An Algebraic Solution to a Canonic Romer Endogenous Growth Model

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Abstract The purpose of this paper is to provide an exact algebraic solution to a fully specified Romer endogenous growth model. The proposed model has three main virtues. First, taking Romer's [1986] model as the starting point, we build a completely and explictly micro-founded competitive general equilibrium model. Second, this version consistently incorporates all the suggestions in Romer [1986] concerning externalities and complementarity between knowledge and physical capital. Lastly, our model has an algebraic solution that allows the dynamics of the variables to be completely described, and does not require a characterization through a phase plane geometric analysis. The result is then a canonic Romer model of endogenous growth, fully specified, tractable and coherent.

Keywords Externalities; Increasing Returns; General Equilibrium Model; Endogenous Growth.
JEL Classification D9, O41.

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