Chapter 1

Why the Already Difficult Task of Identifying Sources of Growth has Become even more Challenging

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ABSTRACT

This chapter is a brief account of what we now observe in the growth literature in light of the developments in the voluminous empirical works on economic growth. It is argued that while the empirical knowledge has advanced adequately, little progress has been made in the growth theory since the classic works of Solow. Therefore it can be said that growth economist and policy makers are still confused on how to raise the steady state growth rate of output and some of these confusions are due to our own experiments.

INTRODUCTION

In a survey chapter as this, it is hard to detail all the important issues that growth and development economists face in their daily professional routine. Nonetheless, we summarize some important points that might be of interest to those working on growth topics, particularly for growth and development policy. It is noted that in light of the confusion in the empirical growth literature, growth economists and policy makers alike are unclear about the specific growth enhancing factors that might increase the steady-state growth rate of output. This is because,

a clear explanation to the sources of growth is yet to be forthcoming. Factors such as trade openness, human capital and R&D, amongst others, have been identified to be growth enhancing. Recently, contribution from information and communications technology (ITC) seems to be significant for developed and some developing economies (see Keely and Quah, 1998). However, the empirics of growth has either supported or rejected these factors on the basis of personal proliferation, (un)complicated econometric techniques and the use of right or wrong specifications, in time series and cross-sectional studies alike. Consequently a non-exhaustive list of growth enhancing factors has been proposed, most of which have led to further confusion than

answers to the century-old question in the growth theory - the sources of economic growth.

Recall the well-known Sala-I-Martin's (1997) experiment with two million regressions - the conclusions of which surprised many. A summary of the top ten growth factors in his work is in Berg (2001). In a recent survey of cross-country studies Durlauf, Johnson and Temple (2005) indicate that in various empirical works, the potential growth factors total one hundred and forty five. More recently, Durlauf, Kourtellos, and Tan (2008) have summarised them into six broad categories, viz, (i) economic institutions (ii) legal and political systems (iii) climate (iv) geographical isolation (v) ethnic fractionalization and (vi) culture. It is not surprising that there are endless debates on growth policy; see for example, Bosworth and Collins (2003) and Durlauf, Johnson and Temple (2005). Pritchett (2006) evaluates the usefulness of growth models for policy, particularly for developing countries. He argues that the first generation endogenous models which propagate incentives for innovative technology and are based on the long run (which in calendar years could be close to a generation's lifespan) are of little use for policy in economies whose main interest is to manage the short-to-medium term fluctuations in their growth rates. Rao and Cooray (2008a) provide some guidelines on how to narrow the gap between the implications of growth models and the need to develop practical policies for developing economies. They take the view that the potential of the Solow (1956) model and its variants such as the Mankiw, Romer and Weil (1992) has not been explored adequately to capture the effects of factors on varying time horizons that might be of use for policy in these economies[1].

This chapter briefly explains how the empirical literature on growth has made identifying sources of growth even more challenging. It is organized as follows: In the next section, we discuss the lessons learnt over the last 50 years or so in growth theory and identify the recent additions to growth literature. Section 3 summarizes issues in empirical growth literature while in section 4, we discuss why Solow is correct in saying that the growth theory has not advanced much since his own contributions despite the new insights obtained from both theoretical and empirical research. Section 5 concludes.

LESSONS LEARNT

In a summary, it can be said that although much was said about growth and its sources, the analysis on growth was unsystematic before the works of Solow (1956, 1957). Although useful for short-term policy, see Berg (2001), the famous Harrod-Domer model of the mid-1940s is today more or less ignored because Solow showed the limitations in its assumptions, see Solow (2008) for his brief comments. Another line of exposition, the endogenous models, starting from the works of Romer (1986) created a series of interesting research where innovation, knowledge capital and R&D etc were tested mainly for developed countries. Meanwhile a wave of works largely based on cross-sectional data flooded the literature where the effects of any possibly quantifiable growth factors were tested mainly with ad-hoc specifications. Easterly, Levine and Roodman (2004) argue that most of these models can hardly be justified by the theory and more seriously often imply that there are more possible specifications than the data points in their sample. Unfortunately, these works are just too many to list. Also apparent are works that did not fail to wrongly implement the famous test of Granger (1988), with some exceptions, leading to casual interpretation for growth policy[2]. Solow (2008) thinks that increasing the steady-state growth rate (SSGR) even by 1% is a huge challenge. This is because if for the last 50 years or so, the SSGR has been 2%, one must be able to justify the policies or the sources of growth that have been unveiled that would raise the SSGR from 2% to say 3%. Unless the justifications are forthcoming in the correct magnitudes, it is hard

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