

Title:

Knowledge and Growth in the Very Long-run

Abstract:

This paper proposes a theory for the evolution of knowledge diffusion and growth over the very long run. A feedback mechanism between capital accumulation and knowledge spillovers creates a unified growth theory that explains a long epoch of (quasi-) stasis and an epoch of high growth linked by gradual economic take-off. It is shown how the feedback mechanism can explain the Great Divergence, the failure of less developed countries to attract capital from abroad, the productivity slowdown in fully developed countries, and why R&D effort, TFP growth, and income growth are jointly rising along the transition towards modern growth. Finally, it is explained how a First Industrial Revolution, brought forth by increasing propositional knowledge, triggered a Second Industrial Revolution from which onwards technological progress was increasingly produced by market R&D activities.