Basic and Applied Research: A Welfare Analysis

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Abstract

This study constructs a variety expansion growth model with basic research. The research sector consists of applied and basic research sectors. Applied research sector creates blueprints and expands the varieties of goods available for consumption. Basic research sector adds to the stock of public knowledge. Each research sector interplays through knowledge spillovers. We examine analytically how basic research affects the welfare of households. First, the steady-state welfare-maximizing level of basic research is below the steady-state growth-maximizing level. Second, a reduction in the level of basic research raises the welfare if the level of basic research is set to the steady-state welfare-maximizing level.

Keywords: Basic research, Innovation, Endogenous growth, Welfare analysis

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