Explanatory Note: Depth

We use two different measures to operationalize depth.

The first measure of depth is an additive index that combines seven key provisions that can be included in PTAs (see Dür et al. 2014). The first provision captures whether the agreement foresees that all tariffs (with limited exceptions) should be reduced to zero (that is, whether the aim is to create a full free trade area). The other six provisions capture cooperation that goes beyond tariff reductions, in areas such as services trade, investments, standards, public procurement, competition and intellectual property rights. For each of these areas, we code whether the agreement contains any substantive provisions. A substantive provision, for example, is a national treatment clause in the services chapter. A statement that the contracting parties desire to open their services markets, by contrast, does not count as a substantive provision.

The second measure of depth relies on latent trait analysis. Latent trait analysis is a type of factor analysis for binary data (Bartholomew et al. 2011). Doing so allows us to deal with highly correlated data and to account for the fact that not all items are of equal importance in establishing the extent of countries' commitments. Standard factor analysis is based on Pearson correlation and thus not applicable to the binary data included in our dataset. We therefore opted for latent trait analysis, a method developed for binary data. The specific approach that we use is known as the Rasch model, which is frequently applied in psychometrics, for example to measure intelligence (Bond and Fox 2007). A major assumption of the Rasch model is that the items are related to a single underlying dimension; we therefore only included variables in the analysis that are theoretically related to depth. We use a total of 48 variables that theoretically are related to the depth of an agreement (these variables pertain to such aspects as services liberalization, trade-related investment measures, intellectual property rights and standards) to arrive at a measure of depth. For a full list of variables, see the on-line appendix of Dür et al (2014).

References:

Bartholomew, D. J., M. Knott, and I. Moustaki. 2011. *Latent Variable Models and Factor Analysis: A Unified Approach*. Chichester: John Wiley and Sons.

Bond, T. and C. Fox 2007. *Applying the Rasch Model: Fundamental Measurement in the Human Sciences*. Mahwah: Lawrence Erlbaum, 2nd. Ed.

Dür, A., L. Baccini, and M. Elsig. 2014. “The Design of International Trade Agreements: Introducing a New Database.” *Review of International Organizations.*