Genetic Endowments, Income Dynamics, and Wealth Accumulation Over the Lifecycle

Author:Daniel Barth, Nicholas W. Papageorge, Kevin Thom, Mateo Velásquez-Giraldo

Date:2022-08-01

Keyword:NA

Url:[click here](https://www.nber.org/papers/w30350)

Attachment:[click here](https://www.nber.org/system/files/working_papers/w30350/w30350.pdf)

From:NEBR-working\_paper

We develop and estimate a life-cycle consumption savings model in which observed genetic variation is allowed to affect wealth accumulation through several distinct channels. We focus on genetic markers that predict educational attainment, aggregated into a predictive index called a polygenic score. Based on substantial descriptive evidence, we allow variation in these endowments to affect earnings, the disutility of labor, stock market participation costs, and idiosyncratic rates of return on risky investments. The model also incorporates endogenous retirement and a realistic social security system. Parameter estimates suggest that, in addition to earnings, genetic differences are significantly associated with risky asset returns, both of which contribute to wealth inequality. Counterfactual policy exercises indicate that two ways to lower costs of an aging population (extending the age of retirement or cutting social security benefits) have similar magnitudes and distributions of welfare costs even though the latter policy appears to reduce wealth differences between agents with different genetic endowments. This illustrates the importance of welfare calculations when evaluating how genes interact with policy, which is possible to do if we incorporate genetic data into structural models.