

Health and Skills Formation

Supported by a Newton-Fund Award

4 December 2015 – Large Seminar room, SSRC Building (ISER)

The University of Essex, Wivenhoe Park, Colchester, CO4 3SQ, T 01206 872957

Chair: Tim Hatton (Essex)

9.30-10.30

Eric Schneider (LSE)

Fetal Health Stagnation: Have health conditions in Utero improved in the US and Western and Northern Europe over the past 150 Years?

Discussant- Samantha Rawlings (Reading)

10.30-10.45

coffee

Chair: Giovanni Mastrobuoni (Essex)

10.45-11.45

Sonia Bhalotra (Essex)

Maternal depression and child development: evidence from a randomized control trial

Discussant- Alison Andrews (IFS London)

11.45-12.45

Sarah Cattan (IFS London)

Estimating the production function for human capital: Results from a randomized controlled trial in Colombia

Discussant-Sofia Amaral (Birmingham)

12.45-1.45

lunch + coffee

Chair: Ben Etheridge (Essex)

1.45-2.45

Pietro Biroli (Zurich)

Health and skill formation in early childhood

Discussant-Matthias Matthias Parey (Essex)

2.45-3.45

James Fenske (Oxford)

Dust exposure and infant mortality in West Africa

Discussant: Paul Fisher (Essex)

3.45-4.15

coffee

Chair: Birgitta Rabe (Essex)

4.15-5.15

Alessandro Tarozzi (Pompeu Fabra)

Child nutritional status and inter-generational transmission of health: Evidence from Indian migrants in England

Discussant: Zabra Siddique (Reading)

5.15-6.15

Liang Bai (Edinburgh)

Self-control and chronic illness: Evidence from a field experiment

Discussant: Patrick J Nolen (Essex)

6.30 Dinner at Wivenhoe House Hotel

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List of Participants

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Abstracts

(1) Fetal health stagnation: have health conditions in utero improved in the US and Western and Northern Europe over the past 150 years?

By **Eric Schneider**

Many empirical studies have shown that health conditions in utero can have long lasting consequences for health across the life course. However, despite this evidence, there is no clear consensus about how fetal health has changed in the very long run. This paper analyses historical birth weights and perinatal mortality rates to construct a coherent picture of how health conditions in utero have changed in the western world over the past 150 years. In short, the evidence suggests that fetal health has been relatively stagnant. Birth weights had already reached their current levels in North America and Northern and Western Europe by the late nineteenth century, and they have changed very little in between. Perinatal mortality rates have fallen dramatically since the late 1930s, but this decline was mainly caused by improvements in intrapartum treatments after the introduction of Sulfa drugs and antibiotics. Thus, the health benefits associated with the perinatal mortality decline were concentrated among those at risk and did not influence the population at large. Finding stagnant fetal health during a period when many other indicators of health improved dramatically is provocative and suggests two conclusions: either fetal health did not improve or the indicators used to measure fetal health, indicators still widely used today, may not accurately capture all aspects of health in utero. If fetal health has been stagnant, then better conditions in utero cannot explain cohort improvements in life expectancy over the twentieth century. If the indicators of fetal health are problematic, then researchers must move beyond birth weight and perinatal mortality to understand how developmental plasticity based on the prenatal environment influences later life health.

(2) Does maternal depression hamper child development? Evidence from a randomized control trial

By **Victoria Baranov, Sonia Bhalotra, Joanna Maselko**

We evaluate the impacts of maternal depression on children's skill accumulation, exploiting randomized variation in depression created by a cluster-randomized control trial that provided cognitive behavioural therapy to women in rural Pakistan who were diagnosed as depressed in pregnancy. We conducted a follow-up study when the children were age 7 and assessed their cognitive, socio-emotional and physical development, parental investments in children, indicators of the quality of parenting, and of the home environment. The intervention was successful in reducing maternal depression and this effect was sustained. We also find that treated mothers exhibit better parenting behaviours, provide a better home environment and invest more in their children's education. We nevertheless find, on average, no detectible effects on children's cognitive, socio-emotional or physical development at age 7. We show that this is not because of differential attrition, differential shocks to treated vs control clusters or low power. With the odd exception, we find no evidence that the average results conceal large effects in relevant sub-samples, or in a segment of the distribution of outcomes. Since we find reinforcing parental investments in many domains in the treated group, it is also unlikely that the results are explained by unobserved compensating investments in the control group. We conclude that there are possibly positive but latent effects of the intervention that may be detectible in later life.

(3) Estimating the production function for human capital: results from a randomized controlled trial in Colombia

By Orazio Attanasio, Sarah Cattan, Emla Fitzsimons, Costas Meghir and Marta Rubio Codina

We examine the channels through which a randomized early childhood intervention in Colombia led to significant gains in cognitive and socio-emotional skills among a sample of disadvantaged children. We estimate production functions for cognitive and socio-emotional skills as a function of maternal skills and child's past skills, as well as material and time investments that are treated as endogenous. The effects of the program can be fully explained by increases in parental investments, which have strong effects on outcomes and are complementary to both maternal skills and child's past skills.

(4) Health and skill formation in early childhood

By Pietro Bifulco

This paper analyzes the developmental origins and the evolution of health, cognitive, and noncognitive skills during early childhood, from age 0 to 5. We explicitly model the dynamic interactions of health with the child's behaviour and cognitive skills, as well as the role of parental investment. A dynamic factor model corrects for the presence of measurement error in the proxy for the latent traits. Using data from the Avon Longitudinal Study of Parents and Children (ALSPAC), we find that children's capabilities strongly interact and build on each other: health is an important determinant of early noncognitive development; in turn noncognitive skills have a positive impact on the evolution of both health and cognitive functions; on the other side, the effect of cognitive abilities on health is negligible. Furthermore, all facets of human capital display a high degree of persistence. Finally, mother's investments are an important determinant of the child's health, cognitive, and noncognitive development early in life.

(5) Dust pollution in West Africa increases infant mortality.

By James Fenske

Employing differences in differences, we make three contributions. First, using data from several poor countries, we highlight the vulnerability of people with few resources, fragile health, and limited capacity to adopt avoidance behavior. Second, we examine prenatal and post-natal parental responses, and show evidence consistent with either compensating parental investments or greater availability of such investments. Despite these efforts, the health of surviving children is adversely affected. Third, we find declining effects over time, suggesting that societies are adapting. We find suggestive evidence that economic growth has contributed to this adaptation.

(6) Child nutritional status and inter-generational transmission of health: evidence from Indian migrants in England

by Caterina Alacevich and Alessandro Tarozzi

A large literature has documented the widespread prevalence of small stature among Indian children as well as adults. We show that the height gap also exists, although substantially reduced, among adult immigrants of Indian ethnicity in England, while it virtually disappears among their young children. We interpret the results in the context of the literature on the inter-generational transmission of health and on the health selection of immigrants.

(7) Self-control and chronic illness: Evidence from a field experiment

By **Liang Bai, Benjamin Handel, Edward Miguel and Gautam Rao**

We construct a simple model of preventive health behavior under present-biased time preferences, and show how beliefs about future time preferences (sophistication, partial naivete, and perfect naivete) affect how agents are predicted to use, under-use or misuse different types of commitment contracts. We propose a type of commitment contract that has the potential to benefit not just sophisticated agents, but also naifs. We conduct a field experiment in northern India, to evaluate the effectiveness of these contracts at increasing the share of patients who actively manage their hypertension by visiting a doctor regularly.