Potential financing sources of investment and economic growth in North African countries: A causality analysis

Samir Abdelhafidh [*]

High Institute of Management, University of Sousse, P.O. Box 763, Sousse 4000, Tunisia

Abstract

This paper investigates the causality interactions between potential financing sources of investment and economic growth in North African countries. For each one of them, trivariate vector autoregressive (VAR) models were estimated. We find that domestic saving follows their economic growth. We also find that the foreign capital-led growth hypothesis was frequently confirmed in Egypt and Algeria, but was observed only for grants in Morocco and Tunisia. These results underscore the merits of a case by case approach and have some policy implications on the more suitable financing sources to enhance economic growth in these countries.

1. Introduction

The positive effects of investment on economic growth are largely proved on the theoretical as well as on the empirical levels. They become however less evident when a distinction is made between the potential financing sources of investment. Indeed, the theory suggests various interactions between domestic saving, foreign capital and economic growth.

For a long span of time, domestic saving was considered as a fundamental driving factor of economic growth. This view was challenged by those who argue that the causality goes from

---

[*] Tel.: +216 98 431 566.

E-mail addresses: samir.abdelhafidh@isgs.rnu.tn, samir_abdelhafidh@yahoo.fr

economic growth to domestic saving. The two variables may also be affected by foreign capital inflows. The impact of these inflows depends on their form (Foreign direct investment, loans,. . .) and varies from a context to another (developed versus developing countries, individual versus country group studies,. . .).

However, a very few studies have examined jointly the causality links between domestic saving, foreign capital, and economic growth. Those distinguishing between various foreign capital inflows are scarce. Furthermore, such an empirical exercise has never been done in the context of North African Countries. In this paper, we try to bridge these gaps by investigating the causal links between domestic saving, foreign capital inflows and economic growth in each of Algeria, Egypt, Morocco and Tunisia. Our methodology relies on VAR models where GDP per capita, domestic saving and foreign capital inflows are endogenous. It has the merit to identify both direct and indirect causalities between the three variables.

The rest of the paper is organized as follows: Section 2 reviews the theoretical and empirical links between economic growth and the potential financing sources of investment. Section 3 provides a first look at the data. Sections 4 and 5 discuss the empirical methodology and the causality results, respectively. Section 6 concludes the paper with some policy implications.

2. Literature review

Potential financing sources of investment have various links between them as well as with economic growth. Indeed, while domestic saving may be a cause as well as a consequence of economic growth, each of these variables has potential causality links with foreign inflows.

2.1. Domestic saving and economic growth

The conventional wisdom is that domestic saving is a cause of economic growth. The latter is a result of capital accumulation, which in turn is determined by domestic saving (Solow, 1956). Hence, this causality implies that domestic saving translates to domestic investment that led to growth. However, the literature suggests that this is not obvious, for several reasons.

First, from a Keynesian view, an exante increase in saving may lead to an expost decline in investment and in real output. Second, the correlation between domestic saving and domestic investment would be very weak in a context of international capital mobility (Feldstein & Horioka, 1980) and, third, even if investment is found to be the most robust determinant of growth (Levine & Renelt, 1992), its effect depends on other factors such as human capital (Mankiw, Romer, & Weil, 1992). Also, the correlation between investment and growth does not necessarily imply causality from the former to the latter. For example Qin, Cagas, Quising, and He (2006) found a one-way Granger causality from growth to investment in China.

A causality running from growth to domestic saving is also possible. Modigliani (as cited in Carroll & Weil, 1993) showed in the context of a life cycle model that high growth causes high saving. This was empirically confirmed by Carroll and Weil (1993) on both aggregate and household data and was supported by Agrawal (2001) and Baharumshah and Thanoon (2006) in samples of Asian countries. The same way of causality was found by Anoruo and Ahmed (2001) in a sample of 7 African countries and by Mohan (2006) in a sample of 25 countries with different income levels. Sinha and Sinha (1998), Odhiambo (2009), and Abu (2010) confirmed the growth-led saving hypothesis for Mexico, Nigeria, and South Africa, respectively. On the basis of the innovation accounting, Singh (2010) found for India that the causality running from saving to growth was relatively stronger than that going in the opposite direction.