

Economic Impact of Improved Trade Facilitation in the Commonwealth

Introduction

Many studies have come up with numbers that indicate the economic impact of trade facilitation. Some of them use standard trade-based CGE or gravity models for this purpose (e.g. PIIE, 2014). However, there has been hardly any study that has attempted to capture the endogenous technological changes arising from investment in trade facilitation, which is what we attempt in this paper.

While the Commonwealth is neither a current nor much of a potential trading bloc, Commonwealth members emphasize on promoting intra-Commonwealth trade. One way of promoting such trade in goods is through improved trade facilitation measures. In this backdrop, the scope of the proposed study is to evaluate the extent to which trade facilitation can benefit all these economies vis-à-vis other trade policy measures such as tariff reduction and NTB (Non-Tariff Barrier) removals.

Methodology

GTAP 9 Data Base contains information on over 30 of the 53 Commonwealth countries, for the year 2011. This will be the starting point for the CGE analysis. We shall employ a special version of GTAP model, which explicitly accounts for the costs and benefits of trade facilitation. We extend the model developed by Mirza (2009), which focuses on these aspects. In addition, we will also incorporate the data on ad valorem tariff equivalents of costs of time delays in trade, which have been developed econometrically using gravity models and employed in GTAP framework. This dataset was developed by Hummels and Minor (2010).

Most GTAP-based models have technology shocks as exogenous. Our model attempts to overcome this shortcoming, by providing structure to the costs involved in making technological improvements. In particular, a capital goods sector enhances productivity behavior related to trade, i.e., the *ams* variable in GTAP model (import-augmented technological change). Modeling facilitation through the capital goods sector clearly embeds the cost side through several channels. Firstly, capital goods are produced using limited resources that have competing uses such as the production of consumables. Secondly, funds for investments need to be obtained by setting aside a fixed portion of income as savings. This makes investments costly in the model, such that there are no free-of-cost technology improvements, which result in economy-wide benefits.

We shall employ the World Bank's Logistics Performance Index (LPI) for this study. Singapore has among the highest LPI among the Commonwealth countries. One strategy of modeling trade facilitation in the standard GTAP model could be to have a technology shock that corresponds to the percentage difference between the LPI's of Singapore and all other Commonwealth countries. Perhaps to avoid drastic results and be more realistic, one could draw the wedge between 50% of Singapore's LPI and 100% that of others. This is an alternative scenario that we would compare with. For the developed countries in the Commonwealth, no further trade facilitation will be attempted in our shocks, given that they are fairly advanced in this area.

As for the analysis, we will focus on intra-Commonwealth trade, although the paper will also contain Commonwealth trade with other countries. We will provide both these aspects, including a break-up between the two, analyzing the extent to which this will come from various aspects including trade

creation and diversion. We will also analyze the employment effects, by assuming unemployment of all types of labor all over the developing world.

Literature Review

In the complete paper, we shall provide a comprehensive review of the literature on the potential impact trade facilitation measures on trade and other macroeconomic headline indicators, particularly focusing on some of the Commonwealth countries. There is a lot of literature on methodological and policy aspects of trade facilitation. Explaining the methodology outlined above by reviewing the relevant papers (e.g. Mirza, 2009; Hummels and Minor, 2010) would be part of this review. One major objective of this review is to come up with the investment estimates required for trade facilitation.

References

Hummels, D and Minor, P (2010). "Time as a Barrier to Trade: A GTAP Data Base of Ad Valorem Trade Time Costs". Conference Proceedings, 13th Annual Conference on Global Economic Analysis, Penang, Malaysia.

Mirza, T. (2009). "Infrastructure and Trade in Sub-Saharan Africa: Costs and Benefits of Reforms" Conference Proceedings, 12th Annual Conference on Global Economic Analysis, Santiago, Chile.

PIIE (2014)....Sachin please include one or more studies here..