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FOR DEMOGRAPHY AND GLOBAL HUMAN CAPITAL

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WIC Online Colloquium

Constructing a subnational database of fertility in low- and middle-income countries to study the impacts of climate change

29th March, 2023
14:00 – 15:00 (CEST)

Côme Cheritel
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Abstract: Climate change may directly or indirectly affect reproductive health and fertility. The few existing studies on the impact of climate variability or extreme climatic events on fertility present inconsistent findings with negative climatic conditions leading to an increase in fertility on the one hand, and fertility decline on the other. To date, there are no comprehensive cross-national empirical studies on the impacts of global warming on. To perform such analysis, harmonised data for a large number of countries are required. In particular, data with a temporal and spatial granularity allowing matching of local climatic conditions with the outcome of interest i.e., fertility, are needed. Such data, however, are not yet readily available given a lack of data structure that is suitable (or easily adaptable) to deal with this problem. While the census data can be used to derive fertility statistics, the data are collected over a rather large time interval – often every 10 years – making it impossible to detect the effects of climate change on fertility behavior in a robust manner. Likewise, fertility statistics are mainly available on a national scale, which masks regional heterogeneities that are of relevance to capturing the local climate change impacts. In order to address this issue, we produce a database of age-specific fertility rate at the subnational level on a monthly, quarterly and annual basis. To do so, we use Demographic and Health Surveys (DHS) available for ~90 low- and middle-income countries. Since the DHS provide individual records of births, we are able to exploit this information to estimate sub-national level fertility statistics over a long period of time with a high temporal frequency. In addition, the compilation of several DHS surveys for a particular country help reduce uncertainties in the estimation of fertility statistics.

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About the presenter:
Côme Cheritel is a PhD student in Economics at Paris School of Economics under the supervision of Katheline Schubert and Raya Muttarak. He is also a visiting researcher at IIASA in the Migration and Sustainable Development research group of the Population and Just Societies department. With an academic background in engineering, physics and economics, Côme is interested in the links between climate change, population dynamics and the economy. Thus, he studies the links between uncertainty and optimal decarbonisation strategies, the impact of population structure and ageing on future greenhouse gas emissions, and finally the impact of global warming on fertility in developing countries.

The Wittgenstein Centre is a collaboration among the Austrian Academy of Sciences (OeAW), the International Institute for Applied Systems Analysis (IIASA) and the University of Vienna.

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