Contents lists available at ScienceDirect

Economic Systems

journal homepage: www.elsevier.com/locate/ecosys

The relationship between trade, FDI and economic growth in Tunisia: An application of the autoregressive distributed lag model

Mounir Belloumi [a,b,*]

[a] Faculty of Economics and Management, LAMIDED, University of Sousse, Tunisia
[b] Faculty of Administrative Sciences, Najran University, Saudi Arabia

ARTICLE INFO

ABSTRACT

The relationship between foreign direct investment (FDI), trade openness and economic growth in host countries remains one of the most important issues in the economic literature and met with renewed interest in recent years mainly for countries suffering from unemployment problems and lack of technological progress. This paper examines this issue for Tunisia by applying the bounds testing (ARDL) approach to cointegration for the period from 1970 to 2008. The bounds tests suggest that the variables of interest are bound together in the long run when foreign direct investment is the dependent variable. The associated equilibrium correction is also significant, confirming the existence of a long-run relationship. The results also indicate that there is no significant Granger causality from FDI to economic growth, from economic growth to FDI, from trade to economic growth and from economic growth to trade in the short run. Even though there is a widespread belief that FDI can generate positive spillover externalities for the host country, our empirical results fail to confirm this belief for the case of Tunisia. They go against the generally accepted idea considering the positive impact of FDI on economic growth to be automatic. The results found for Tunisia can be generalized and compared to other developing countries which share a common experience in attracting FDI and trade liberalization.

© 2014 Elsevier B.V. All rights reserved.

---

* Correspondence to: Faculty of Administrative Sciences, Najran University, Saudi Arabia. Tel.: +966 530948710; fax: +966 75428887.
E-mail addresses: mounir.balloumi@gmail.com, mrbelloumi@nu.edu.sa.

1. Introduction

Trade and FDI inflows are well known as very important factors in the economic growth process. Trade plays the role of upgrading skills through the importation and adoption of superior production technology and innovation. Exporters use innovation and developed production technology either by acting as subcontractors to foreign enterprises or through international markets competition. Producers of import-substitutes face competition from foreign firms. They are pushed to adopt more capital-intensive production facilities to face the hard competition in developing countries, where products are usually capital intensive (Frankel and Romer, 1999). The impact of trade openness on economic growth can be positive and significant mainly due to the accumulation of physical capital and technological transfer.

Inward FDI can play an important role by increasing and augmenting the supply of funds for domestic investment in the host country. This can be done through the production chain when foreign investors buy locally made inputs and sell intermediate inputs to local enterprises. Furthermore, inward FDI can increase the host country's export capacity, causing the developing country to increase its foreign exchange earnings. FDI can also encourage the creation of new jobs, enhance technology transfer, and boost overall economic growth in host countries. Wang and Blomstrom (1992) and Günther (2002) identify four main channels of technological spillovers from foreign to local firms, namely: imitation, competition, skills (i.e. also labor mobility) and linkage. Imitation is also known as the learning-by-watching effect. It occurs when a local firm improves its productivity by imitating the technology used by the multinational firm. The presence of foreign firms creates competition with local firms. Hence, domestic firms are forced to use the existing resources more efficiently and adopt new technologies (Wang and Blomstrom, 1992; De Mello, 1997, 1999). FDI also causes spillovers through the transfer of knowledge to the host country. The spillover effect occurs when there is mobility of well-trained workers and managers from foreign firms to domestic firms (Kaufmann, 1997; Haaker, 1999; Fosfuri et al., 2001; Glass and Saggi, 2002). Generally, FDI spillover arising from linkages may occur when foreign firms have productivity spillover effects on local firms in the same industry (horizontal spillovers) or (and) in upstream and downstream industries (vertical spillovers) by increasing the range and quality of intermediate goods (Borensztein et al., 1998).

The majority of past empirical studies dealt with either trade and FDI interaction on economic growth (Balasubramanyam et al., 1996; Karbasi et al., 2005) or the relationship between FDI and economic growth (Lipsey, 2000) or (and) the relationship between trade and economic growth (Pahlavani et al., 2005). All these studies concluded that both FDI inflows and trade promote economic growth. However, they failed to provide a conclusive result on the relation in general and the direction of the causality in particular in many developing countries. The growth enhancing effects from FDI inflows and trade vary from country to country and over time. For some countries, FDI and trade can even affect economic growth negatively (Balasubramanyam et al., 1996; Borensztein et al., 1998; Lipsey, 2000; De Mello, 1999; Xu, 2000).

Some past studies on this subject suffer from three empirical limitations. The first is that even though a large volume of econometric literature dealt with the impacts of FDI on economic growth in developing countries, there are not enough studies on the question of the causality relationship between them. The second is that these studies used cointegration techniques based on either the Engle and Granger (1987) cointegration test or the maximum likelihood test based on Johansen (1988) and Johansen and Juselius (1990). However, these cointegration techniques may not be appropriate when the sample size is too small (Odhiambo, 2009). Odhiambo (2009) uses the bounds testing cointegration approach developed by Pesaran et al. (2001), which is more robust for a small sample. The third limitation is that by using cross-sectional data some studies do not address country-specific issues (Casselli et al., 1996; Ghirmay, 2004; Odhiambo, 2009).

The current study investigates the dynamic causal relationship between trade, FDI and economic growth in Tunisia by implementing the newly developed ARDL-bounds testing approach to cointegration. Trade and FDI are expressed as a ratio of GDP. The proxy of economic growth is real GDP per capita. Labor force and capital investments are also considered as control variables in the model. The Granger procedure is used to test the direction of causality within the Vector Error Correction Model (VECM). If a set of variables is cointegrated, they must have an error correction representation