

CARE WORK AND THE ECONOMY

Advancing policy solutions with gender-aware macroeconomic models

POLICY BRIEF | 20 – 02

ENDOGENOUS GROWTH, POPULATION DYNAMICS, AND RETURNS TO SCALE: LONG-RUN MACROECONOMICS WHEN DEMOGRAPHY MATTERS

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POLICY HIGHLIGHTS

Returns to scale in the model may be decreasing (meaning that output per unit input declines as the level of output increases), constant, or increasing (meaning that output per unit input increases as the level of output increases).

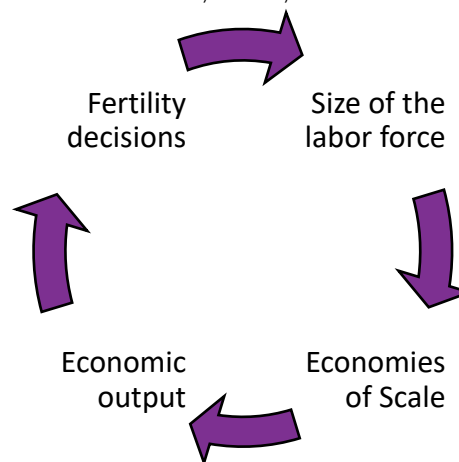
Decreasing Returns to Scale:

- Lower-income economies which feature *decreasing returns to scale* may be trapped in a situation in which higher fertility rates and low per capita income are mutually reinforcing.
- External intervention, such as additional investment in education and training, is necessary to escape this “high fertility trap.”

Increasing Returns to Scale:

- Higher-income economies featuring *increasing returns to scale* eventually experience negative population growth as a response to rising costs of raising children.
- Below-replacement fertility rates can create increased demand for care services and pressures on social security as well as higher health expenditures.
- Reducing the expected burden of raising children through actions like subsidizing childcare costs could alter the population dynamics. Or, reducing barriers to adult immigration could offer an alternative solution.

Demographics and returns to scale (decreasing, constant, or increasing) matter when modeling long-run economic growth. Research demonstrates that family size decisions respond to economic conditions and the resulting fertility outcomes collectively drive population growth (or shrinkage). Yet long-run economic growth models tend to take population growth as either given or irrelevant. Such models also typically assume constant returns to scale, although it is well known that production characteristics vary widely.



The model proposed in this paper considers ways that social institutions, structural features of the economy, and macroeconomic outcomes can influence fertility decisions and so economic growth. A more realistic treatment of demographic dynamics leads to a more realistic picture of macroeconomic trajectories, with important policy implications.

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CWE-GAM Working Paper 19-01: [Endogenous Growth, Population Dynamics, and Returns to Scale: Long-Run Macroeconomics When Demography Matters](#)