

Effects of Family-Support/Work and Family Reconciliation Policies on Changes in the Fertility: Analysis by a Macroeconomic Model

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This paper represents a simulation analysis based on a macroeconomic model (simultaneous equations model) that uses macro time-series data. The purpose of the analysis is to analyze effects of fertility related policies (family-support policies and work and family reconciliation policies) on changes in the fertility. More specifically, using the fixed number of children being accepted at childcare centers (per 100 of the population of zero to four-year-old children) and working hours (monthly per-capita working hours for male and female ordinary workers combined) as policy variables, the analysis evaluates the impact of fertility related policies on the fertility by operationally controlling these variables. The fixed number of children being accepted at childcare centers is used as a proxy variable to represent family-support policies, while working hours are used as a proxy variable to quantitatively represent work and family reconciliation policies. In addition, the analysis examines an impact of economic growth on the fertility. Specifically, the analysis evaluates an impact of economic growth on the fertility by operationally controlling capital stock that influences gross domestic product (GDP).

The simulation analysis suggests the following possibilities: (1) an increase in the fixed number of children being accepted at childcare centers, a shortening of working hours and a higher rate of economic growth each have the effect of raising the fertility to a certain extent; and (2) when an increase in the fixed number of children being accepted at childcare centers and a shortening of working hours occur concurrently, they raise the fertility to a higher level than when each policy variable changes independently. Thus, the results of the analysis suggest that fertility related policies would be effective in raising the fertility if both family-support policies and work and family reconciliation policies are implemented concurrently. However, even when the fixed number of children being accepted at childcare centers, working hours and capital stock are concurrently changed at an annual rate of 2%, the total fertility rate (TFR) will have risen only to 1.596 in 2020, falling short of reaching the fertility of 2.07 at the population replacement level. This suggests that the improvement of the childcare environment and shorter working hours would not constitute adequate fertility related policies and they need to be implemented comprehensively, including more numerous policy measures.