



Economics Seminars

Friday 21 November 2025 at 12:00

Aula Magna Edificio Baffi

Facoltà di Scienze Economiche Giuridiche e Politiche - Viale Sant'Ignazio 74

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Aging Population and Technology Adoption

Abstract. Population aging affects labor supply, interest rates, and the skill composition of workers, altering technology adoption incentives. A dynamic general equilibrium task-based model of endogenous technology and skill acquisition shows that the impact of aging on technology depends on the underlying age structure of the population. When the population is young, aging boosts the adoption of labor-saving and skill-intensive new technology. Conversely, when the population is old, aging reduces new technology adoption, describing a hump-shaped relationship between age and new technology. The model, calibrated to European data, shows that aging significantly drove new technology adoption from 1990 to 2015, but caused a slowdown thereafter. Aging also influences the skill premium by affecting the demand and supply of skilled labor, thereby increasing inequality. Additionally, the aging-induced rise in retirement age slows new technology adoption and labor productivity growth. Policies that mitigate retirement age increases can lead to Pareto improvements.