Paper 1

Yanan Li (Beijing Normal University) and Naveen Sunder

More Education, Better Mental Health: Evidence from China

Abstract:

We explore the effects of a compulsory schooling law (CSL) on long-run mental health outcomes. In 1986, China passed a law that made it mandatory for all school age children to complete nine years of education. We use the temporal and geographic variation in the implementation of the law in a regression discontinuity design to estimate the reform's effect on long-term psychological well-being of beneficiaries. Our results indicate that beneficiary cohorts had 0.6 years of additional education and were four percent more likely to complete at least nine years of schooling. Almost three decades later, these cohorts were 16 to 19 percentage points less likely to be in severe mental distress, as measured by internationally validated measures of depressive symptoms. Women and rural residents, both in educational and psychological well-being. These findings add to evidence on the positive effect of education on health outcomes by bringing forth novel evidence on mental health benefits in a developing country context.

Paper 2

Radim Boháček (CERGE-EI), Jesús Bueren, Laura Crespo, Pedro Mira, and Josep Pijoan-Mas

Inequality in Life Expectancies across Europe

Abstract:

We use harmonized household panel data from 10 Continental Europe countries (SHARE), England (ELSA), and the US (HRS) to provide comparable measurements of the inequalities in life expectancy, healthy life expectancy, and average years spent in disability. Common across countries we find that the education advantage in total life expectancy is larger for males, while the education advantage in disability years is larger for females; and equivalently, that the female advantage in total life expectancy and the female disadvantage in disability years are both greatly reduced with education. These patterns appear because of two underlying differences between men and women in the multi-state life tables: the education advantage in conditional survival is relatively more important for men and the education advantage in health transitions is relatively more important for women. Looking at the differences across countries, socio-economic and gender inequalities are largest in Eastern Europe and lowest in Scandinavia, while the US stands out as the most unequal country across education groups in terms of disability-free life expectancy.

Paper 3

Yusuke Kuroishi and **Yasuyuki Sawada** (Asian Development Bank)

On the Stability of Preferences: Experimental Evidence from Two Disasters

Abstract:

The literature concerning how preferences are affected by extreme events is characterized by mixed findings. To bridge this gap, we investigate the impacts of two disasters triggered by different natural hazards on present bias, exponential time discounting, and curvature parameters of a utility function. These are elicited in an integrated manner by the convex time budget (CTB) experiments as well as the multiple price list (MPL) experiments. Based on these approaches, we employ sui generis experimental data and accurate disaster damage information from the official metrical surveys in Iwanuma city of Japan and from satellite images of the East Laguna Village of the Philippines, which were hit, respectively, by a strong earthquake and tsunami in 2011 and serious floods in 2012. First, we find that disaster exposure makes individuals more present-biased and less risk-averse regardless of distinctive differences in socio-economic conditions and disaster types. Second, the impact lasted for 6 years in both areas, suggesting persistency of the effect. Third, our results are consistent with emotional channels but not necessarily with a potential market friction in the form of binding liquidity constraints. Our findings suggest that the existing mixed empirical evidence can be attributed to the lack of an integrated and consistent framework as well as accurate data on disaster damages, rather than variations in literacy or education levels of experimental subjects.

Paper 4

Laurence Baker (Stanford University) and Karine Lamiraud

The Impact of DRG Payment on the Diffusion of Medical Innovation / CT Scanners

Abstract:

Very little research has examined whether DRG-based systems are associated with changes in technology adoption. We focus on the relationship between the switch to DRG financing and the adoption of computed tomography (CT) scanners in Switzerland. The Swiss health care system offers an interesting setting for our study as DRG-based financing for hospitals was implemented progressively across Switzerland between 2002 and 2012, the date when all remaining hospitals had to switch. We built a unique longitudinal dataset at the hospital-year level over the 21-year 1998-2018, incorporating hospital administrative information, the date each hospital switched to DRG financing, and the number of CT devices in operation. We conducted two main analyses. First, we estimated a difference-in-difference model to compare changes in CT availability before and after the adoption of DRG financing, using the hospitals that switched to DRG in 2012 as a comparison group. In the second, we compared trends on adoption of CT for the late DRG hospitals before and after 2012. In all analyses, we found a clear association between the switch to DRG financing and a slowdown in the rate of CT adoption. We believe this information will be valuable to understanding the effects that adoption of DRGs has had in many countries, and inform ongoing discussions about further implementation.

Paper 5

Ya-Ming Liu and **Chon-Kit Ao** (National Cheng Kung University)

The Effect of Air Pollution on Health Care Expenditure

Abstract:

Recent reports show that at least 95% of the world's population is breathing polluted air. However, the cost impact of air quality on air pollution-related medical expenditures and utilization is sparse. This paper estimates the health care cost effects of air pollution using a meteorological phenomenon—thermal inversion—as instrumental variables for air quality. Using information of outpatient care for respiratory diseases from the universal health insurance claim data in Taiwan during 2006–2012, we find that a one-unit reduction in air quality index leads to NT$ 474.25 million (nearly US$ 15.6 million) savings in respiratory-related outpatient expenditure, which represents 7.5% of the annual air pollution control fee levied by the government. We also find a reduction of 0.686 million outpatient visits for respiratory diseases.

Paper 6

Ginger Jin, **Hsienming Lien** (National Chengchi University), Xuezhen Tao

Balance Billing and Health Care Cost: Evidence from Cardiac Stents

Abstract:

Taiwan's National Health Insurance (NHI) has adopted balance billing for cardiac stents since 2007: NHI covers the full cost of baseline treatment (bare-medal stents); but if a patient prefers more expensive treatments (drug-eluting stents), she must pay for the incremental cost out of pocket. Such "top-up" coverage has been advocated as a good model to provide essential care for the mass population and keep the cost of health care under control (Einav, Finkelstein and Williams, 2016 AEJ Policy). To further reduce health spending, NHI down-adjusted the reimbursement rate of bare-medal stents (to hospitals) in 2009. We study how hospitals respond to the price change and how they affect the actual payment from NHI and patients. Based on individual patient records and hospital-reported stent prices (2007-2010), we find no evidence of hospitals increasing the number of stent patients. However, hospitals respond to the rate cuts by increasing the number of stents used per procedure, which implies the moral hazard problem for hospitals to overuse the free option. We further estimate the scale of hospitals' adjustment and its impact on hospital revenue and total healthcare claim. While the moral hazard problem partly offset the reimbursement cut, we find the policy effective in reducing the claim amount.

Paper 7

Dajung Jun (University of Melbourne)

The Effects of the Dependent Health Insurance Coverage Mandates on Fathers' Job Mobility and Compensation

Abstract:

Due to the low rates of health insurance coverage among young adults, some state governments began mandating health insurance companies to allow adult children to stay on their parents' health insurance plans. First implemented in 1995, these mandates aimed to increase health coverage among young adults. In 2010, the federal government enacted a more comprehensive version of the dependent coverage mandate as part of the Affordable Care Act. These state- and federal-level efforts successfully increased insurance rates for young adults, but they might have also come with unintended consequences for parents. Parents who placed a high value on health insurance for their young adult children might be reluctant to leave jobs with employer-provided health insurance, and employers might offset the mandated-incurred health care costs by reducing other types of employee benefits or earnings. To assess the extent of such consequences, I study the effects of both the state- and federal-dependent health insurance mandates on fathers. By analyzing the 2004 and 2008 Survey of Income and Program Participation panels, which are linked with the Detailed Earnings Records and the Business Registrar data from the United States Census, I examine the mandates' effects on fathers' voluntary job separation rates (job-lock and job-push) and changes in their compensation. After the implementation of the mandates, I observe a significant decrease in the likelihood of voluntary job separation among eligible working fathers aged 45–64 with employer-provided health insurance. Additionally for these fathers, except for those who separated from these jobs within the current wave, my analysis slightly evidences that the mandates reduced the total monetary compensation.

Paper 8

Toshiaki Iizuka (University of Tokyo), Katsuhiko Nishiyama, Brian Chen, and Karen Eggleston

False Alarm? Estimating the Value of Health Signals

Abstract:

We investigate the value of information in the context of health signals that people receive after checkups. Although underlying health status is similar for individuals just below and above a clinical threshold, treatments differ according to the checkup signals they receive. For the general population, whereas health warnings about diabetes increase healthcare utilization, health outcomes do not improve. However, among high-risk individuals, outcomes do improve, and improved health is worth its cost. These results indicate that the value of health information depends on setting appropriate thresholds for health warnings and targeting follow-up medical care on individuals most likely to benefit.

Paper 9

Xiaoyan Lei (Peking University), Xuejuan Su, and Guangxiang Song

Information, Belief, and Health Behavior: Evidence from China

Abstract:

Individuals with imperfect information may make suboptimal choices, so giving them more information can lead to improved decision making. We build a Bayesian updating model to illustrate this phenomenon and use a unique Chinese survey that provides data on information shock, belief updating and corresponding behaviors to test it. We find that when individuals receive new information regarding their hypertension status, behavioral changes, such as quitting smoking and taking medication, are more likely if the new information leads to updated belief. On the other hand, there are no behavioral changes if individuals maintain their old belief despite the new information. Furthermore, we find heterogeneous effects across subgroups of individuals: Females and rural people are more likely to update their belief than their male and urban counterparts; the impact on quitting smoking is larger for males and rural people; the impact on taking medication is larger for female and urban people. We find no significant impacts on drinking.

Paper P1

Toshiaki Aizawa (University of York)

Reviewing the Existing Evidence of the Conditional Cash Transfer in India through the Partial Identification Approach

Abstract:

This paper re-estimates the causal impacts of a conditional cash transfer programme in India, the Janani Suraksha Yojana (JSY), on maternal and child healthcare use. The main goal is to provide new evidence and assess the validity of the identification assumptions employed in previous studies on the JSY, through the conservative partial identification approach. We find that the average treatment effects estimated under the conditional independence assumption lie outside the bound of the treatment effect estimated under weaker but more credible assumptions, thereby suggesting that the selection bias could not have been fully controlled for by the observable characteristics and that the average treatment effects estimated in the previous studies may have been over- or under-estimated.

Paper P2

Thomas Buchmueller, **Terence C. Cheng** (University of Adelaide), Ngoc T.A. Pham, and Kevin E. Staub

Income-Based Mandates on the Demand for Private Hospital Insurance and its Dynamics

Abstract:

We examine the effect of an income-based mandate on the demand for private hospital insurance and its dynamics in Australia. The mandate, known as the Medicare Levy Surcharge (MLS), is a levy on taxable income that applies to high income individuals who choose not to buy private hospital insurance. Our identification strategy exploits changes in MLS liability arising from both year-to-year income fluctuations, and a reform where income thresholds were increased significantly. Using data from the Household, Income and Labour Dynamics in Australia longitudinal survey, we estimate dynamic panel data models that account for persistence in the decision to purchase insurance stemming from unobserved heterogeneity and state dependence. Our results indicate that being subject to the MLS penalty in a given year increases the probability of purchasing private hospital insurance by between 2 to 4 percent in that year. If subject to the penalty permanently, this probability grows further over the following years, reaching 13 percent after a decade. We also find evidence of a marked asymmetric effect of the MLS, where the effect of the penalty is about twice as large for individuals becoming liable compared with those going from being liable to not being liable. Our results further show that the mandate has a larger effect on individuals who are younger and are in better health.

Paper P3

Ali Shajarizadeh and **Karen A. Grépin** (Wilfrid Laurier University / University of Hong Kong)

The Impact of Institutional Delivery on Infant and Maternal Health Outcomes: Evidence from a Road Construction Program in India

Abstract:

High rates of infant and maternal mortality in low and middle-income countries have been associated with persistently high rates of home births. As a result, many countries have introduced policies to encourage women to deliver in health facilities. However, it is unclear if these programs lead to reductions in mortality in contexts where the quality of care provided in health facilities is low. This paper investigates the effect of institutional delivery on infant mortality and maternal postpartum complications in rural India between 2010-2015. To address potential selection bias resulting from higher-risk women being more likely to deliver in a health facility, we exploit a large-scale road upgrade program that quasi-randomly upgraded roads to villages across India, likely reducing the cost of travelling to a health facility. During our study period, 172,000 km of roads, connecting 58,000 villages to the nearest town, were paved over the study time period providing plausibly exogenous variation across towns in terms of the timing of road upgrading, which we then use as an instrument for institutional delivery on rates of infant mortality and postpartum complications. We find that moving from an unconnected village to a connected village increases the probability of institutional delivery by 13 percentage points, with deliveries in public hospitals most affected and women with lower levels of education and from poorer households were also more likely to be affected by the road upgrade program. We find no evidence, however, that the increase in institutional delivery rates led to reduced rates of infant mortality or postpartum complications, regardless of whether the delivery occurred in a public or private facility. Policies that encourage institutional delivery should thus be complimented with policies to improve quality of care in order to reduce rates of infant and newborn mortality in low and middle-income countries.

Paper P4

Timothy J. Halliday (University of Hawaii, Mānoa), Randall Q. Akee, Tetine Sentell, Megan Inada, and Jill Miyamura

The Impact of Medicaid on Medical Utilization in a Vulnerable Population: Evidence from COFA Migrants

Abstract:

In March 2015, the State of Hawaii stopped covering the majority of migrants from countries belonging to the Compact of Free Association (COFA) in its Medicaid program. COFA migrants were required to obtain private insurance in the exchanges established under the Affordable Care Act. Using statewide hospital discharge data, we show that Medicaid-funded hospitalizations and emergency room visits declined in this population by 31% and 19%. Utilization funded by private insurance did increase, but not enough to offset the declines in Medicaid-funded utilization. Finally, the expiration of benefits increased uninsured ER visits.

Paper P5

Yuanyuan Ma and **Zhiyong Huang** (Southwestern University of Finance and Economics)

Newly Diagnosed with a Chronic Illness? To Treat or to Live with it? A Lesson from Chinese Middle-Aged and Older Adults

Abstract:

In this paper, we investigate when facing negative health events, how the elderly react in subsequent short- and medium-terms. In particular, we examine the trajectory of health and healthcare utilization, immediately and two years after diagnosis of a wide range of chronic illnesses, of middle-aged and older Chinese who are over 45 years old. Using a longitudinal survey, we are able to control the pre-treatment difference between individuals who are affected by shocks and who are not. By an inverse-probability-weighted regression adjustment combined with a difference-in-difference (IPWRA-DD) design, we evaluate the treatment effect of health shock on health and healthcare utilization. We find that the short-term treatment effects are rather strong. Immediately after shocks, people experienced deterioration of overall health, more limitations and higher utilization of both inpatient and outpatient healthcare services. However, except for effects on IADL, most of these effects contracted two years after health shocks. Self-reported health, healthcare facility visits and expenditure returned to the average level in medium-term.

Paper P6

Ming-Jen Lin and **Hsiu-Han Shih** (Tunghai University)

The Impact of Air Pollution on Infant Health in Taiwan

Abstract:

This paper investigates the health effects of air pollution during pregnancy on newborn babies in Taiwan. Using the birth data and data on atmospheric condition in Taiwan, we examine the effects of in utero health conditions through instrumental-variable (IV) method to address potential endogeneity problems. We use variation in temperature, humidity, and rainfall to instrument for in utero exposure to air pollution. We find that the increase in exposure to PM10 during pregnancy resulted in prematurity, low birth weight, and being born in bad health. Moreover, exposure to SO2 and NO2 during pregnancy led to prematurity and low birth weight for those born between 37 and 44 weeks of gestation. Our results suggest that air pollution has negative health effects on newborn babies.

Paper P7

Guojun He and **Takanao Tanaka** (Hong Kong University of Science and Technology)

Energy Saving Can Kill: Evidence from the Fukushima Nuclear Accident

Abstract:

Following the Fukushima nuclear accident, Japan gradually shut down all its nuclear power plants, causing a country-wide power shortage. In response, the government launched large-scale campaigns that aimed to reduce summer electricity consumption by as much as 15% in some regions. Because electricity use plays a key role in mitigating climate impacts, such policies could potentially damage the population's health. Exploiting the different electricity-saving targets set by different regions, we show that the reduction in electricity consumption indeed increased heat-related mortality, particularly during extremely hot days. This unintended consequence suggests that there exists a trade-off between climate adaptation and energy saving.

Paper P8

Giovanni van Empel (Gadjah Mada University), Hugh Gravelle, and Rita Santos

Canaries in a Coal Mine: Does Quality Affect Choice of General Practice by Patients Changing Practice without Changing their Address?

Abstract:

Competition for patients by general practices can improve their quality only if quality affects patients' choices of practice. Each year 9% of English patients change practice. Most do so when moving from one area to another. But around 1% of patients leave their current practice and join another local practice without changing their address. These patients are likely to be better informed about local practices than those who are new to the area. If their decisions about leaving or joining local practices are not affected by quality it is unlikely that overall demand for a practice will be affected by its quality. We examine how the numbers of patients who join and leave practices without changing their address are affected by practice quality and other practice characteristics such as the number and type of general practitioners. We use a 2006/7 to 2010/11 panel of data on 6766 English general practices and estimate practice level count data models with practice fixed effects. We find that the number of patients leaving a practice without changing their address falls when its clinical quality improves and the proportion of patients satisfied with access increases. Numbers leaving also fall if the practice increases the number of doctors per patient and the proportion of doctors who qualified in the UK. The number of patients joining without changing their address increases when clinical quality, the proportion of patients satisfied with access, and the number of doctors per patient increase. A 10% increase in the proportion of patients reporting they are satisfied with practice opening hours is associated with a 5.75% reduction in numbers leaving and a 2.9% increase in the numbers joining without change of address.

Paper P9

Anwen Zhang (University of Glasgow)

Peer Effects on Mental Health: Evidence from Random Assignment into Classrooms

Abstract:

Adolescent mental health has wide-ranging and long-lasting socio-economic consequences. Existing evidence based on observational data of friendship networks points to a positive correlation between an individual's mental health and her peers', but concerns remain whether this link is causal. I study whether there exist peers effects on mental health in the classroom, by exploiting variations in peer composition generated by assignment rules in junior secondary schools in China, where students are randomly or evenly grouped into classrooms. In general I find no evidence of overall peer effects, and weak evidence of context-specific peer effects when taking into account heterogeneity and nonlinearity. From a policy perspective, the general weakness of peer effects suggests that group-based interventions at the classroom level probably would not generate large positive externality.

Paper 10

Masaki Takahashi (Hitotsubashi University)

The Behavioral Effects of Insurance Coverage and Health Consequences: Evidence from Long-Term Care

Abstract:

How does the generosity of social insurance coverage affect the demand for healthcare and health outcomes for the elderly? This paper examines the effect of insurance coverage on long-term care utilization and its health consequences using novel administrative data on public long-term care insurance (LTCI) system in Japan. The generosity of LTCI coverage is determined by a standardized health index and there exist multiple thresholds that generate discontinuous changes in insurance coverage. Using a regression discontinuity design, I find that an expansion of insurance coverage significantly increases recipients' long-term care utilization even without changing the prices they face. I also find that utilizing more long-term care has little effect on health outcomes. Together, these results suggest that generous LTCI coverage could induce excessive utilization mainly due to behavioral biases without having health benefits.

Paper 11

Manasvini Singh (Emory University)

What Passed is Past? The Role of Recent Adverse Events in Physician Treatment Decisions

Abstract:

In many areas of medical care, physician treatment decisions are made under substantial uncertainty. In the context of obstetrics, this uncertainty may predispose physicians to use decisionmaking heuristics when choosing between a cesarean or a vaginal mode of delivery. In this study, I examine whether obstetricians overreact to a prior patient's adverse obstetric events when making subsequent delivery-mode choices, and if so, its effect on patient welfare. Using electronic health record data from a large academic hospital, I find that experiencing adverse obstetric events in one delivery-mode makes the physician more likely to switch to the other (and likely inappropriate) delivery-mode on the next patient, regardless of patient indication. Physician switching after adverse events is also associated with increased resource use by the physician and worse patient outcomes. I formally test and reject the hypothesis that observed physician behavior is consistent with Bayesian updating, and conclude that it is likely an overreaction to salient, negative events. These results highlight a source of cognitive bias in clinical settings, which may inform future efforts to improve physician decision-making through increased awareness or policy interventions.

Paper 12

Harold Glenn Valera, **Takashi Yamano** (Asian Development Bank), Ranjitha Puskur, Muhammad Ashraful Habib, Maria Luisa G. Valera, Donald Villanueva, and M.D. Khairul Bashar

The Impact of Micronutrient Training on High-Zinc Rice Demand among Mothers: A Randomized Control Trial Study in Bangladesh

Abstract:

Zinc deficiency in children leads to stunting that affects 41% of children below 5 years of age in Bangladesh. To address the issue, zinc-enhanced rice varieties have been developed and disseminated since 2013 in Bangladesh, although the diffusion remains limited. To measure the impact of a micronutrient training among female farmers who have young children on the demand for zinc-enhanced varieties, we conducted a randomized control trial by providing micronutrient training in randomly selected villages. After the intervention, we employed the Becker-DeGroot-Marschak auction method to measure the demand for zinc-enhanced rice. We found that more than 70% of the trained female farmers participated in the bidding process, while only 23% of the untrained female farmers did. After controlling for the bidding participation, we found that the trained female farmers bid for a higher price than untrained female farmers. Female farmers who self-claimed to be actively involved in decision making participated more in the bidding and bid a higher price than other female farmers. The results suggest the effectiveness of the micronutrient training, at least in a short period immediately after the training. The long-term effectiveness of the training, however, remains to be examined.

Paper 13

Anaka Aiyar and **Naveen Sunder** (Harvard University)

Health Insurance and Infant Mortality: Evidence from India

Abstract:

In this paper, we estimate the causal impact of health insurance in reducing child mortality using exogeneous variation provided by the random rollout of a national-level at-scale public health insurance (RSBY) programme from India. Our data comes from two novel sources that have not been explored in the literature– 1. A unique administrative dataset that provides district level information on the programme's rollout, 2. The National Family Health Survey of 2015-16 which captures birth information and health service usage of around 300,000 children across the country. Using a difference in differences approach, we compare child mortality outcomes between cohorts who received the programme and those who did not, both within and across districts between 2010 and 2015. We find robust evidence that RSBY exposure reduces infant mortality by 1.8 per 1000 births and under-2 mortality rates by 3.4 per 1000 births. This translates into a mortality decline of 5 to 10 percent, thus saving close to 145,000 children annually. We also see that families in the lowest income quintile, girl children and children of higher birth parity experience the largest reductions in mortality rates. This finding is crucial for policy makers in countries like India where child deaths commonly happen when income constraints force poor households to either forgo access to child health care or trade-off health among their children. We show that access to RSBY also increases health investments in ante-natal and post-natal care for mothers. Hospital births and immunization rates of children increase in districts covered by RSBY. These, we propose, are the mechanisms that improve a child's health both in-utero and post birth and explain the reductions in mortality. Overall, our paper shows that health insurance, when implemented at-scale, leads to significant reductions in child mortality even in resource poor contexts like India.