



# Seminario de Microeconomía Aplicada - A Neoclassical Theory of Population

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**Abstract:** We show that a suitable extension of the neoclassical growth model to include endogenous fertility can account for four robust patterns in international data: (i) population size is strongly positively correlated with effective land; (ii) per capita income is largely uncorrelated with effective land; (iii) the land share of income declines with per capita income; and (iv) per capita income is positively correlated with labor-augmenting productivity. Our theory features a fixed land endowment, a production function combining capital, labor, and land---with technological change specific to each factor---and a Barro-Becker model of fertility with both time and goods costs of raising children. The model delivers a steady-state dichotomy: land and land-augmenting productivity determine the long-run level of population, while labor-augmenting productivity governs long-run income per capita. We construct cross-country measures of effective land and factor-specific productivities and find strong empirical support for the model's core predictions. The framework also generates non-monotonic transitional dynamics: technological breakthroughs, such as industrial revolutions, induce population surges above long-run levels followed by sustained declines, broadly consistent with historical experience and current projections.

**About the exhibitor:** Marla Ripoll es Profesora Titular y jefe del Departamento de Economía de la Universidad de Pittsburgh, donde también se desempeña como Profesora del Centro de Estudios Latinoamericanos y del Programa de Estudios Globales. Recibió su título de pregrado en Economía de la Universidad Nacional de Colombia, y su PhD en Economía de la Universidad de Rochester.

**Exposure time:** 1 hora y 30 minutos