

Faculty Research Grant Final Report

Project: Can We Capture the Multidimensional Nature of Trade Policy With a Summary Measure?

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1. Description of grant-supported activity:

In this paper we addressed the issue of developing a more useful country-level measure of the level of protectionism (referred to, more appropriately, as openness to trade). We focused on the fact that trade policy is multi-faceted. Trade policy involves numerous instruments, including (but not limited to) tariffs, non-tariff barriers (such as administrative classification of goods, domestic content provisions, government procurement provisions, restrictions on services trade, and trade-related investment measures), and quantitative restrictions such as import quotas. It is in large part because of this multi-faceted nature of trade policy that previous efforts to create adequate summary measures were not successful.

In order to explore the multidimensionality of trade policy (and thus openness) my coauthor and I used a statistical technique known as factor analysis (often referred to as the method of principal components). If various measures of trade policy and openness do indeed capture some common aspects of the overall openness of a country then there are underlying common factors; that is to say, while each measure captures a unique aspect that is not addressed by any other measure, each measure also captures some part of the common factors. Use of factor analysis allowed us to estimate the common underlying factors.

2. Were you able to complete the project? Describe any difficulty you had.

As mentioned, we used the technique of factor analysis. This approach has not been tried previously on this type of data, for two reasons. First, most prior researchers did not have large enough data sets to use factor analysis. As we have the largest collection of measures of openness that was not a problem for us. We have some interesting results from the econometric estimations.

The second reason why the technique has not been used previously is that the identification of the underlying factors can be quite challenging. We are now at the stage where we are seeing how we can use the knowledge we have of the common factors to suggest how we can combine measures of trade openness and policy into a smaller number of variables that share the common factors.

3. Did, or will, the project result in specific product—a manuscript, composition, syllabus, etc? If so, please describe and indicate state of development.

We presented preliminary results at the Western Economic Association Meetings and received very positive feedback on the work. We currently have a working paper that we are aiming to send out for review early next year.