionis, Domantas.....	34,72,P1-37
Hill, Peter S. ....	5	Jensen, An-Magritt .....	15
Hin, Saskia .....	6	Jiang, Leiwen .....	2
Hinde, Andy .....	62	Johansson, Mats.....	12
Hindin, Michelle J. ....	54	Jordà, Joan Pau .....	P1-38
Hjältn, Anna.....	20	Joseph, Olivier .....	90
Hladun, Olga .....	P2-20	Joutsenniemi, Kaisla.....	26
Hoem, Jan M .....	4	Jozwiak, Janina .....	45
Hoffmann, Rasmus .....	91	Juarez, Sol .....	22
Hogan, Dennis .....	36	Kahlert, Heike.....	102
Hogan, Howard .....	30	Kajungu, Dan.....	58
Holland, Jennifer A. ....	17,83,105	Kalabikhina, Irina E. ....	P3-32
Holmqvist, Emma .....	88	Kaldager, Rannveig .....	25
Hoque, Nazrul .....	23,P1-58	Kalmijn, Matthijs .....	63,70
Hosseini, Hatam .....	29	Kalogirou, Stamatis .....	P2-34
Hosseini Chavoshi, Meimanat.....	37	Kalousova, Lucie.....	93
Hosseni, Ghorban .....	P2-57	Kalter, Frank .....	31
Howarth, Helena .....	74	Kamanda, Amie.....	P1-39
Hox, Joop .....	99	Kamtsiuris, Panagiotis .....	26
Huinink, Johannes .....	71	Kaneko, Ryuichi.....	P1-35
Huisman, Corina.....	21,109	Kante, Malick .....	58,87



Karakaya, Mehmet Dogu .....	100	Kowaleski-Jones, Lori .....	83,P1-25,P2-38
Karelson, Kati .....	101	Kozlov, Lenar .....	P1-74
Kato, Akihiko .....	P2-35	Kozlov, Vladimir .....	P3-32
Kaufman, Gayle .....	63	Kraval, Øystein .....	13,45,92
Kauppinen, Timo M. ....	73	Kreyenfeld, Michaela.....	.....25,69,85,90,P2-39,P2-94
Kavas, Serap.....	98	Kristina, Siewert .....	P1-65
Kawachi, Ichiro .....	84,P1-46	Krumins, Juris .....	1
Kazemipour Sabet, Shahla .....	P2-57	Küçük Biçer, Burcu .....	108
Kazianga, Harounan .....	P2-3	Kuhnt, Anne-Kristin .....	P1-15
KC, Samir .....	46,87,102	Kulasekaran, Ravisankar .....	P1-44
Keefe, Janice.....	P1-82	Kulhánová, Ivana .....	91
Keilman, Nico .....	110	Kulsariyeva, Sabira.....	32
Kennedy, Sheela .....	2	Kulu, Hill .....	44,51,72
Kenney, Catherine T.....	50	Kumar, Ashok .....	77,P2-68
Keogh, Alice .....	97	Kumar, Dinesh .....	P1-78,P2-74
Kerr, Don .....	109	Kumar, Surendra .....	P1-78,P2-74
Keshri, Kunal .....	55	Kupiszewska, Dorota .....	55
Khramova, Marina N.....	44	Kupiszewski, Marek .....	55
Kibele, Eva U.B. ....	23,34	Kurkiewicz, Jolanta .....	P3-35
Kibiki, Gibson.....	P1-60	Kusunoki, Yasamin.....	94
Kiernan, Kathleen E. ....	61	Kuyumjian, Karine .....	79
Kim, Younoh .....	P2-36	Kveder, Andrej.....	99
Kirdar, Murat G. ....	58	Lagergren, Jesper.....	57
Kitterød, Ragni Hege.....	40	Lainiala, Lassi .....	49,P2-40
Kley, Stefanie A.....	P3-33	Lake, Gulilat Teshome.....	P2-41
Klinthall, Martin .....	18	Lakshmana, CM .....	109
Cluesener, Sebastian .....	85,105	Lakshmanasamy, Thangamuthu.....	P1-45
Kluge, Fanny .....	P1-40,P2-95	Lammens, Lies.....	P1-87
Knapik, Oskar.....	P3-35	Lanari, Donatella .....	23,76
Koc, Ismet .....	51,58,88	Lanzieri, Giampaolo.....	70
Kocot-Górecka, Katarzyna .....	P1-41	Lapante, Benoît .....	30
Kocourková, Jirina .....	54	Lappegård, Trude .....	4,49,71,105
Kodzi, Ivy A. ....	45	Lapueta, Irene .....	90
Koellet, Suzana M. ....	51	Lardoux, Solene .....	P3-36
Koenig, Matthias.....	31,P1-18	Latten, Jan .....	105
Kofie, Humphrey.....	P1-42	Le Bouteillec, Nathalie .....	85
Kolk, Martin .....	57	Le Goff, Jean-Marie .....	35
Komarova, Tatiana .....	P3-34	Leão, Carla .....	P2-72,P3-37
Köppen, Katja .....	P1-43,P2-39	Lebrao, Maria .....	23,68
Kornstad, Tom .....	25	Lecours, Chantale .....	34
Korobeynikova, Nadezhda S. ....	43	Lee, James Z.....	P3-38
Korpi, Martin.....	41	Lee, Marlene A. ....	P3-39
Kostaki, Anastasia.....	P2-63	Lee, YeonJin .....	P1-46
Kostova, Dora .....	94	Lefebvre, Pierre .....	28
Kotowska, Irena E.....	45,95,105,P1-41	Lelièvre, Eva .....	38
Kotsifakis, George .....	P2-34	Lenart, Adam .....	75
Kotyrlo, Elena .....	25	Lengerer, Andrea .....	P1-47
Kōu, Anu.....	64	Lenka, Benova.....	84
Kovács, Katalin .....	P2-37		

Lennartsson, Carin.....	81	Lydié, Nathalie.....	17
Lenzi, Rachel.....	10	Lyngstad, Torkild Hovde.....	13,73
León Díaz, Esther María.....	P2-42	Ma, Li.....	P1-49
Leopold, Thomas.....	81,P3-60	Machado, Carla J.....	10
Lerch, Mathias.....	26	Machado, Luciano.....	9
Lersch, Philipp.....	P2-43	Maciel, Andréia B. F.....	P3-45
Lesmana, Susanti.....	22	Mackenbach, Johan P.....	75,79,91
Lesné, Maud.....	P2-44	Macmillan, Ross.....	23,46,83
Lesthaeghe, Ron J.....	50	Magalhaes, Maria.....	P1-50
Letablier, Marie-Therese.....	35	Mahapatro, Sandhya Rani.....	44
Levison, Deborah.....	28	Maharana, Barsharani.....	104
Lewin, Alisa C.....	P2-45	Mahieu, Pierre-Alexandre.....	6
Li, Shuzhuo.....	111	Mahlberg, Bernhard.....	89
Liang, Xiangliang.....	P3-98	Mahmoudi, Mohammad Javad.....	P2-57
Liefbroer, Aart C.....	14,30,61	Makay, Zsuzsanna.....	P2-51
Lille, Nathan.....	P1-16	Makoni, Brenda T. N.....	P2-52
Lim, So-jung.....	106	Malacic, Janez.....	103
Lindgren, Urban.....	41	Malin, Eric.....	6
Lindh, Thomas.....	103	Malmberg, Bo.....	P3-1
Lisenenkov, Alexander.....	P1-74	Malmberg, Gunnar.....	88
Liu, Jianye.....	P3-66	Mandemakers, Jornt.....	15,66
Liu, Mao-Mei.....	P3-40	Manfredi, Piero.....	1
Ljung, Rickard.....	57	Manshin, Roman.....	P2-73
Ljunge, Martin.....	97	Manu, Alex.....	65
Llorente, Mar.....	P1-21,P2-46	Marcellusi, Andrea.....	P3-46
Lodewijckx, Edith.....	P3-41	Marczak, Joanna.....	P3-47
Loghi, Marzia.....	54	Margolis, Rachel.....	P3-48
Loichinger, Elke.....	46	Marinacci, Chiara.....	P1-93
Longkumer, Temsumeren.....	P2-29,P2-47	Marques, António.....	P1-27
Longo, Luciene.....	P3-42	Marsicano, Elise.....	17
Loozen, Suzanne.....	107	Marsili, Marco.....	74,110,P2-7
López, Cristina.....	P2-48	Martikainen, Pekka.....	13,26,73,84,92
López, Federico.....	48	Martínez García, Jacqueline.....	P1-73
López de Lera, Diego.....	P3-43	Martínez-Abadías, Neus.....	P2-19
López-Colás, Julián.....	P1-56,P2-49	Martins, José.....	100
Lopez-Falcon, Diana.....	17	Martinson, Melissa L.....	83
López-Gay, Antonio.....	50,P3-11	Masanja, Honorati.....	58
Louckx, Fred.....	P2-10	Maslauskaite, Ausra.....	50,72,P1-37
Lozar Manfreda, Katja.....	99	Maslovskaya, Olga.....	52
Lucifora, Claudio.....	97	Masquelier, Bruno.....	74
Lundh, Christer.....	64	Mathian, Hélène.....	P2-53
Lundholm, Emma.....	24	Matthijs, Koen.....	11,16,19,61,108,P1-34
Lundkvist, Lena.....	P1-48	Matysiak, Anna.....	3,16,25,P2-85
Lundström, Karin L.....	P3-44	Mazouch, Petr.....	P3-29
Luo, Liying.....	83	Mazzarelli, Federica.....	P3-55
Lutambi Mageni, Angelina.....	P2-50	Mazzoni, Stanislaw.....	11
Luthra, Renee.....	16	Mazzuco, Stefano.....	1,37,93
Lutz, Wolfgang.....	29,45,59,86,102	Mbaruku, Godfrey.....	58,P2-50
Luy, Marc.....	46,66	McDonald, Peter.....	5,37,65

McGhee, Derek .....	27	Moguérrou, Laure .....	P1-57
McGregor, Ian .....	74	Monden, Christiaan W. S. ....	46,70
Meggiolaro, Silvia .....	1,60,93	Montañas Cobo, Víctor .....	22,34
Mejia-Guevara, Iván.....	83,89,P1-51,P1-88	Montez, Jennifer Karas.....	23
Melegaro, Alessia .....	1	Moragues, Aina .....	P1-38
Melilli, Eugenio .....	110	Moshfegh, Mahmoud.....	P2-57
Melser, Chantal .....	P1-20	Mostofa, Golam .....	P1-58
Mencarini, Letizia .....	36,80	Moustgaard, Heta .....	26
Mendes, Maria..P1-50,P2-71,P2-90,P3-45		Mouton, Didier .....	P3-51
Mendes de Leon, Carlos .....	93	Movahed, Majid .....	P1-59
Mendola, Daria .....	P2-54	Mrema, Sigilbet .....	58
Meng, Xiangjing .....	P2-55	Mtabho, Charles .....	P1-60
Mennini, Francesco Saverio.....	P3-46	Mu, Ren .....	44
Menvielle, Gwenn .....	79	Muennig, Peter .....	P1-46
Mergenthaler, Andreas .....	104	Mukhambetova, Kuralai .....	P1-95
Merlo, Juan .....	22,34	Mukhopadhyay, Barun Kumar .....	P1-61
Merrigan, Philip .....	28	Mulder, Clara H. ....	24,88,100,105
Merz, Eva-Maria .....	19,P1-52	Muresan, Cornelia .....	4,P1-62
Meslé, France .....	8,79,101	Murinkó, Livia .....	47,92
Metsä-Simola, Niina.....	13	Murphy, Michael .....	15
Meurs, Dominique .....	97	Mussino, Eleonora .....	7,P3-83
Mezger, Cora .....	39,P1-53	Muszynska, Magdalena.....	1
Micheel, Frank .....	89	Müters, Stephan .....	26
Miech, Richard .....	23,46	Muttarak, Raya .....	P3-52
Miettinen, Anneli .....	49,P2-40	Mykyta, Laryssa.....	98
Mihaescu, Constanta V.....	5,P3-9	Mynarska, Monika .....	3,16,80,94
Mikolai, Julia .....	106	Myrskylä, Mikko.....	
Milewski, Nadja.....	51,62,P3-59	.....	8,26,48,92,P3-24,P3-48
Mills, Melinda.....	3,15,36,70,P3-14	Naderi, Robert .....	20,99,105
Minagawa, Yuka .....	66,93	Nanda, Geeta .....	10
Minca, Elisabeta .....	P1-54	Nathan, Rose .....	58
Minello, Alessandra .....	59	Naz, Syeda Saman .....	94
Miranda-Ribeiro, Paula.....		Nazan, Ahmad .....	23
.....	10,65,P3-20,P3-42,P3-49	Neels, Karel.....	9,50,59,85,P1-89
Miret-Gamundi, Pau .....	P2-56	Neilson, Jeff .....	60
Mirzaei, Hossein .....	100,P1-55	Nettey, Ernest.....	65
Mirzahosseini, Nasser .....	76	Neyer, Gerda R.....	3,12,71
Mishra, Mukesh .....	10	Ni Bhrolchain, Maire .....	80
Mishra, Pushpendra Kumar.....	P3-50	Nikitovic, Vladimir .....	P3-65
Misra, Joya .....	12	Nisén, Jessica .....	92
Missov, Trifon I. ....	53,75	Noack, Turid .....	P2-58
Mitchell, Colter .....	6	Norgård Berntsen, Kjersti.....	13
Mitra, Sadananda .....	77,87	Nowok, Beata .....	76
Mizuochi, Masaaki .....	3	Noymer, Andrew .....	1
Mkopi, Abdallah .....	58	Nusselder, Wilma .....	75
Módenes, Juan A. ....	20,P1-56,P2-49	Nyseth, Hollie .....	83
Modig, Karin .....	75,101	Nystedt, Paul.....	70
Modugu, Hanimi Reddy .....	77	Oakes, J. Michael .....	83
Moghadas, Ali asghar.....	P2-5	Oanes-Faludi, Cristina .....	P1-63

Öberg, Stefan ..... 66  
 Obucina, Ognjen ..... P1-64  
 Ocek, Serdar ..... P3-53  
 Ocello, Cristina ..... 88  
 O'Connell, Martin T. .... 30  
 Odimegwu, Clifford O. .... 33,49,P2-1  
 Odipo, George ..... 86  
 Oeppen, James E. .... 32  
 Ögren, Anders ..... 85  
 Okun, Barbara S. .... 47  
 Olah, Livia ..... 60,82  
 Olbrich, Sophie ..... P1-65  
 Oliveira, Isabel Tiago ..... 56  
 Oliveira, Manuela Maria ..... P1-50  
 Olivera, Javier ..... 103  
 Omidayi, Adekunbi ..... 33  
 Omololu, Obafemi ..... 56  
 Omoyeni, Sunday T. .... 33,P2-1  
 Ongaro, Fausta ..... 93  
 Ononokpono, Dorothy ..... 33  
 Onwuama, Mercy ..... P1-66  
 Öri, Peter ..... 43  
 Oris, Michel ..... 11,26  
 Ortensi, Livia Elisa ..... P1-67,P3-17  
 Ortiz, Elsa ..... 36  
 Östh, John ..... P3-1  
 Otero, Raimundo ..... P3-87  
 Ou, Xiaoling ..... 110  
 Oucho, John ..... 86  
 Ouellette, Nadine ..... 8,34  
 Owusu-Agyei, Seth ..... 65  
 Ozcan, Berkay ..... 40  
 Özcebe, Hilal ..... 108  
 Pace, Monica ..... 79  
 Pace, Roberta ..... 61  
 Padmadas, Sabu S. .... 56  
 Pailhé, Ariane ..... 27,35,90  
 Pajaron, Marjorie ..... P1-68  
 Pakot, Levente ..... 43  
 Palacio, Andres ..... 87  
 Paledi, Bobby B.M. .... P2-59  
 Pandey, Ajay ..... 58  
 Pandey, Anamika ..... P3-54  
 Panico, Lidia ..... P1-69  
 Paparusso, Angela ..... P3-55  
 Pappagallo, Marilena ..... 79  
 Parr, Nick ..... 40  
 Parrado, Emilio A. .... 62  
 Partida, Virgilio ..... P1-51

Passos, José ..... 14  
 Pastor, Karol ..... P3-56  
 Patel, Rachana ..... 77  
 Paterno, Anna ..... 41,P2-21,P3-83  
 Patra, Ananya ..... P3-57  
 Patt, Anthony ..... 86  
 Pattaro, Serena ..... 25  
 Pearce, Lisa D. .... P2-60  
 Pearlman, Jessica ..... P2-60  
 Pedersen, Eirin ..... 35  
 Pelletier, David ..... P2-61,P3-36  
 Pennec, Sophie ..... 19,38  
 Peracchi, Franco ..... 53  
 Perales, Francisco ..... 97  
 Perelli-Harris, Brienna ..... 5,50,97,106  
 Perianayagam, Arokiasamy ..... 59,P2-79  
 Peri-Rotem, Nitzan ..... P2-62  
 Peristera, Paraskevi ..... P2-63  
 Permanyer, Iñaki ..... 16  
 Persson, Lotta ..... P1-48,P3-58  
 Peters, Frederik ..... 75,P3-59  
 Petric, Gregor ..... 99  
 Petrucci, Alessandra ..... 88  
 Pettersson, Katarina ..... 41  
 Pfeffer, Fabian T. .... 28  
 Pham, Bang Nguyen ..... 5  
 Philipov, Dimitar ..... 71  
 Pieroni, Luca ..... 23  
 Piguet, Virginie ..... 55  
 Pink, Sebastian ..... P3-60  
 Pirani, Elena ..... P1-70,P1-75  
 Pismennaya, Elena E. .... P2-73  
 Pison, Gilles ..... 58,P2-53  
 Platinovsek, Rok ..... 99  
 Platt, Lucinda ..... 31  
 Ploubidis, George B. .... 84  
 Plumejeaud, Christine ..... P2-53  
 Pohl, Carsten ..... P3-61  
 Poniakina, Svitlana ..... P2-64  
 Poortman, Anne-Rigt ..... 30,61  
 Potancokova, Michaela ..... P2-83  
 Potarca, Gina ..... 70  
 Pötter, Ulrich ..... 21  
 Poulain, Michel ..... 68,104  
 Pouwels, Babette ..... 85  
 Pozzi, Lucia ..... 11  
 Pradhan, Jalandhar ..... P3-57  
 Prasithima, Abdun-Aziz ..... P1-36  
 Prati, Sabrina ..... 99

Price, Debora J. ....	14	Richardson, Linda L. ....	60
Prieto Rosas, Victoria .....	P2-42,P3-62	Richardson, Sylvia .....	79
Prioux, France .....	72	Riffe, Timothy L. M. ....	42
Pronzato, Chiara .....	28	Rijken, Arieke J. ....	47
Ptak-Chmielewska, Aneta .....	71	Rijs, Kelly .....	89
Pujadas, Isabel .....	P2-48	Rimoldi, Stefania .....	P3-68
Pujadas-Mora, Joana-Maria .....		Rindfuss, Ronald R. ....	99
.....	107,P1-38,P3-27,P3-90	Rinesi, Francesca .....	99,P3-19
Pullum, Thomas W. ....	P3-42	Riosmena, Fernando .....	96
Puur, Allan .....	12,50	Rios-Neto, Eduardo L. G. ....	42,59,85,P3-49
Qi, Haodong .....	P3-63	Rivas, Anais .....	P2-19
Quaranta, Luciana .....	63	Rivera Galicia, Luis .....	48
Quintero Lesmes, Doris Cristina .....	P2-65	Rizzi, Ester L. ....	10
Raab, Marcel .....	P3-18	Robards, James .....	62
Rabusic, Ladislav .....	47,P2-14,P2-66	Rocklöv, Joacim .....	57
Radomska, Malgorzata .....	P3-64	Rodrigues, Clarissa G. ....	42,59
Rahnu, Leen .....	50	Rodrigues, Teresa .....	P2-72,P3-37
Rajendran, Periyathambi .....	78	Roessger, Felix .....	37
Rakotonarivo, Andonirina .....	P1-71	Roig, Marta .....	P1-73,P3-69
Ramiro-Fariñas, Diego .....	22,34,46	Rønsen, Marit .....	25,40
Randall, Sara .....	24,38	Rösch, Angi .....	21
Randriamiandrisoa, Jossie .....	P2-67	Rosina, Alessandro .....	94,P1-28,P2-11
Raneke, Andreas P. ....	P1-72,P3-44	Rösler, Wiebke .....	P3-70
Rani, Manju .....	P2-68	Rostila, Mikael .....	84
Ranjan, Rajiv .....	P2-69	Rotkirch, Anna .....	49,P2-14,P2-40
Rao, Chalapati .....	5	Rozée Gomez, Virginie .....	P3-71
Rapoport, Benoît .....	97	Ruckdeschel, Kerstin .....	99
Rasevic, Mirjana .....	P3-65	Rüger, Heiko .....	100
Rau, Roland .....	34,48,75	Ruggles, Steven .....	2
Ravanera, Zenaida R. ....	82,P3-66	Rusanov, Alexander .....	P3-72
Ray Saraswati, Lopamudra .....	P2-70	Rusanova, Nina E. ....	111
Raymer, James .....	39,55,110	Ryazantsev, Sergey V. ....	P2-73
Raymo, James .....	106	Rychtarikova, Jitka .....	22
Raz-Yurovich, Liat .....	49,69	Ryser, Valérie-Anne .....	35
Read, Sanna L. ....	20	Saarela, Jan M. ....	41,84
Recaño Valverde, Joaquin .....		Saari, Matti .....	21
.....	21,P1-73,P2-65,P3-69	Säävälä, Minna .....	56,111
Recotillet, Isabelle .....	90	Saavedra Morales, Anny Carolina .....	P3-73
Rees, Philip H. ....	88,100,P2-98	Sabater, Albert .....	20,P1-29
Reher, David .....	11,43,95	Sabgayda, Tamara P. ....	P1-77
Reichman, Nancy E. ....	83	Sadeghi, Rasoul .....	P1-59,P3-74
Reimondos, Anna .....	30,65	Safarova, Anna .....	P1-74
Remes, Hanna .....	84	Safarova, Gayane .....	P1-74
Remund, Adrien .....	4	Sage, Joanna .....	52
Requena, Miguel .....	11,95	Sagna, Marguerite L. ....	87,P3-78
Revuelta Eugercios, Bárbara .....	22,P3-67	Saha, Kalyan B. ....	P1-78,P2-74
Reynaud, Cecilia .....	76	Saha, Manashi .....	P3-31
Ribe Montserrat, Eloi .....	14	Saito, Yasuhiko .....	93
Ribeiro, Filipe .....	P2-71	Sakkeus, Luule .....	12,101,P2-93

Salaris, Luisa .....	41	Sharma, Ravendra K....	P1-78,P2-68,P2-74
Salles, Anne .....	35	Sharygin, Ethan J.....	78
Salvatore, Antonio.....	79	Shinjiashvili, Tamar .....	P2-86
Salvini, Silvana .....	105,P1-75	Shkolnikov, Vladimir M. ....	34,72,P1-37
Sambasivam, Ramachandran.....	P1-44	Shushtakashvili, Vano.....	P2-86
Sambt, Joze .....	103	Sieck, Regan .....	83
Sánchez Barriga, Carolina .....	P1-73	Sigilbert, Mrema.....	87
Sanchez-Dominguez, Maria.....	11,95	Sigle-Rushton, Wendy.....	7,45,58,72,108
Sander, Nikola.....	P1-2	Sikoki, Bondan.....	P2-36
Sandström, Glenn.....	P2-75	Sikorska, Iga .....	82,P2-6
Santarelli, Elisabetta .....	P3-75	Silva, Carlos .....	100
Santelli, Emmanuelle .....	P1-57	Silva, Ernesto .....	P2-78
Santos, Reinaldo .....	P3-76	Silventoinen, Karri .....	92
Sanz-Gimeno, Alberto .....	11	Silverstein, Merrill .....	14,81
Sauer, Lenore.....	99	Simão, Andrea B.....	67
Scalone, Francesco .....	2,P2-76	Simard-Gendron, Anaïs .....	P1-79
Scarpa, Bruno.....	37	Simon, Christa .....	96
Schéele, Siv .....	57	Singelmann, Joachim .....	P3-39
Schenk, Niels.....	52	Singh, Atvir .....	P2-68
Schmidbauer, Harald .....	21	Singh, Brijesh P. ....	P1-80
Schmitt, Christian.....	35	Singh, K.K.....	P1-80
Schnor, Christine .....	63	Singh, Mayank Kumar .....	P1-81,P3-80
Schockaert, Ingrid H. ....	21,P3-77	Singh, Shrikant.....	10
Schoeni, Robert .....	24	Sirniö, Outi .....	73
Scholz, Rembrandt D.....	26	Sironi, Emiliano .....	P1-28
Schopflocher, Donald .....	P3-78	Sironi, Maria.....	29,36
Schoumaker, Bruno D.....	P1-71	Sivanandan, Vini .....	59,P2-79
Schuler, Sidney Ruth.....	10	Sivkova, Olga .....	P3-81
Schumacher, Reto .....	11	Sjovold, Torstein.....	P2-19
Scott, Kirk A.....	107	Skarman, Christian .....	18
Sear, Rebecca.....	15	Skirbekk, Vegard .....	16,68,P2-83
Sebastian, Daliya.....	P3-79	Skora, Thomas .....	100
Seierstad, Ane.....	P2-58	Sloczynski, Tymon.....	25
Seiz, Marta .....	P1-76	Slotwinska-Roslanowska, Ewelina...	P2-80
Selemani, Majige B. ....	58	Smith, Christopher .....	107
Seltzer, Judith A. ....	30	Smith, Peter W.F. ....	39,110
Semvua, Hadija .....	P1-60	Smits, Jeroen .....	46,70
Semyonov, Moshe .....	P1-32	Snopkowski, Kristin .....	15
Semyonova, Victoria G.....	P1-77	Soares, Jose Francisco .....	42
Seplaki, Christopher L.....	48	Sobotka, Tomas.....	37,69,102
Serret, Joana.....	P2-77	Sodermans, An Katrien.....	108
Sert, Deniz.....	39	Soja, Ewa .....	P3-35
Sevoyan, Arusyak .....	78	Sokhna, Cheikh .....	58
Shamte, Amri .....	58	Solaz, Anne .....	90
Shanahan, Michael J.....	23,46	Solera, Cristina.....	36
Sharfman, Amanda.....	74	Soo, Kadri .....	85
Sharipova, Anel .....	32	Soroko, Eugeny .....	P2-81
Sharma, Ajay.....	P2-12	Speder, Zsolt .....	50,71
Sharma, Nidhi.....	10	Spielauer, Martin.....	94

Spijker, Jeroen J. A.....	42,74,82	Tayman, Jeff.....	74,P3-86
Spin, Paul.....	P1-82	Tedesco, Nicola.....	41
Spizzichino, Daniele.....	P2-15	Teitler, Julien O.....	83
Stanfors, Maria A.....	9,27,60,107	Teltemann, Janna.....	P1-85
Stankuniene, Vlada.....	50,72,P1-37	Terzera, Laura.....	P2-21,P3-68,P3-83
Steele, Fiona.....	99	Testa, Maria Rita.....	71,88,94
Steiner, Ilka.....	P2-82	Tezcan, Sabahat.....	P1-3,P2-89
Stenberg, Anders.....	12	Thai, Thuan.....	92
Stephenson, Rob.....	78	Theunynck, Zita.....	59
Steверink, Nardi.....	24	Thévenin, Marc.....	16
Stillwell, John.....	55	Thevenon, Olivier.....	90
Stoeldraijer, Lenny.....	75,P3-92	Thiede, Brian C.....	86
Stonawski, Marcin.....	45,P2-83	Thomese, Fleur.....	14
Stone, Juliet A.....	95	Thomson, Elizabeth.....	94,105
Strassburger, Gaby.....	51	Thorkelson, Catherine L.....	41
Strauss, John.....	P2-36	Thornton, Arland.....	6,82,P3-5
Strielkowski, Wadim.....	P3-82	Thorogood, David.....	39
Striessnig, Erich.....	29,45,86	Tiit, Ene-Margit.....	P2-92
Ström, Sara.....	80	Tinker, Anthea.....	14
Strozza, Massimo.....	P3-6	Tinsley, Rebecca.....	74
Strozza, Salvatore.....	76,P2-21,P3-83	Toch, Marlen.....	79
Strzelecki, Pawel A.....	P1-41,P2-84	Tolesh, Fariza A.....	43
Stuchbury, Rachel.....	14	Tollebrant, Johan.....	P1-86
Styrc, Marta.....	94,P2-85	Tomassini, Cecilia.....	14,52
Suhrcke, Marc.....	1	Tomé, Lidia.....	P2-90
Sulaberidze, Avtandil.....	P2-86	Torgasheva, Liudmila.....	79
Sulemana, Abubakari.....	65	Tostmann, Alma.....	P1-60
Sundström, Marianne.....	19	Toth, Erzsebet.....	P1-33
Sunil, Thankam S.....	33,87,P1-96	Toulemon, Laurent.....	19,38
Surkyn, Johan.....	P3-77	Tourbeaux, Jérôme.....	P2-91
Swanson, David A.....	74,P3-86	Touriño, Ana.....	P3-87
Sweeney, Stuart H.....	P1-83	Towriss, Catriona.....	20
Swicewood, Gray.....	19	Trape, Jean-François.....	58
Swier, Nigel.....	74	Trappe, Heike.....	90,P2-39
Sykhoveeva, Anna.....	P3-34	Trevena, Paulina.....	27
Syse, Astri.....	13	Treviño-Maruri, Rocio.....	P2-28
Szalma, Ivett.....	92,P3-84	Troitskaia, Irina.....	43,P3-2
Szczepaniak-Sienniak, Joanna.....	P2-87	Tropf, Felix.....	15
Szél, Bernadett.....	92	Tsimbos, Cleon.....	P2-34,P3-94
Szklarska, Marta.....	P1-84	Tsuya, Noriko.....	99
Szolysek, Mikolaj.....	2,43	Tucci, Enrico.....	76,P3-6
T V, Sekher.....	P3-79	Tuncalp, Ozge.....	54
Takács, Judit.....	P3-84	Turkylmaz, Ahmet Sinan.....	P3-88
Takwa, Teke Johnson.....	P3-85	Turunen, Jani.....	19
Tammaru, Tiit.....	41	Tymicki, Krzysztof.....	P3-89
Tanturri, Maria-Letizia.....	28,89	Ucar, Baris.....	13
Tashakori, Azadeh.....	P2-88	Utomo, Iwu D.....	65
Tavares, Lara.....	61	Uunk, Wilfred.....	63
Tawiah, Charlotte.....	65	Vaezzade, Sajede.....	P2-5

Vähi, Mare .....	P2-92	Vogt, Tobias C.....	P2-95
Valdes, Béatrice .....	38	von der Lippe, Elena .....	26
Vallin, Jacques.....	8,79,101	Wagner, Ines .....	P1-16
Valls Figols, Miquel.....	P3-90	Walhout, Evelien .....	66
Van Bavel, Jan .....	11,62,69,81	Waller, Lorraine.....	27
van Dalen, Hendrik P. ....	89,P3-91	Wang, Cuntong .....	56
Van de Putte, Bart .....	9	Washbrook, Elizabeth .....	99
van den Boogaard, Jossy .....	P1-60	Wazir, M. Asif .....	46
van den Broek, Thijs.....	52	Weber, Daniela .....	45,68
Van den Kommer, Tessa.....	89	Webster, Natasha.....	P1-90
Van der Erf, Rob .....	21	Wegner-Siegmundt, Christian .....	46,P2-96
Van der Gaag, Nicole .....	21	Wen, Ming .....	83,P1-25,P2-38
van der Pers, Marieke.....	24	Wengler, Annelene .....	79
van Duin, Coen .....	75	Wesolowski, Katharina.....	5
van Gaalen, Ruben I.....	P3-92	White, Nicola .....	74
van Ham, Maarten .....	76,88	Whitworth, Simon.....	74
van Huis, Mila .....	P3-93	Wibowo, Karina.....	P2-97
Van Landschoot, Lisa .....	62	Wickenheiser, Ines .....	89
van Nimwegen, Nico.....	96,111	Wiik, Kenneth Aarskaug.....	P2-58
van Raalte, Alyson A. ....	48,75	Willaert, Didier .....	76,95
van Wissen, Leo .....	21,47,64,75	Willekens, Frans .....	96
van Zantvliet, Pascale I.....	70	Willis-Núñez, Fiona L. ....	102
Vanassche, Sofie .....	19,P1-34	Wilmoth, John R. ....	8,26
Vandenheede, Hadewijch .....	101,P1-87	Wilson, Ben .....	7
Vandormael, Alain.....	83	Windzio, Michael .....	P1-85
Vanroelen, Christophe.....	P2-10	Winkler-Dworak, Maria E.....	69,96
Vapattanawong, Patama.....	P1-36	Winkley, Ben .....	74
Varadhan, Ravi .....	48	Winter, Amy K.....	78
Värnik, Peeter.....	P2-93	Wisniowski, Arkadiusz .....	39,53
Vatterrott, Anja .....	P2-94	Witoelar, Firman .....	P2-36
Vega, Alma .....	18,83	Wobma, Elma .....	73,107
Vélez Fernández-Varela, Félix.....		Wohland, Pia N.....	100,P2-98
.....	P1-51,P1-88	Wood, Jonas.....	P1-89
Verbakel, Ellen .....	70	Wroblewska, Wiktoria .....	P3-96
Vergauwen, Jorik.....	P1-89	Xia, Guomei.....	P2-99
Verona, Ana Paula A. ....	P3-20	Xie, Yu .....	6,P3-5
Verropoulou, Georgia.....	P2-34,P3-94	Xu, Hongwei.....	53
Vézina, Samuel .....	P1-82	Xueyan, Yang .....	111
Viciano, Francisco .....	22,34	Yadav, Priyanka.....	P3-97
Vickstrom, Erik .....	64	Yakisik, Harun .....	P3-100
Vidal, Sergi.....	17,97,P2-43	Yang, Juhua .....	44
Vidal-Coso, Elena.....	41,P2-56	Yang, Xiushi.....	P2-99
Vignoli, Daniele.....		Yarger, Jennifer.....	94
.....	25,37,49,71,80,105,P1-75	Yépez-Martínez, Brenda .....	P1-56,P2-49
Viklund, Ida .....	90	Yigit, Elif .....	P1-3,P2-89
Viry, Gil.....	100	Yildiz, Dilek .....	P1-92,P3-88
Vitali, Agnese .....	49,70	Yilmaz, Mevlana .....	108
Vlachantoni, Athina .....	52	Yoo, Sam Hyun .....	62
Vobecka, Jana .....	55,P3-95	Youens, Peter.....	74



Young-DeMarco, Linda.....	6
Yount, Kathryn M.....	6,P3-5
Yücesahin, Mustafa Murat.....	102
Yuksel, Ilknur.....	51,P1-92
Zagheni, Emilio.....	1,67,73
Zaharoula, Michou.....	P1-5
Zaidi, Batool.....	94
Zajac, Beata.....	P1-84
Zakharov, Sergei V.....	69
Zakirov, Fegan.....	108
Zanjari, Nasibeh.....	P1-59,P3-74
Zannella, Marina.....	73,103
Zarulli, Virginia.....	P1-93
Zeman, Kryštof.....	69,P1-94
Zemlyanova, Elena V.....	26,91
Zhanatayeva, Ulbossyn.....	P1-95
Zhao, Bojuan.....	P3-98
Zhu, Yu.....	55
Zielonke, Nadine.....	101
Zorlu, Aslan.....	9
Zottarelli, Lisa K.....	33,P1-96
Zoutewelle-Terovan, Mioara.....	106
Zueras, Pilar.....	P1-97
Zufferey, Jonathan.....	P3-99
Zülfikar, Berna Safak.....	P3-100

## Notes



## Notes



## Notes



## Notes





## Notes



## Notes



## Notes



## Notes





## Notes