Estimation of Trade Elasticities: An Application of Johansen’s Cointegration Method to the Bangladesh Trade Data

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This paper employs Johansen’s cointegration method to estimate import and export demand elasticities for Bangladesh. Based on the graphical display of the data in the log of levels, the cointegrating vectors were estimated assuming a linear trend in the non-stationary part of the model, both for the import demand and the export demand equations. Trace test as well as λ-max test suggest that only a single statistically significant cointegrating vector is present among the variables of the import demand and the export demand equations. Normalizing the cointegrating vector for the import demand with respect to the log of the import variable and the export demand with respect to the log of export variable the estimated elasticity with respect to price change originating from exchange rate movement were about −3 and 2.4 respectively, implying the comfortable fulfillment of the Marshall-Learner condition. So currency depreciation or devaluation, given relative prices and income, will improve trade balance for Bangladesh in the long run.

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