

Web Appendix

Balance sheet data and firm-level variables. Firm-level variables are constructed from 2006 and 2007 balance sheet data from the Business Registry covering the population of firms required to file their (unconsolidated) accounts to the National Bank of Belgium (NBB). The data combine annual accounts with data from the Crossroads Bank on firms' main sector, activity and legal status. Overall, most firms that are registered in Belgium (i.e., that exist as a separate legal entity) and have limited liability are required to file annual accounts.

For the 2008S1–2009S1 (2007S1–2008S1) analysis, we selected those companies that filed unconsolidated balance sheets in 2007 (2006) while reporting at least one employee. Annualized balance sheets provide us with information on the (full-time equivalent) number of employees, operating profits, equity and liability values, the amount of liabilities due after or within one year, the amount of liabilities held by financial institutions or commercial parties, the value of intermediate stocks, and the NACE rev1.1 5-digit code of the firm. Data on firm turnover, value added, purchased intermediates, and investments in 2006 and 2007 come from mandatory VAT declarations provided by the NBB. Balance sheets also record information on these four variables, but we prefer to use VAT declarations as information is more accurate and virtually covers the universe of Belgian firms. Multinational status and foreign ownership of a firm come from the yearly Survey of Foreign Direct Investments carried out by the NBB. Finally, firm-level imports and exports, which are needed to construct some firm-level controls, refer to the same year of the balance sheet information. Data have been obtained by aggregating firm-product-country level trade values for a given year at the firm level.

Trade and production data. Import and export data by firm, product, and country for Belgium is collected by the NBB on a monthly basis. More precisely, the information comes from intra-EU (Intrastat) and extra-EU (Extrastat) customs declarations that cover the universe of trade transactions. Firm and trade data were merged using the VAT number which identifies each firm in Belgium. Imports and exports of each firm are recorded in current euros at the 8-digit Combined Nomenclature (CN) level by country of origin/destination. Information on either the number of units or the weight in kilograms (or sometimes both) of traded goods is available and is product specific. Weight is the most widely used quantity unit.

In order to construct the quantity index used in Tables 1 to 2 we have use a 'mixed quantity' unit corresponding to kilograms, whenever recorded, and to units for those products recorded in units only. We then compute the average mixed quantity value across all firm-country-product triples involved in the group considered (example: exports of small firms) separately for 2008 and 2009. We define the average price as the ratio of the average value of trade triples across all firm-country-products involved in the group considered and the average mixed quantity defined above.

Finally, monthly production data are provided by the Belgian National Institute of Statistics. Data are based on mandatory monthly declarations by a sample of about 7,000 firms representing medium and large manufacturing producers in Belgium. Once anonymized, data are then made available to the public at different levels of sectoral aggregation under the Prodcom database brand. Some goods, especially in agriculture and fishery, are not included in the data. We use the firm-level version of that data.

Country and product data. Exchange rate variations between 2008S1 and 2009S1 (as well as between 2007S1 and 2008S1) refer to the change in the nominal interbank exchange rates with respect to the Euro at noon on April 1st, as recorded by the Bank of Canada. We choose April 1st as our midpoint in the first semester of each year (April 2nd in 2007). The average growth rate of GDP between 2008 and 2009 is the average of the two annual growth rates of the GDP at constant prices and comes from the IMF World Economic Outlook database as of October 2009. A mirror definition applies to the average growth rate between 2007 and 2008. The product classification follows the EU’s ‘Main Industrial Groupings’ in official statistics, as described in the European Commission Regulation No 586/2001 (March 26, 2001). This classification separates products into intermediate, capital, consumer durable, consumer non-durable, and energy products. Some HS4 products (mainly agricultural goods) cannot be assigned to one of these categories using the correspondence table provided by the EU; we thus classify them as ‘Residual goods’. The product group ‘Intermediate, Capital, & Durables’ used in the paper refers to the grouping of intermediate, capital goods, and consumer durables. All remaining product categories are subsumed by the ‘Other Goods’ group. The measure of product differentiation we use is based on the Rauch (1999) classification and corresponds to the share of HS6 codes within an HS4 category that are neither sold on an organized exchange nor referenced priced. We use the ‘liberal’ classification.

Treatment of re-exports. Using Belgian data has the drawback of including a large amount of re-exports. Indeed, Belgium is a key port of entry to – and exit from – the EU. Many ‘Belgian’ firms thus trade exclusively with non-resident partners. We deal with this potential problem in two ways. First, we exploit the information gathered by the National Bank of Belgium (NBB) since 2001 and systematically exclude trade by firms identified as non-residents. Non-resident firms are the main re-exporters and are identified by the NBB using information from VAT declarations. Non-resident trade accounted for about 26% (28%) of Belgian exports and 22% (25%) of Belgian imports in 2008 (2009). Second, we control for a firm’s industry in our regressions. Doing so should largely capture the remaining re-exports which are strongly concentrated in wholesalers’ and retailers’ foreign trade.

Continuing triples. In the analysis of Section 3 we use continuing triples. Any firm-country-product trade triple that records positive values in both 2007S1 and 2008S1 (or 2008S1 and 2009S1) is considered a continuing triples for that period. By definition, continuing triples are a subset of stayers’ trade triples. They account for the lion’s share of trade values in 2007S1, 2008S1, and 2009S1. For example, there were 272,216 continuing triples out of the 433,529 (430,000) export triples in 2008S1 (2009S1), thus corresponding to 62.79% (63.31%) of the number of total triples and to 93.66% (91.83%) of total triples values. Our analysis in Section 3 covers the bulk of continuing triples, but we have to drop some for which firm-level regressors are missing. Considering the period 2008S1–2009S1, there are 204,598 (out of 272,216) continuing export triples for which all data on firm, country, and product characteristics is available. These triples represent 69.50% of 2008S1 export values and 68.41% of 2009S1 export values. The drop in the number of continuing triples is mainly due to Belgian affiliates of foreign groups that do not exist as a separate legal entity in Belgium. Such firms are not required to report unconsolidated accounts.

Stayers. The sample of firms used in our analysis of Section 4 is given by the stayers for which

both balance sheet information and VAT declarations are available, i.e., 8,360 (8,250) firms among the 12,964 (12,481) export stayers and 14,388 (13,983) firms among the 23,782 (21,209) import stayers for the period 2008S1–2009S1 (2007S1–2008S1). VAT declarations are virtually exhaustive so that the binding data constraint is the availability of balance sheet information. For example, the data cover 73.07% (73.61%) of 2008S1 (2009S1) exports and 71.33% (70.20%) of 2008S1 (2009S1) imports by stayers.