Fertility and Changes in Household Wealth in the Tanzanian Lake Region

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Introduction

Effects of changing fertility on household wealth are studied for 807 women from 54 villages in the Tanzania Lake region (Kagera, Mwanza and Mara). Data were collected using a panel design with interviews in 2004 and 2010. Dependent variable is the change in household wealth over this period. Main independent variables are number and age of children in 2004 and number of births between 2004 and 2010. Control factors at the household level are major shocks between 2004 and 2010, socio-economic and demographic factors, and changes therein. Major context factors are indicators for the quality and availability of (reproductive) health facilities, level of development, urbanization and cultural factors. Data are analyzed using multilevel regression models, including explanatory variables at the household, village and district level. Interaction analyses are performed to find out to what extent the effects of fertility on household wealth depend on the circumstances in which the household lives.

Reproductive health facilities and behavioural factors may impact household wealth in various ways. For example, through family planning, women can avert premature (unwanted) pregnancy and childbirth, which often limits educational development (Desai, 1999). Family planning also enables families to control their family size, which facilitates their potential to make savings and investments (Montgomery & Lloyd, 1999). Investments in safe motherhood enhances the health status of women and enables them to remain involved in productive activities. Effective family planning services may further stimulate economic growth by pushing the region into the demographic window of opportunity, with a larger size of the economically active population compared to the size of the dependent population, and hence economic growth can be maximal if adequate reproductive health measures are taken (Bloom, 2007).

Although the link between reproductive health and poverty seems obvious, the impact and mechanisms of how different types of interventions could affect poverty are hardly understood. (Singh et al, 2003). With this paper we hope to contribute further to this understanding.

Data

The data we use for this study come from a household survey conducted in the summer of 2010 in the Lake region of Tanzania (Kagera, Mwanza and Mara). This survey was a follow up of an

earlier household survey conducted in 2004. For 807 women living in 54 communities in the three regions, data for two points in time were obtained. The two surveys constitute a rich source of panel data on a wide range of topics, like family composition, education and work of all household members older than 5 years, possession of assets, major events influencing household well-being, birth histories, pregnancies, knowledge and use of contraceptives, general health and changes therein, fertility preferences. Besides the household surveys, in 2010 also community questionnaires were conducted in each of the villages, adding valuable information regarding the economic situation, health and educational facilities and changes therein over the past 6 years. The data for 2010 are available for over 800 women living in 54 communities in the three regions (Kagera, Mwanza and Mara).

Household wealth is measured on the basis of assets of the household, like having a TV, radio, bike, fridge, phone, car, or electricity, water supply and sanitation, housing characteristics, like material of walls, roof and floor, number of rooms, and possession of agricultural land and cattle. Dependent variable is the change in household wealth over the period 2004 to 2010. Major independent variables at the household level are number and age of children in 2004, number of births between 2004 and 2010, health of household members including changes therein, problems experienced during pregnancy and child birth, (other) major shocks between 2004 and 2010, socio-economic factors (education, occupation) and changes therein. Major context factors are indicators for the quality and availability of (reproductive) health facilities, level of development, urbanization and cultural factors.

Methods

The effect of individual and context characteristics on household wealth are studied using bivariate and multivariate logistic regression analysis. Because we use explanatory variables at three levels of aggregation (individual, community, region), we apply multilevel versions of the logistic regression models. With multilevel analysis it is possible to include explanatory variables at different levels simultaneously and to study interactions among levels (Hox, 2002). Models are estimated in MlwiN 2.18 using MCMC estimation.

To determine how the effect of fertility on household wealth differs depending the circumstances in which a household lives, we include (cross-level) interactions in our models.

Literature

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