

Modeling the long-term trend of accumulation of knowledge

Kirshin I.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

In the given article we've developed and substantiated a model of the long-term trend of the knowledge adding process, based on the method of the production function and algebraic properties of information. We demonstrate that in terms of the increasing returns, networking specifics of production and knowledge proliferation, we face exponential growth of knowledge generation and accumulation. The development of technologies of knowledge accumulation, processing and transmission are viewed in the context of common regularities of phasic technological evolution. The given model offers the analytical kit that enables one to prognosticate the dynamics of knowledge adding effectiveness.

Keywords

Compounded annual growth rate, General purpose technologies, Idempotency of addition of information, The increasing returns effect, The method of the production function