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On the dynamic measurement of economic openness

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Abstract

The empirical relationship between economic openness and economic performance is much debated in the economic literature. No definitive conclusions seem to be reached yet, part of the problem being the very measurement of economic openness of a national economy. In their article in the *Journal of Policy Modeling*, Ruíz Estrada & Yap (2006) propose a new method to measure economic openness and to empirically assess the openness–growth nexus as a new tool for policy-makers: the Openness Growth Monitoring Model (OGM-Model). The authors claim: (i) that their method is different from and more flexible than existing empirical methods, (ii) that higher levels of openness do not lead to income growth, and (iii) that customs unions perform better than free trade areas. This short article challenges the three claims of the authors.

Keywords: Economic openness; Trade liberalization; Economic growth; Dynamic measurement; Free trade areas; Customs unions

1. Introduction

The empirical relationship between economic openness or outward orientation of a national economy, and its economic performance (income growth, export performance) has been much debated in the economic literature. On the one hand, there are the more skeptical authors like Rodrik who conclude that the relationship between trade and growth is not yet fully established (Rodríguez & Rodrik, 2001), that no reliable and robust estimates of outward orientation on economic performance is likely to be possible from cross-country data (Pritchett, 1991), or that trade liberalization and market access are tools that contribute to growth and development "in specific situations and certain sectors" (Malhotra, Bahadur, Jahan, & Keklik, p. 2).[1] On the other

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[1] See also Easterly et al. (1993) and Stiglitz (2004).

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hand, there is the more orthodox stance shared by Bhagwati, Frankel, the New Growth Theory, and others arguing that there is indeed a demonstrable positive relationship, in line with what the textbooks suggest (Srinivasan & Bhagwati, 1999; Edwards, 1993; Frankel & Romer, 1999; Harrison, 1995).[2] The thesis of a positive relationship received also support from very recent work, using matching estimators and synthetic control methods, by Billmeier and Nannicini (2007).

The difficulty to clearly demonstrate a relevant and statistically significant relationship between both variables starts with the very definition and measurement of economic openness. One has the choice between narrow (trade of goods) and broad (trade of goods + trade of services + investment + remittances + labour migration + ···) conceptions of openness, and between measures that capture policy orientation and effort (for example, tariffs), or rather *de facto* degrees of openness (measured directly in terms of specific international flows). This results in different indicators, capturing different aspects of 'openness'. In his review article, for example, Pritchett proposed a useful typology of empirical measures: (i) shares of trade (or imports) in GDP, (ii) average tariffs and coverage ratios of non-tariff barriers (NTBs), (iii) measures of the deviation of countries' actual trade pattern from the pattern predicted from a model of resource-based comparative advantage,[3] and (iv) measures of real price distortions (Pritchett, 1991, 1996).

Further developments include the construction of multi-dimensional openness indicators (known as globalization indicators) (Lockwood, 2004; De Lombaerde & Iapadre, 2008), and measures of trade openness based on transformed uniform tariff equivalents derived from CGE analysis (Lloyd and MacLaren, 2002).[4]

In a recent article in this Journal, Ruíz Estrada and Yap (2006) propose a new method to measure economic openness and to empirically assess the openness–growth nexus: the Openness Growth Monitoring Model (OGM-Model). This short article presents a few comments on both aspects of the Ruiz Estrada–Yap proposal.

2. A new measure for economic openness

Ruiz Estrada and Yap present a new analytical model, including the measurement of new openness indicators. The step-wise application of the OGM-model includes the following steps: (i) calculation of the degree of openness by production sectors (O_i); (ii) the calculation of the average openness rate ($\bar{O}$); (iii) calculation of the harmonization of openness (HO); (iv) calculation of the openness growth rate (ΔO); (v) calculation of per-capita gross national income (Y); (vi) calculation of the income growth rate (ΔY); (vii) plotting the openness diamond graph; and (viii) drawing the openness/income growth rates (O/Y) sensitivity analysis chart.

In step-1, the authors calculate degrees of openness by sector, as follows (Ruíz Estrada & Yap, 2006, p. 243): $O_i = (\text{realX}_i + \text{realM}_i)/\text{realGDP}$ (where realX_i = real exports FOB of sector i; realM_i = real imports FOB of sector i; real GDP = real gross domestic product).

In step-2, they then calculate the average openness rate ($\bar{O}$) as follows: $\bar{O} = \left(\sum_{i=1}^{N} O_i\right)/N$ (where N = number of sectors in the economy). This amounts to $\bar{O} = (1/N)[(X + M)/\text{GDP}]$

[2] See also Salvatore (2004) who subscribes to the thesis of the positive relationship, at least beyond the first phase of the growth process.

[3] See also Leamer (1988).

[4] See Anderson and Neary (1994) on the concept of uniform tariff equivalent.