



Revisiting the causal nexus between savings and economic growth in India: An empirical analysis

Suresh Kumar Patra^{a,*}, D. Satyanarayana Murthy^a, K. Mahendra Babu^b

^a Department of Economics, Pondicherry University, Kalapet, Pondicherry 605014, India

^b Department of Business Management, H.N.B. Garhwal University, Srinagar, Garhwal, Uttarakhand 249161, India

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Abstract

This paper attempts to analyze the long run association between savings and growth; and investigates the causality issue in Indian context for the period 1950–51 to 2011–12. Firstly, the study identifies the structural break in the year 1980 by employing Bi-Perron test with unknown time. Further, it examines the association and the direction of causality between savings and real economic activity. The empirical evidence of the study suggests that savings boost the real activity both in the pre and post break period in the long run, while economic growth causes saving in the short run in the pre break period. Thus, the present study brings evidence in favour of the neoclassical exogenous and the post-neoclassical endogenous growth models and suggest that both the incentive-based measures and the productivity-based measures would be useful to generate higher savings and reinforce the acceleration of income and growth.

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Keywords: Savings; Economic growth; Structural break

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1. Introduction

Savings in an economy plays a pivotal role in achieving the growth targets. Economic growth attained with domestic savings is sustainable than the growth that is achieved through borrowed capital. In fact, it is the savings that determine the economic health of a country. Even an economic super power like U.S. and the industrialized nations in the Europe are resorting to the measures of austerity and making serious attempts to save more than what they did till the cropping up of global financial crisis in 2007 and the European sovereign debt crisis in 2010 respectively. The reason for this structural shift in their saving behaviour is that they spent more than what could afford to. Increasingly troublesome is the fact that the spending was driven by borrowed capital, instead of their domestic savings. The result of the savings indiscipline: U.S. and Euro zone is paying a heavy price in terms of lost output, high unemployment and increasing economic inequalities.

If this is the case of industrialized nations, a typical emerging economy like India need to be much more careful on its savings front in order to achieve the growth targets and cater to the needs of a billion plus population. However, there is an alarming development in the Indian economy since 2008 that the savings as a percentage of GDP is falling

* Corresponding author.

E-mail addresses: sureshabuni@gmail.com (S.K. Patra), murthy801@gmail.com (D.S. Murthy), mahendrababu3687@gmail.com (K.M. Babu).

steadily for a variety of reasons like rising inflation and fall in incomes. During the same period, growth also faltered from its peak level and Indian economy registered lowest growth rate i.e. 4.3% of the decade during the first quarter of 2013–14. In this context an attempt is made to verify the causal nexus between savings and growth in Indian economy. To get a clear idea of the past trends, the post independent period is taken as the period of study.

There are theories aplenty that emphasizes the role of savings in achieving and maintaining high economic growth. Important among them is the Harrod-Domar growth theory that explains of how economic growth depends on the rate of saving or investment and the incremental capital-output ratio in the economy. The neo-classical growth theory due to Solow (1956) assigned a critical role to saving rate for facilitating a higher growth in per capita capital and per capita income in the transition to the steady state, and also implied that a high saving rate facilitates achieving a higher level of steady state per capita capital and income. On the other hand, there are fully endogenous growth models suggesting that, high savings rate and increased in the size of population contributes for the long-term growth rate. Consistent with theoretical underpinnings, empirical evidences also strongly support close inter-linkages between savings and economic growth in a cross-country perspective. It is observed that economies witnessing rapid economic growth such as China, India, Indonesia, Malaysia, Singapore, South Korea and Thailand, etc. also characterized by high saving rates during their developmental phase. Similarly, many countries in sub-Saharan Africa and Latin America typically save at a low rate and experience slow economic growth. Despite a large empirical evidence on the strong association between saving and growth, the direction of causality between saving and economic growth is highly debated both in the theoretical and empirical literature and the divergent views continue to persist.

From the theoretical prospective, two school of thoughts i.e. Mill–Marshall–Solow view versus Marx–Schumpeter–Keynes view emerged in line of the causality between saving and growth (Gutierrez and Solimano, 2007). In the Mill–Marshall–Solow approach, all savings is automatically invested and translated into output growth under wage–price flexibility and full employment. Thus, the first view posits that saving leads economic growth. Similarly, Jappelli and Pagano (1994) also claimed that saving contribute to higher investment and higher GDP growth in the short-run. In contrast, the Marx–Schumpeter–Keynes view depicts that investment (Keynes and some extent Marx) and innovation (Schumpeter) are the two important drivers of output. In this context, savings adjusts passively to meet the level of investment required to hold macroeconomic equilibrium and deliver a certain growth rate of output. In this view growth leads savings. In the same fashion, the Carroll–Weil hypothesis (Carroll and Weil, 1994) also states that it is economic growth that contributes to saving, not saving to growth.

Also, a strand of empirical results on the aforesaid issue for both the advanced and developing countries context do not reach at a settled conclusion. While a set of studies (Bacha, 1990; Otani and Villannueva, 1990; DeGregorio, 1992; Morande, 1998; Hebbel et al., 1992; Oladipo, 2010; Misztal, 2011) supports unidirectional causality from saving to economic activity, another set (Cullison, 1993; Mühleisen, 1997; Alguacil et al., 2004; Lorie, 2007) supports the reverse causality. A third set of studies (Singh, 2010) supports bi-directional causality between saving and economic growth.

A handful of studies in Indian context also intensely debated the direction of causality between saving and economic activity since the economic crisis of late 80s and consequently financial reforms initiated in the early 90s. The empirical findings of such studies in connection to saving–growth causality in India are lopsided. To illustrate, Sinha (1996) looked at the causality between the growth rates of gross domestic saving and economic growth, and found that there was no causality running in either direction. While Agrawal (2000), Jangili (2011) found causality runs from saving to growth but rejected causality from growth to saving, Mühleisen (1997), Sahoo et al. (2001), Verma and Wilson (2005), Sinha and Sinha (2008), and Verma (2007) from their study reached at the conclusion that saving does not cause growth, but growth causes saving. However, Singh (2010) found bidirectional causality between saving and growth.

Indian economy witnessed significant economic transformations, what Thomas Kuhn calls as a paradigm shift after 1991, which is generally called the post reform period. India's embrace of economic reforms was not a deliberate policy choice but an economic compulsion, given the deteriorating external and domestic economic conditions. Socialist model of development strategy was replaced by market friendly economic reforms. Insular economic model gave way to a globalized and integrated financial and real markets. As a result from the abysmally low growth rate, India jumped on to the high growth trajectory and became an one of the fastest growing emerging economies.

So far, no study has been attempted to identify the structural break with unknown time and to examine the causality in the pre and post break periods. In this backdrop, analysis of the causal nexus between savings and growth in Indian economy would expand the horizons of operating policy frame work. This study also adds to the to the existing saving-growth causality literature by explaining the pro-cyclicality story of saving; identifying the structural break

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