Appendix: Exporters and Shocks

Contents

1 CIP data **5**

2 PRODCOM data **6**

3 Customs data **6**

3.1 Quality of CIP-customs match 7

3.2 Export markets used in our analysis of export responses 9

4 Tariff data **10**

4.1 Tariff sources by country 10

4.2 Coverage 13

4.3 More details on creation of variables used in the regressions 14

4.4 Variation in the data 14

5 Macro data **17**

5.1 Sources 17

5.2 Variation in the data 18

6 Robustness tables **21**

7 Details of adding-up exercise **46**

8 Details of model for simulation exercise **48**

List of Tables

1 Exports matched to firms as a share of published merchandise exports 8
2 Export status: CIP and Customs classification, number of firms 8
3 Export status: CIP and Customs classification, share of CIP revenue 9
4 Different measures of exports: Ratios to total CIP sales 9
5 Tariff data coverage: # of HS6s for which we have tariffs 14
6 Summary statistics on exporters and non-exporters 21
7 Share of exports by destination in published trade data 21
8 Entry and past participation: unconditional statistics 22
9 Exit and past participation: unconditional statistics 22
10 Share of in-sample exports by market tenure and export spell length 22
11 Entry and past participation 23
12 Exit and past participation 23
13 Revenue dynamics 24
14 Export entry responses to shocks: Baseline and alternative specifications . . 25
15 Export entry responses to shocks: In differences, allowing asymmetric responses to RER increases and decreases 25
16 Export entry responses to shocks: In differences, allowing nonlinear responses to RER changes 26
17 Export entry responses to shocks: In differences, including forwards of tariff changes 26
18 Export entry responses to shocks: Conditional logit 27
19 Export entry responses to shocks: Market interactions 27
20 Export entry responses to shocks: Richer controls for export histories 28
21 Export entry responses to shocks: Clustering standard errors at different levels 28
22 Export entry responses to shocks: Different levels of fixed effects 29
23 Export entry responses to shocks: Firm size and ownership 29
24 Export entry responses to shocks: Different sets of markets 30
25 Export entry responses to shocks: Industry groups 30
26 Export entry responses to shocks: Splitting RER into nominal exchange rate and prices 31
27 Export entry responses to shocks: Robustness on shock variables 31
28 Export exit responses to shocks: Baseline and alternative specifications . . . 32
29 Export exit responses to shocks: Alternative interactions 33

30 Export exit responses to shocks: In differences, allowing asymmetric responses to RER increases and decreases . . . 33
31 Export exit responses to shocks: In differences, allowing nonlinear responses to RER changes . . . 34
32 Export exit responses to shocks: In differences, including forwards of tariff changes . . . 34
33 Export exit responses to shocks: Conditional logit . . . 35
34 Export exit responses to shocks: Market interactions . . . 35
35 Export exit responses to shocks: Clustering standard errors at different levels 36
36 Export exit responses to shocks: Different levels of fixed effects . . . 36
37 Export exit responses to shocks: Firm size and ownership . . . 37
38 Export exit responses to shocks: Different sets of markets . . . 37
39 Export exit responses to shocks: Industry groups . . . 38
40 Export exit responses to shocks: Splitting RER into nominal exchange rate and prices . . . 38
41 Export exit responses to shocks: Robustness on shock variables . . . 39
42 Export revenue responses to shocks: Coefficients on export history controls in baseline specification . . . 40
43 Export revenue responses to shocks: Baseline and alternative specifications . 41
44 Export revenue responses to shocks: Alternative controls and interactions . . 41
45 Export revenue responses to shocks: In differences, allowing for asymmetric responses to RER increases and decreases . . . 42
46 Export revenue responses to shocks: In differences, allowing for nonlinear responses to RER changes . . . 42
47 Export revenue responses to shocks: In differences, including forwards of tariff changes . . . 43
48 Export revenue responses to shocks: Market interactions . . . 43
49 Export revenue responses to shocks: Clustering standard errors at different levels . . . 44
50 Export revenue responses to shocks: Different levels of fixed effects . . . 44
51 Export revenue responses to shocks: Firm size and ownership . . . 45
52 Export revenue responses to shocks: Different sets of markets . . . 45
53 Export revenue responses to shocks: Industry groups . . . 46

54 Export revenue responses to shocks: Splitting RER into nominal exchange rate and prices . . . 46
55 Export revenue responses to shocks: restricting to observations where quantity is available . . . 47
56 Parameter values for model simulation . . . 49

List of Figures

1 Residual variation in tariff levels . . . 15
2 Residual variation in tariff changes . . . 16
3 Average evolution of tariffs for 5 rich destination markets . . . 16
4 Average evolution of tariffs for China and India . . . 17
5 Residual variation in real exchange rate level . . . 18
6 Residual variation in real demand level . . . 19
7 Residual variation in real exchange rate differences . . . 19
8 Residual variation in real demand differences . . . 20
9 Evolution of real exchange rates in selected non-Euro and Eurozone markets 20

1 CIP data

Our first data source is the Irish Census of Industrial Production (CIP). This census of manufacturing, mining and utilities takes place annually at both the firm (enterprise) and plant (local unit) level. All firms with 3 or more persons engaged are required to fill in a return. The industries covered are NACE revision 1.1 (the harmonized European industrial classification system) classes 10 to 41 until 2007 and NACE revision 2 classes 05 to 39 from 2008. The data available to us covers the period 1991 to 2009. Survey forms and methodology documents for this data are available on the web at www.cso.ie.
Variables in the CIP data are checked for a number of different measurement issues: industry (NACE), county and ownership changes are ignored if they revert in the following year. A similar procedure applies where first or last observations differ from those after or before.

Figures on employment relate to employment in the firm in the second week of September. In some cases this can result in zero employees in combination with a positive wage bill. Where the average wage is clearly out of line with the firm's employment history, the figures are adjusted. For example, if employment is zero but the wage bill is positive, employment figures are obtained by averaging the average wage over the previous and the following year and backing out the employment figure closest to the nearest full number from the wage bill for the current year.

Sales are checked for digit issues based on large changes in sales per employee and deviations from the mean over time. Fuels, materials and wages are checked for large changes from one year to the next and whether they exceed sales both individually as well as taken together. Export and import shares are checked for big changes from year to year as well as for once-off zero observations.

The sampling frame for the CIP is the CSO's business register. Firm identifiers on this register occasionally change due to name or legal status changes even if the firm physically stays the same. We identified possible cases of reclassification in the CIP among firms in the top decile according to turnover. The actual cases were then confirmed by CSO statisticians. We assign these firms a new firm identifier that stays the same over their time in the CIP to ensure they are not classified as entrants or exiters. This affects just over 50 firms throughout the sample period.

2 PRODCOM data

The PRODCOM survey covers all industrial enterprises with three or more persons engaged which are wholly or primarily engaged in industrial production and industrial services in the mining, quarrying and manufacturing industries. The survey does not cover the products of coal and lignite mining and coke and refined petroleum products. The business activity classification used in this publication is based on the Statistical Classification of Economic Activities in the European Community i.e. NACE revision 2. Prior to 2008 PRODCOM publications were based on the NACE Rev.1.1 classification.

The PRODCOM classification is organised into product divisions and classes corresponding to the sectoral divisions (2 digit) of NACE revision 2. It uses an eight-digit product code - XX.XX.XX.XX. The first four digits of the code correspond to the 4-digit classes of NACE. The first six digits are the European Community Classification of Products by Activity (CPA) codes. The CPA provides a detailed listing of the characteristic products for each 4-digit NACE economic activity. The last two digits provide a more detailed breakdown of the CPA classes into PRODCOM product headings. There is a direct link between the PRODCOM classification and the EU foreign trade Harmonised System/Combined Nomenclature (HS/CN) classification.

There were a small number of duplicates in the Prodcom files for the years 2003-2005. These were dealt with by either reassigning firm identifiers, aggregation or deletion. Production values in the PRODCOM file were checked against sales in the CIP for more than 10fold discrepancies (total value over all products in PRODCOM more than 10 times (less than one tenth of) sales in CIP. Values (and if appropriate also proportionately) volumes were then adjusted in the majority of cases by reducing the number of digits in PRODCOM. In a few instances sales in the CIP were adjusted. (Firms are asked to report in multiples of 1000EUR in both surveys, but occasionally they report in actual Euros.)

3 Customs data

Irish customs data are collected by the Revenue Commissioners. Starting in 1993, data for intra-European and extra-European trade are collected separately using two different systems called Intrastat and Extrastat. All VAT-registered traders make regular VAT returns, which record the total value of goods imported from and exported to other EU countries. In addition, traders whose exports to EU countries in the previous twelve months exceeded 635,000 must make a detailed Intrastat export return each month, which reports the value

and volume of intra-EU exports, by destination market and product classification. There is some imputation of data when VAT returns or Intrastat returns are missing. The reporting threshold for extra-European exports to the Extrastat system is 254 Euro per transaction. There is no imputation for Extrastat returns.

Intrastat and Extrastat records are transferred to the CSO, and matched by the CSO to the Business Register using confidential information. We have access to the value (in Euros) and volume of exports by destination market and product classification, aggregated to an annual frequency. We do not have access to a flag for imputed data.

3.1 Quality of CIP-customs match

Our measures of firm-level variables and exports come from different sources - the CIP and customs data. There are two issues in using customs data matched to firms as a measure of export participation (and to a lesser extent, exports conditional on participation). The first is the fact that not all customs records can be matched by the CSO to firms on the Business Register. The second is the possibility that some firms export through intermediaries rather than directly, and are hence misclassified as non-exporters. Table 1 reports customs exports matched by the CSO to firms as a share of total published merchandise exports, and customs exports matched to CIP firms (a subset of firms) as a share of total published merchandise exports. The share of exports that can be matched to firms on the Business Register is relatively low for the period 1996-1998, and highest for the period 1999-2009.

We do have independent information from the CSO on export participation, as firms are asked what share of total sales is due to export sales. In Table 2 we report the number of firms in each of the following four categories: nonexporters in both CIP and customs; nonexporters in CIP, exporters in customs; exporters in CIP, nonexporters in customs; exporters in both CIP and customs. In Table 3 we report the share of CIP revenue accounted for by each of these four groups. It appears possible from these statistics that there are moderately sized firms who are misclassified as nonexporters due to an inability to match the relevant customs records with the Business Register.

Table 4 reports CIP exports (obtained by multiplying a firm's reported export share by its total sales) as a share of total CIP sales, customs exports matched to CIP firms as a share of total CIP sales, and CIP exports for firms classified as exporters by the customs definition as a share of total CIP sales. The latter two ratios are relatively similar, suggesting that on average, the CIP measure of exports may be of reasonable quality, and that conditional on being matched to a CIP firm, customs records provide a relatively complete picture of

exports. However it also suggests that, due to an inability to match customs records to firm identifiers, some exporters are misclassified as nonexporters. Unfortunately, since our empirical strategy relies on precise measurement of the destination composition of exports, we cannot exploit the CIP export measure in our analysis.

Table 1: Exports matched to firms as a share of published merchandise exports

	All firms	CIP firms
1996	0.57	0.53
1997	0.59	0.52
1998	0.65	0.56
1999	0.76	0.64
2000	0.75	0.61
2001	0.74	0.58
2002	0.74	0.60
2003	0.77	0.62
2004	0.78	0.65
2005	0.76	0.62
2006	0.75	0.61
2007	0.77	0.64
2008	0.74	0.64
2009	0.76	0.65
avg 2000-09	0.76	0.62

Notes: First column reports the ratio of customs exports for which the CSO can find a match to a firm on the Business Register (including firms not in the CIP) to total published merchandise exports. The second column reports the ratio of customs exports for which the CSO can find a match to a CIP firm (satisfying our nonzero turnover and employment criteria) to total published merchandise exports. Source: CSO and authors' calculations.

Table 2: Export status: CIP and Customs classification, number of firms

	CIP	Customs	CIP	Customs	CIP	Customs	CIP	Customs	
	Nonex	Nonex	Nonex	Ex	Ex	Nonex	Ex	Ex	Total
1996	2017		94		1277		969		4357
1997	1927		286		864		1417		4494
1998	1922		280		786		1482		4470
1999	1981		273		720		1587		4561
2000	1999		397		699		1731		4826
2001	1930		428		665		1745		4768
2002	2119		452		641		1732		4944
2003	2092		485		632		1693		4902
2004	1929		504		486		1666		4585
2005	1840		436		441		1590		4307
2006	1911		456		509		1600		4476
2007	2436		476		750		1604		5266
2008	2364		478		937		1558		5337
2009	2075		495		841		1495		4906
avg 2000-09	2070		461		660		1641		4832

Notes: First column is the number of CIP firms who report zero exports in the CIP, and who are not matched with any export flows in the customs data. Second column is the number of CIP firms who report zero exports in the CIP and are matched with positive export flows in the customs data. Third column is the number of CIP firms who report positive exports in the CIP and are not matched with any export flows in the customs data. Fourth column is the number of CIP firms who report positive exports in the CIP and are matched with positive export flows in the customs data. Source: CSO and authors' calculations.

Table 3: Export status: CIP and Customs classification, share of CIP revenue

	CIP	Customs	CIP	Customs	CIP	Customs	CIP	Customs
	Nonex	Nonex	Nonex	Ex	Ex	Nonex	Ex	Ex
1996	0.10		0.02		0.33		0.56	
1997	0.09		0.02		0.28		0.62	
1998	0.08		0.01		0.28		0.63	
1999	0.07		0.01		0.24		0.68	
2000	0.07		0.02		0.21		0.70	
2001	0.08		0.02		0.25		0.65	
2002	0.07		0.02		0.24		0.68	
2003	0.05		0.02		0.25		0.68	
2004	0.05		0.02		0.24		0.69	
2005	0.05		0.02		0.25		0.68	
2006	0.05		0.02		0.26		0.67	
2007	0.06		0.01		0.28		0.65	
2008	0.07		0.02		0.22		0.69	
2009	0.06		0.05		0.22		0.68	
avg 2000-09	0.06		0.02		0.24		0.68	

Notes: First column is the share of CIP sales accounted for by CIP firms who report zero exports in the CIP, and who are not matched with any export flows in the customs data. Second column is the share of CIP sales accounted for by CIP firms who report zero exports in the CIP and are matched with positive export flows in the customs data. Third column is the share of CIP sales accounted for by CIP firms who report positive exports in the CIP and are not matched with any export flows in the customs data. Fourth column is the share of CIP sales accounted for by CIP firms who report positive exports in the CIP and are matched with positive export flows in the customs data. Source: CSO and authors' calculations.

Table 4: Different measures of exports: Ratios to total CIP sales

	Total CIP exports	Total matched customs exports	CIP exports of firms with customs exports > 0
1996	0.64	0.42	0.42
1997	0.66	0.41	0.47
1998	0.69	0.49	0.49
1999	0.73	0.55	0.55
2000	0.74	0.55	0.58
2001	0.73	0.55	0.53
2002	0.75	0.54	0.56
2003	0.75	0.47	0.54
2004	0.76	0.50	0.55
2005	0.77	0.47	0.55
2006	0.75	0.44	0.53
2007	0.75	0.44	0.52
2008	0.71	0.49	0.54
2009	0.71	0.53	0.54
avg 2000-09	0.74	0.50	0.54

Notes: First column is the ratio of total exports reported by CIP firms to total sales reported by CIP firms. Second column is the ratio of total customs exports matched to CIP firms to total sales reported by CIP firms. Third column is the ratio of total CIP exports reported by CIP firms who are matched to non-zero export flows in the customs data to total sales reported by CIP firms. Source: CSO and authors' calculations.

3.2 Export markets used in our analysis of export responses

In our full sample we include the following destinations: Australia, Austria, Belgium, Brazil, Canada, China, Denmark, Finland, France, Germany, Hong Kong, India, Italy, Japan, Malaysia, Mexico, Netherlands, New Zealand, Norway, Portugal, Saudi Arabia, South Africa,

Spain, Sweden, Switzerland, Thailand, Turkey, United Arab Emirates, United Kingdom, United States.

Of these, the following are in Intrastat: Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Portugal, Spain, Sweden, United Kingdom.

The following countries are in Extrastat: Australia, Brazil, Canada, China, Hong Kong, India, Japan, Malaysia, Mexico, New Zealand, Norway, Saudi Arabia, South Africa, Switzerland, Thailand, Turkey, United Arab Emirates, United States.

4 Tariff data

4.1 Tariff sources by country

Irish exporters face zero tariffs in the EU throughout our sample period (1996-2009). They face Most Favored Nation (MFN) tariffs in the following sample countries for the full sample period: Australia, Brazil, Canada, China, Hong Kong, India, Japan, Malaysia, New Zealand, Saudi Arabia, Thailand, United Arab Emirates and the US. Norway and Switzerland are part of the European Free Trade Area (EFTA) of which the EU is also a member throughout the sample period. Tariffs on most products are zero in Norway and Switzerland, but there are non-zero tariffs on some agricultural products and processed agricultural products. The EU and Turkey are part of a customs union throughout the sample period, but again, there are zero tariffs on some agricultural products and processed agricultural products. For some portion of the sample period, Irish exporters face the MFN tariff in Mexico and South Africa; free trade agreements between these countries and the EU came into effect during the sample period, and Irish exporters face preferential tariffs for the latter part of the period.

Throughout, we restrict attention to HS 6-digit products for which there are no non-ad-valorem tariffs at the sub-6-digit tariff line (non-ad-valorem tariffs are more prevalent for some countries than for others and their use declines over time). For these 6-digit products we collect the average tariff across all tariff lines within the 6-digit product, and an indicator for whether there is variation in tariffs across tariff lines within the 6-digit product.

We collect most of our tariff data from the WTO's *Tariff Download Facility*. This is supplemented occasionally by the World Bank's *World Integrated Trade Solution* (WITS) database. We have verified that when both the WTO and WITS report tariffs, the two sources are almost always in agreement. Our data is also supplemented occasionally by information from official documents of preferential trade agreements. We now detail for each country whether and when supplemental sources are used, and provide the relevant details.

- **Australia:** Ireland faces MFN tariffs in Australia 1996-2009. MFN tariffs for Australia are taken from the WTO, available 1996-2009.

- **Brazil:** Ireland faces MFN tariffs in Brazil 1996-2009. MFN tariffs for Brazil are taken from the WTO, available 1997-2002 and 2004-2009. We fill in the tariff for 2003 with the tariff in 2002 for products for which the tariff in 2002 is the same as the tariff in 2004.

- **Canada:** Ireland faces MFN tariffs in Canada 1996-2009. MFN tariffs for Canada are taken from the WTO, available 1996-2009.

- **China:** China joined the WTO in 2001. Ireland faces MFN tariffs in China 2001-2009. The WTO reports MFN tariffs for China 2001-2009, and also for 1996 and 1997. These are the tariffs we use.

- **Hong Kong:** Ireland faces MFN tariffs in Hong Kong 1996-2009. MFN tariffs are taken from the WTO, available 1996-2009 (tariffs are all equal to zero).

- **India:** Ireland faces MFN tariffs in India 1996-2009. MFN tariffs are taken from the WTO, available 1996-1997, 2000-2002 and 2006-2008. Tariffs for 2009 are taken from WITS.

- **Japan:** Ireland faces MFN tariffs in Japan 1996-2009. MFN tariffs are taken from the WTO, available 1996-2009.

- **Malaysia:** Ireland faces MFN tariffs in Malaysia 1996-2009. MFN tariffs are taken from the WTO, available 1999-2009. Malaysia reports 2007 tariffs in the 2002 revision of the HS 6-digit classification (rather than the 2007 revision) and we account for this.

- **Mexico:** Ireland faces MFN tariffs in Mexico 1996-2000. Ireland faces a preferential tariff 2001-2009 (see http://ec.europa.eu/trade/policy/countries-and-regions/countries/mexico/). MFN tariffs are taken from WITS, available 1997-2009. The preferential tariff is taken from the WTO, available in 2001 and 2007. We fill in missing values and missing years for the preferential tariff data with the MFN tariff where the MFN tariff is ad valorem and equal to zero. Mexico reports 2002 tariffs in the 1996 revision of the HS 6-digit classification (rather than the 2002 revision), and reports 2007 tariffs in the 2002 revision of the HS 6-digit classificaiton (rather than the 2007 revision), and we account for this.

- **New Zealand:** Ireland faces MFN tariffs in New Zealand 1996-2009. MFN tariffs are taken from the WTO, available 1996-1999, 2001 and 2003-2009. We fill in the tariff for 2000 with the tariff in 1999 for products for which the tariff in 1999 is the same as the tariff in 2001. We do the same for 2002 for HS 6-digit products for which there is a one-to-one correspondence between the 1996 and 2002 revisions of the HS 6-digit classification.

- **Norway:** Ireland faces the preferential tariff offered to the EU 1996-2009. This preferential tariff is taken from the WTO, available 1999-2009. We fill in some missing values in preferential tariffs for these years with the MFN tariff (also taken from the WTO) where the MFN tariff is ad valorem and equal to zero.

- **Saudi Arabia:** Ireland faces MFN tariffs in Saudi Arabia 1996-2009. MFN tariffs are taken from the WTO, available 2001-2008. Tariffs for 2009 are taken from WITS.

- **South Africa:** Ireland faces MFN tariffs in South Africa 1996-1999. Ireland faces a preferential tariff 2000-2009. MFN tariff data is available from the WTO for the years 2000-2003, 2005 and 2007-2009. Data on the preferential tariff is taken from the WTO, 2000-2003 and 2007-2009. We make use of this preferential tariff data, filling in both missing data for these years and for 2005 using the MFN tariff where the MFN tariff is ad valorem and equal to zero.

- **Switzerland:** Ireland faces the preferential tariff offered to the EU 1996-2009. This preferential tariff is taken from the WTO, available 1996-2009. We fill in some missing values in preferential tariffs for these years with the MFN tariff (also taken from the WTO) where the MFN tariff is ad valorem and equal to zero.

- **Thailand:** Ireland faces MFN tariffs in Thailand 1996-2009. MFN tariffs are taken from the WTO, available 1999, 2001 and 2004-2009. We fill in the tariff for 2000 with the tariff in 1999 for products for which the tariff in 1999 is the same as the tariff in 2001.

- **Turkey:** Turkey and the EU have a customs union agreement which came into force at the beginning of 1996. Preferential tariffs under this agreement are taken from the WTO, available 1996-2004, 2006 and 2008-2009. We fill in the tariff for 2005 with the tariff in 2004 for products for which the tariff in 2004 is the same as the tariff in 2006. We do the same for 2007 for HS 6-digit products for which there is a one-to-one

correspondence between the 2002 and 2007 revisions of the HS 6-digit classification. We fill in some missing values in preferential tariffs for these years with the MFN tariff (also taken from the WTO) where the MFN tariff is ad valorem and equal to zero. Based on the customs union document[1] we fill in any remaining missing non-agricultural tariffs as zero.

- **United Arab Emirates:** Ireland faces MFN tariffs in the United Arab Emirates 1996-2009. MFN tariffs are available from the WTO for 2005, 2007 and 2008. We take tariffs for 2009 from WITS. We fill in the tariff for 2006 with the tariff for 2005 if there is a one-to-one correspondence between the 2002 and 2007 revisions of the HS 6-digit classification, and the tariff in 2005 equals the tariff in 2007.

- **United States:** Ireland faces MFN tariffs in the US 1996-2009. MFN tariffs are taken from the WTO, available 2007-2009. We take tariffs for 1996 from WITS, using information from the WTO for 1997 to identify which HS 6-digit products have non-ad-valorem tariffs at the tariff line.

4.2 Coverage

Table 5 lists for each country and year in the data the number of HS6-digit products for which we have tariff data, excluding HS 6-digit products where there are non-ad-valorem tariffs and where there is sub-6-digit variation at the tariff line. The blanks represent years in which no data is available.

[1] http://www.avrupa.info.tr/fileadmin/Content/Downloads/PDF/Custom_Union_des_ENG.pdf

Table 5: Tariff data coverage: # of HS6s for which we have tariffs

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Australia	4,638	4,640	4,727	4,738	4,748	4,751	4,826	4,826	4,826	4,826	4,826	4,632	4,632	4,632
Brazil		4,444	4,438	4,436	4,416	4,426	4,506	629	4,466	4,452	4,459	4,274	4,272	4,266
Canada	3,693	3,687	3,446	3,461	3,471	3,472	3,534	3,620	3,622	3,592	3,592	3,396	3,392	3,525
China	4,633	4,602				4,548	4,608	4,639	4,674	4,735	4,740	4,519	4,521	4,520
Hong Kong	5,113	5,113	5,113	5,113	5,113	5,113	5,222	5,222	5,222	5,222	5,222	5,051	5,051	5,051
India	5,103	5,102			4,704	4,754	4,947				4,838	4,728	4,613	4,738
Japan	3,860	3,870	3,866	3,783	3,787	3,782	3,855	3,851	4,023	4,033	4,020	3,835	3,835	3,817
Malaysia				4,215	4,313	4,334	4,468	4,443	4,448	4,451	4,452	4,243	4,355	4,363
Mexico		3,873	3,862	3,808	3,805	3,814						4,542		
New Zealand	3,992	4,019	4,062	4,090	4,042	4,080	3,753	4,165	4,208	4,207	4,377	4,177	4,288	4,289
Norway				4,615	4,622	4,626	4,728	4,768	4,829	4,810	4,811	4,649	4,649	4,649
Saudi Arabia						4,644	4,869	4,900	4,897	4,905	4,967	4,920	4,813	4,919
South Africa					3,229	3,286	2,864	3,390				4,387	4,391	4,411
Switzerland	4,425	4,516	4,517	4,514	4,556	4,556	4,660	4,674	4,676	4,679	4,720	4,557	4,574	4,566
Thailand				3,826	129	3,869			3,936	3,939	3,975	4,058	4,058	4,057
Turkey	4,616	4,620	4,623	4,634	4,634	4,634	4,727	4,724	4,700	4,640	4,649	4,406	4,467	4,489
UAE										5,186	4,242	4,920	4,920	4,963
USA	3,075	3,069	3,040	3,240	3,215	3,283	3,336	3,322	3,492	3,353	3,353	3,168	3,170	3,169

Notes: Source: WTO, WITS and authors' calculations. The table reports for each country and year the number of HS6 categories for which there are no ad valorem tariffs, and all tariffs on all tariff lines within the HS6 are identical.

4.3 More details on creation of variables used in the regressions

In the text of the paper, we describe how we create tariff variables at the level of the firm-product-market for our analysis of entry and exit, and our analysis of export revenue. one points that we do not mention there for reasons of space is as follows. When we are constructing a weighted average over a number of HS6 categories, for some of which we do not have tariff data, we take the weighted average only across the HS6s for which we do have tariff data.

4.4 Variation in the data

We illustrate the variation in the raw data by running some simple fixed effects regressions and plotting the histograms of the resulting residuals. Let j index concorded HS6 products, let k index countries and let t index time. We then construct the variables $\ln\left(1+T_t^{jk}\right)$ and $\Delta\ln\left(1+T_t^{jk}\right)$ and run the following regressions:

$$\ln\left(1+T_t^{jk}\right)=\alpha^{jk}+c_t^j+\varepsilon_t^{jk}$$

and

$$\Delta\ln\left(1+\tau_t^{jk}\right)=c_t^j+\eta_t^{jk}$$

Figure 1 plots a histogram of the residuals from the first regression (ε_t^{jk}). Figure 2 plots a histogram of the residuals from the second regression (η_t^{jk}).

The tariff variation comes mainly from tariff reductions over the sample period. We illustrate this by running the following regressions country-by-country:

$$\ln\left(1+T_t^{jk}\right) = \alpha^{jk} + c_t^k + \varepsilon_t^{jk}$$

and plotting the coefficients on the year dummies. Figure 3 does this for five developed countries. Figure 4 does this for China and India (for these countries the gaps in the data are indicated by the dashed portion of the line).

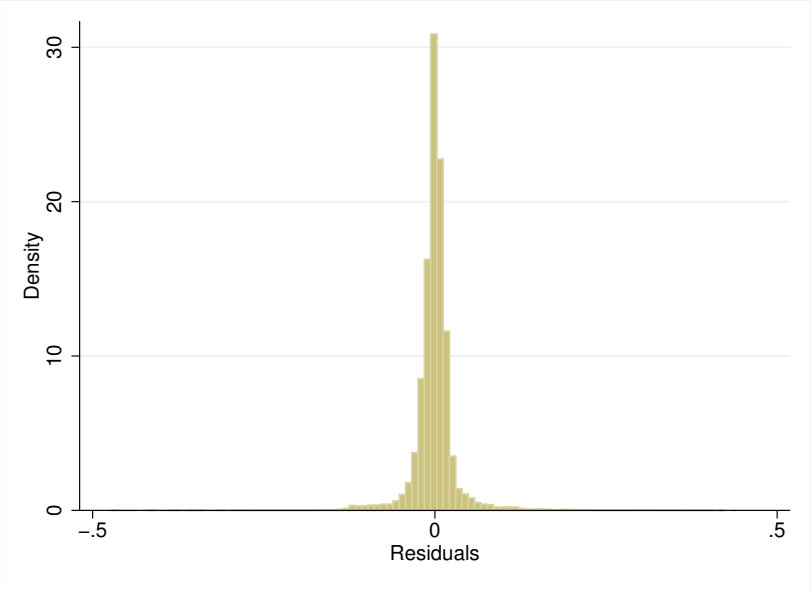

Figure 1: Residual variation in tariff levels

Notes: Figure shows histogram of residuals from regressing $\ln\left(1+\tau_t^{jk}\right)$ on country fixed effects and HS6-year fixed effects. Source: WTO and authors' calculations.

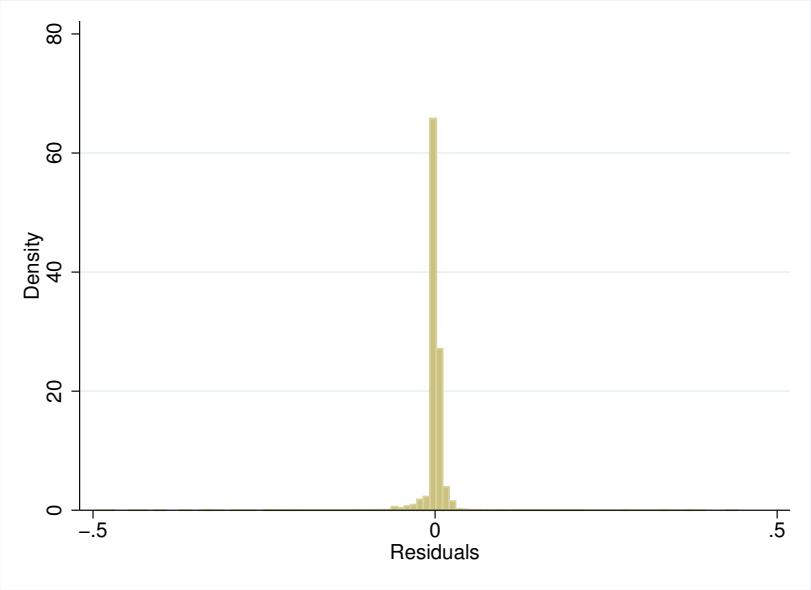

Figure 2: Residual variation in tariff changes

Notes: Figure shows histogram of residuals from regressing $\Delta \ln\left(1+\tau_t^{jk}\right)$ on HS6-year fixed effects. Source: WTO and authors' calculations.

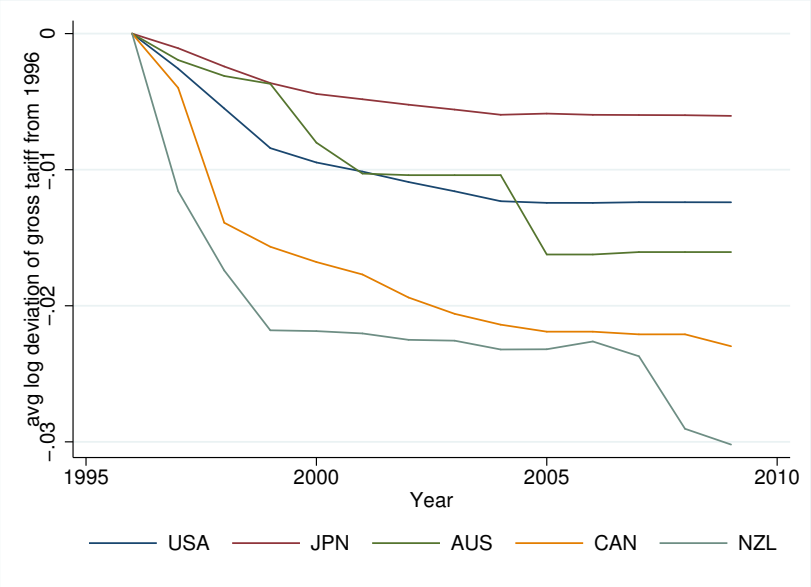

Figure 3: Average evolution of tariffs for 5 rich destination markets

Notes: Figure shows coefficients on year dummies in country-by-country regression of $\ln\left(1+T_t^{jk}\right)$ on HS6 fixed effects and year dummies. Source: WTO and authors' calculations.

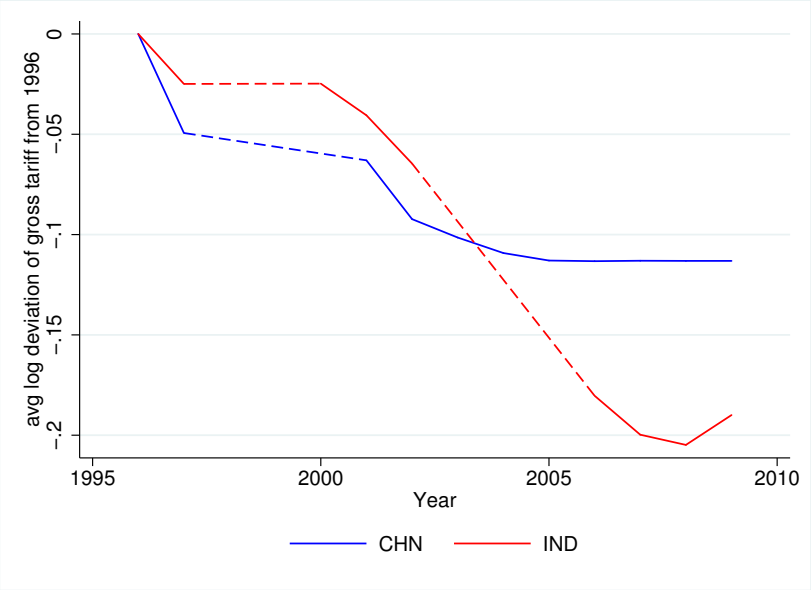

Figure 4: Average evolution of tariffs for China and India

Notes: Figure shows coefficients on year dummies in country-by-country regression of $\ln\left(1+T_t^{jk}\right)$ on HS6 fixed effects and year dummies. Dotted lines indicate missing years in data. Source: WTO and authors' calculations.

5 Macro data

5.1 Sources

Annual average nominal exchange rates with the US dollar are taken from the IMF's *International Financial Statistics* (IFS). These are used to construct nominal exchange rates between the Irish currency (Irish Punt 1996-2001, Euro 2002-2009) and the relevant partner currency. Fixed Euro conversion rates from the European Central Bank are used to convert pre-Euro currencies to Euros.

The CPI for all countries except China and the United Arab Emirates is taken from IFS. The CPI for China and for the United Arab Emirates 2007-2009 are taken from the the World Bank's *World Development Indicators* (WDI).

National accounts data on GDP, exports and imports in current local currency are taken from both the OECD's *National Accounts Statistics* and the WDI. For Brazil, Hong Kong, India, Malaysia, Saudi Arabia, Thailand and the United Arab Emirates, the WDI data is used. For all other countries, the OECD data is used. Real demand in each market is calculated as GDP - Exports + Imports, deflated by the CPI (taken from IFS for all countries other than China and the UAE, for which data from WDI is used).

5.2 Variation in the data

We illustrate the variation in the raw data by running some simple fixed effects regressions and plotting the histograms of the resulting residuals. Let k index markets and let t index time. For each variable $w = \ln RER,\ \ln Q$ we run the following regressions:

$$w_t^k = \alpha^k + c_t + \varepsilon_t^k$$

and

$$\Delta \ln w_t^k = c_t + \eta_t^k$$

The histograms of the residuals from the four resulting regressions are in Figures 5, 6, 7 and 8. Figures 9 illustrates that the bulk of variation comes from non-Euro markets.

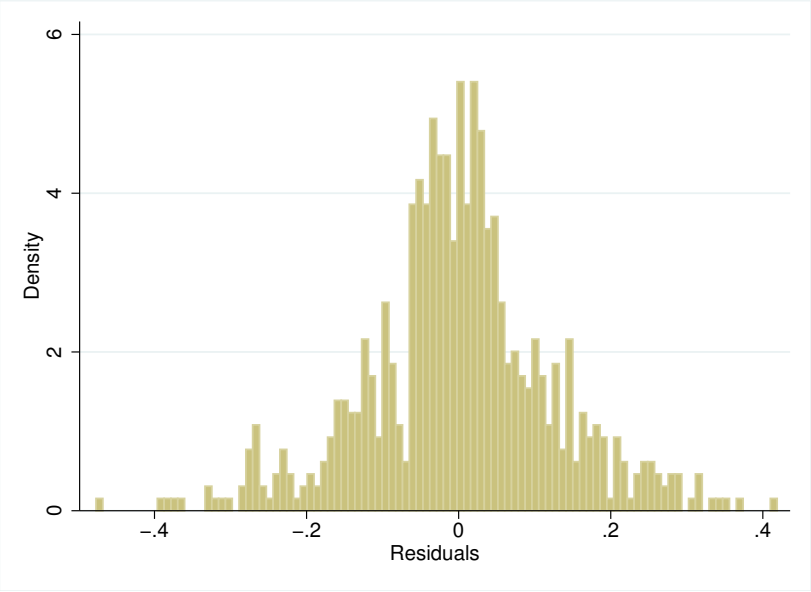

Figure 5: Residual variation in real exchange rate level

Notes: Figure shows histogram of residuals from regressing rer_t^k on country fixed effects and year fixed effects. Source: IFS, WDI and authors' calculations.

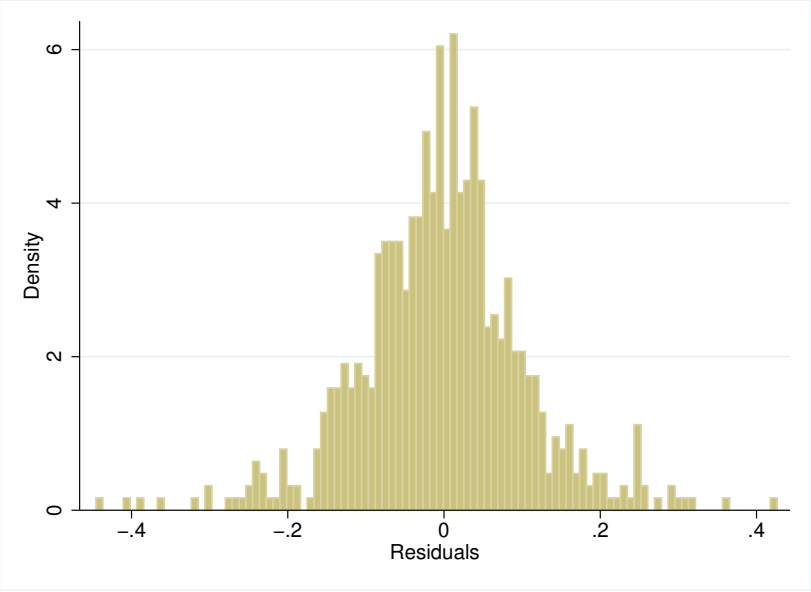

Figure 6: Residual variation in real demand level

Notes: Figure shows histogram of residuals from regressing dem_t^k on country fixed effects and year fixed effects. Source: OECD, WDI, IFS and authors' calculations.

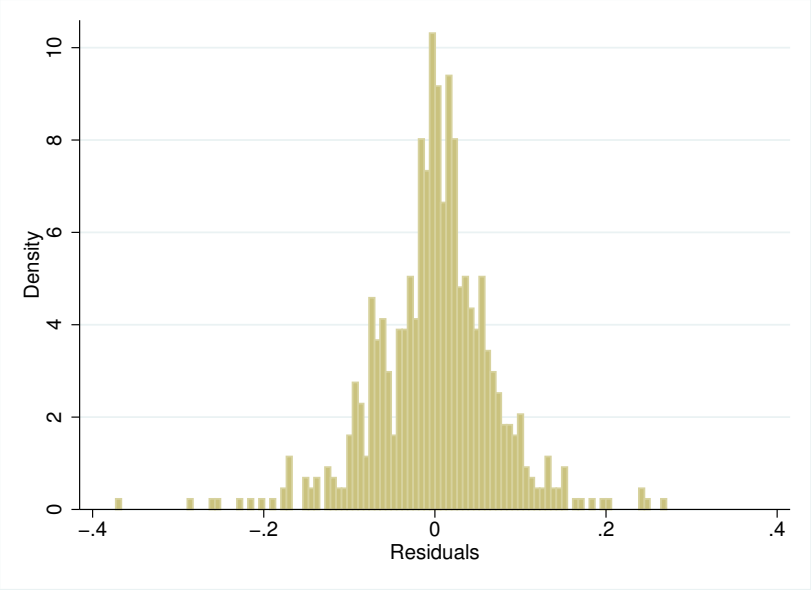

Figure 7: Residual variation in real exchange rate differences

Notes: Figure shows histogram of residuals from regressing $\Delta \ln rer_t^k$ on year fixed effects. Source: IFS, WDI and authors' calculations.

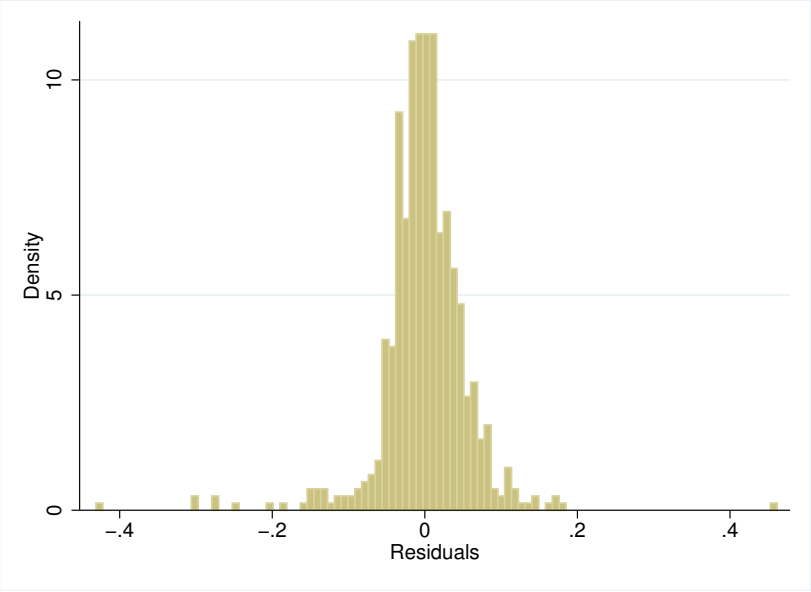

Figure 8: Residual variation in real demand differences

Notes: Figure shows histogram of residuals from regressing $\Delta \ln dem_t^k$ on year fixed effects. Source: OECD, WDI, IFSI and authors' calculations.

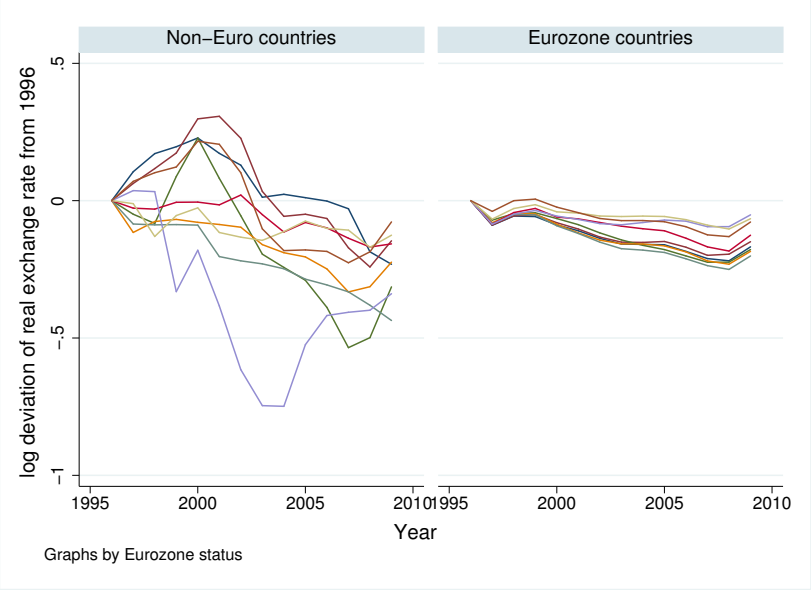

Figure 9: Evolution of real exchange rates in selected non-Euro and Eurozone markets

Notes: Figure shows log deviation of annual average real exchange rate from 1996 level for selected Non-Euro and Eurozone countries. Non-Euro countries include Australia, Brazil, China, Japan, Norway, Sweden, Switzerland, UK and USA. Eurozone countries include Austria, Belgium, Finland, France, Germany, Italy, Netherlands, Spain and Portugal. Source: IMF, OECD, WDI and authors' calculations.

6 Robustness tables

Table 6: Summary statistics on exporters and non-exporters

		Mean										
				Share	Share	rate of export			ex. size premium		export	# markets
	# firms	employees	age	foreign	multi	particip.	entry†	exit†	employees	revenue	intensity	per exporter
1996	4357	55	14	0.16	0.03	0.25			3.31	4.40	0.46	9.4
1997	4494	56	15	0.15	0.03	0.38			2.35	2.97	0.36	7.0
1998	4470	57	16	0.15	0.03	0.40	0.06	0.07	2.60	3.83	0.38	7.2
1999	4561	57	16	0.14	0.03	0.41	0.09	0.09	3.03	4.60	0.37	7.4
2000	4826	55	16	0.13	0.03	0.45	0.13	0.07	3.14	4.55	0.34	6.9
2001	4768	55	16	0.14	0.03	0.46	0.08	0.07	3.07	3.22	0.33	6.8
2002	4944	51	17	0.13	0.03	0.45	0.08	0.10	3.12	5.19	0.31	6.8
2003	4902	49	17	0.13	0.03	0.45	0.10	0.13	3.33	5.66	0.31	6.9
2004	4585	51	18	0.12	0.03	0.48	0.11	0.13	3.52	5.42	0.31	6.7
2005	4307	53	19	0.13	0.03	0.48	0.08	0.15	3.36	5.26	0.31	6.8
2006	4476	52	18	0.11	0.03	0.47	0.13	0.15	3.28	5.22	0.30	6.4
2007	5266	45	17	0.09	0.02	0.40	0.11	0.16	3.59	5.50	0.29	6.3
2008	5337	40	16	0.09	0.02	0.39	0.09	0.16	4.17	8.44	0.28	5.9
2009	4906	39	17	0.09	0.02	0.41	0.08	0.14	4.18	8.51	0.29	6.4
Avg	4729	51	17	0.13	0.03	0.42	0.09	0.12	3.29	5.20	0.33	6.9

Notes: Statistics are for our cleaned data set of CIP firms. Firms are defined as exporters if they are matched to positive concorded product exports from customs data. Export intensity is calculated as total concorded product exports from customs divided by sales reported in the CIP. Values greater than 1 are replaced by 1. † The set of potential entrants used to calculate the entry rate in year t includes all firms present in year t which did not export in year $t-1$. This includes firms born in year t. The set of potential exiters used to construct the exit rate in year $t$includes all firms exporting in year $t-1$, including those who are no longer present in the CIP in year t. Entry and exit rate averages are calculated over 1998-2009. Source: CSO and authors' calculations.

Table 7: Share of exports by destination in published trade data

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Australia	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Canada	1	1	1	0	0	1	1	1	0	0	0	0	0	1
China	0	0	0	0	0	0	1	1	1	1	1	1	2	2
Denmark	1	1	1	1	1	1	1	1	1	1	1	1	1	0
Japan	3	3	3	3	4	4	3	3	3	3	2	2	2	2
Norway	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sweden	2	2	2	2	2	1	1	1	1	1	1	1	1	1
Switzerland	2	2	2	2	2	3	3	3	3	4	3	4	3	3
UK	25	25	22	22	22	24	24	18	17	17	18	19	18	16
US	9	11	14	15	17	17	18	21	20	19	19	18	19	22
Euro 9	41	40	43	40	37	35	38	41	42	43	42	40	40	41

Notes: Source: Comtrade and authors' calculations. The Euro 9 includes Austria, Belgium, Finland, France, Germany, Italy, Netherlands, Portugal and Spain.

Table 8: Entry and past participation: unconditional statistics

History	Entry rate	Share of potential entrants	Share of entrants
Some past export experience	0.129	0.01	0.22
Never participated	0.006	0.99	0.88

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. The set of potential entrants used to calculate the entry rate in year t includes all firm-product-markets present in year t which did not export in year $t-1$. This includes firms born in year t. We categorize a firm-product-market-year observation as having some past export experience if we observe positive exports for this firm-product-market in some year prior to $t-1$. This measure of past export experience is censored by the start of the sample.

Table 9: Exit and past participation: unconditional statistics

Market tenure	Exit rate	Share of export obs.	Share of exiters
1 year	0.45	0.24	0.42
2 years	0.33	0.12	0.16
3 years	0.22	0.08	0.06
4 years	0.23	0.05	0.04
5 years	0.18	0.03	0.02
6 years	0.15	0.02	0.01
7+ years	0.14	0.03	0.02
censored	0.16	0.43	0.26

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. The set of potential exiters used to construct the exit rate in year $t$includes all firm-product-markets exporting in year $t-1$, including firms no longer present in the CIP in year t. Market tenure is the number of years a firm-product-market observation has been continuously exporting since entry. For observations where exporting is ongoing in 1996 or starts in 1997 we categorize tenure as censored by the start of the sample.

Table 10: Share of in-sample exports by market tenure and export spell length

	Export spell length							
Market tenure	1 year	2 years	3 years	4 years	5 years	6 years	7+ years	Censored exit
1 year	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01
2 years		0.01	0.00	0.01	0.00	0.00	0.02	0.01
3 years			0.00	0.01	0.00	0.00	0.03	0.01
4 years				0.00	0.00	0.00	0.03	0.01
5 years					0.00	0.00	0.03	0.01
6 years						0.00	0.02	0.00
7+ years							0.09	
Censored entry								0.63

Notes: Products are defined based on the concorded CN product definition as described above. Shares are calculated within each year, and then each year is weighted equally. Market tenure is censored when exporting is ongoing in 1996 or begins in 1997. Given top-coding at 7 years, completed export spell length is censored when entry takes place in 2004 or later and exporting is ongoing at the Source: CSO and authors' calculations.

Table 11: Entry and past participation

	Fixed effects only	Limited history	Richer history
History	coeff. s.e.	coeff. s.e.	coeff. s.e.
$evpart_t^{ijk}$		0.091 (0.002)**	
$X_{t-2}^k = 1$			0.174 (0.004)**
$X_{t-2}^k = 0$, $X_{t-3}^k = 1$			0.091 (0.004)**
$X_{t-2}^k = 0$, $X_{t-3}^k = 0$, $evpart_t^k = 1$			0.044 (0.002)**
firm-prod-yr f.e.	yes	yes	yes
prod-mkt-yr f.e.	yes	yes	yes
N	2,785,844	2,785,844	2,785,844
R^2	0.32	0.33	0.34
R^2-adj	0.20	0.21	0.23

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is an indicator for entry at the firm-product-market level. Sample period is 1998-2009. Only potential entrants are included in the regression. Omitted category is observations with no past export experience. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 12: Exit and past participation

	Fixed effects only	Including history
Market tenure	coeff. s.e.	coeff. s.e.
2 years		-0.147 (0.010)**
3 years		-0.206 (0.012)**
4 years		-0.241 (0.013)**
5 years		-0.218 (0.014)**
6 years		-0.263 (0.015)**
7+ years		-0.265 (0.013)**
censored		-0.272 (0.009)**
firm-prod-yr f.e.	yes	yes
prod-mkt-yr f.e.	yes	yes
N	47,592	47,592
R^2	0.63	0.65
R^2-adj	0.44	0.47

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is an indicator for exit at the firm-product-market level in the next year. Only current participants are included in the regression. Omitted category is observations with market tenure equal to 1 year. Censored indicates that market tenure is censored because exporting was ongoing at the start of the sample. This is extended also to observations observed to "enter" in 1997, because of the relatively poor quality of the match between CIP and customs data in 1996. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 13: Revenue dynamics

	F.E. only		Including history	
	coeff	s.e.	coeff	s.e.
Mkt tenure	2-year spell			
1 year			0.48	(0.05)**
2 years			0.49	(0.05)**
Mkt tenure	3-year spell			
1 year			0.83	(0.06)**
2 years			1.23	(0.06)**
3 years			0.66	(0.09)**
Mkt tenure	4-year spell			
1 year			0.86	(0.08)**
2 years			1.42	(0.08)**
3 years			1.45	(0.09)**
4 years			1.00	(0.11)**
Mkt tenure	5-year spell			
1 year			1.03	(0.11)**
2 years			1.67	(0.10)**
3 years			1.70	(0.11)**
4 years			1.59	(0.11)**
5 years			0.98	(0.11)**
Mkt tenure	6-year spell			
1 year			0.98	(0.13)**
2 years			1.86	(0.13)**
3 years			1.93	(0.12)**
4 years			1.94	(0.13)**
5 years			1.65	(0.14)**
6 years			1.17	(0.14)**
Mkt tenure	7+ year spell			
1 year			1.26	(0.08)**
2 years			2.08	(0.07)**
3 years			2.32	(0.07)**
4 years			2.49	(0.07)**
5 years			2.60	(0.07)**
6 years			2.58	(0.07)**
7+ years			2.51	(0.06)**
	Censored			
cens entry			2.74	(0.04)**
cens exit			1.40	(0.05)**
	Fixed effects			
Firm-prod-yr	Yes		Yes	
Prod-mkt-yr	Yes		Yes	
N	121,261		121,261	
rsq	0.73		0.76	
rsq-adj	0.55		0.60	

Notes: Products are defined based on the concorded CN product definition as described above. Dependent variable is log revenue at the firm-product-market-year level. Full set of firm-product-year and product-market-year effects included. Omitted category in column 2 is spells that last one year. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 14: Export entry responses to shocks: Baseline and alternative specifications

		(1)		(2)		(3)		(4)	
		Baseline		No $evpart_t^k$		Interactions		Shocks in differences	
		coeff	s.e.	coeff	s.e.	coeff	s.e.	coeff	s.e.
All	τ_t^{jk}	-0.006	(0.002)**	-0.005	(0.002)**			-0.022	(0.006)**
	p_t^k	0.001	(0.001)**	0.002	(0.001)**			0.003	(0.001)**
	q_t^k	0.005	(0.001)**	0.005	(0.001)**			0.004	(0.001)**
No previous participation	τ_t^{jk}					-0.005	(0.002)**		
	p_t^k					0.001	(0.001)*		
	q_t^k					0.005	(0.001)**		
Previous participation	τ_t^{jk}					-0.080	(0.044)*		
	p_t^k					0.003	(0.001)**		
	q_t^k					0.006	(0.001)**		
$evpart_t^k$		0.079	(0.002)**			0.055	(0.002)**	0.079	(0.002)**
Firm-prod-yr f.e.		yes		yes		yes		yes	
Prod-mkt f.e.		yes		yes		yes		yes	
N		2,380,829		2,380,829		2,380,829		2,268,204	
R^2		0.28		0.27		0.28		0.29	
R^2-adjusted		0.23		0.23		0.23		0.24	
		In-sample entry rate†							
All		0.008							
No previous participation		0.006							
Previous participation		0.129							

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Sample period is 1998-2009. Only potential exiters are included in the regression. Dependent variable is an indicator for exit at the firm-product-market level. Omitted category in columns (1), (3) and (4) is observations with 1 year . Tariffs, real exchange rates and foreign demand are included in logs in columns (1), (2) and (3), and in differences in column (4). Robust standard errors calculated. ** significant at 5%, * significant at 10%. † In-sample entry rate refer to levels specifications. Source: CSO and authors' calculations.

Table 15: Export entry responses to shocks: In differences, allowing asymmetric responses to RER increases and decreases

	coeff	s.e.
$\Delta\tau_t^{jk}$	-0.022	(0.006)**
$\Delta p_t^k > 0$	-0.001	(0.002)
$\Delta p_t^k < 0$	0.006	(0.002)**
Δq_t^k	0.004	(0.001)**
Export history control	yes	
Firm-prod-yr f.e.	yes	
Prod-mkt f.e.	yes	
N	2,268,204	
R^2	0.29	
R^2-adjusted	0.24	
	In-sample entry rate	
	0.008	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is an indicator for entry at the firm-product-market level. Sample period is 1998-2009. Only potential entrants are included in the regression. Export history control is an indicator for past export experience. Tariffs, real exchange rates and foreign demand are included in log differences. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 16: Export entry responses to shocks: In differences, allowing nonlinear responses to RER changes

	coeff	s.e.
$\Delta\tau_t^{jk}$	-0.022	(0.006)**
$\lvert\Delta p_t^k\rvert < 0.1$	0.002	(0.002)
$\lvert\Delta p_t^k\rvert > 0.1$	0.003	(0.001)**
Δq_t^k	0.004	(0.001)**
Export history control	yes	
Firm-prod-yr f.e.	yes	
Prod-mkt f.e.	yes	
N	2,268,204	
R^2	0.29	
R^2-adjusted	0.24	
	In-sample entry rate	
	0.008	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is an indicator for entry at the firm-product-market level. Sample period is 1998-2009. Only potential entrants are included in the regression. Export history control is an indicator for past export experience. Tariffs, real exchange rates and foreign demand are included in log differences. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 17: Export entry responses to shocks: In differences, including forwards of tariff changes

	coeff	s.e.
$\Delta\tau_t^{jk}$	0.001	(0.006)
$\Delta\tau_{t+1}^{jk}$	0.010	(0.001)**
Δp_t^k	0.003	(0.001)**
Δq_t^k	0.005	(0.002)**
Export history control	yes	
Firm-prod-yr f.e.	yes	
Prod-mkt f.e.	yes	
N	2,111,217	
R^2	0.30	
R^2-adjusted	0.24	
	In-sample entry rate	
	0.008	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is an indicator for entry at the firm-product-market level. Sample period is 1998-2009. Only potential entrants are included in the regression. Export history control is an indicator for past export experience. Tariffs, real exchange rates and foreign demand are included in log differences. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 18: Export entry responses to shocks: Conditional logit

	coeff	s.e.
τ_t^{jk}	-2.42	(0.30)**
p_t^k	0.18	(0.13)
q_t^k	0.37	(0.14)**
Export history control	yes	
Firm-prod-yr f.e.	yes	
Mkt dummies	yes	
N	177,688	
Pseudo-R^2	0.16	
	In-sample entry rate	
	0.11	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is an indicator for entry at the firm-product-market level. Sample period is 1998-2009. Only potential entrants are included in the regression. Export history control is an indicator for past export experience. Tariffs, real exchange rates and foreign demand are included in logs. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 19: Export entry responses to shocks: Market interactions

		(1)		(2)	
		5% threshold		10% threshold	
		coeff	s.e.	coeff	s.e.
Low participation markets	τ_t^{jk}	-0.003	(0.002)	-0.004	(0.002)*
	p_t^k	0.001	(0.001)**	0.001	(0.001)
	q_t^k	0.005	(0.001)**	0.005	(0.001)**
High participation markets	τ_t^{jk}	-0.088	(0.120)	-0.090	(0.012)
	p_t^k	0.003	(0.002)	0.006	(0.003)*
	q_t^k	-0.005	(0.002)**	-0.004	(0.004)
Export history control		yes		yes	
Firm-prod-yr f.e.		yes		yes	
Prod-mkt f.e.		yes		yes	
N		2,380,829		2,380,829	
R^2		0.28		0.28	
R^2-adjusted		0.23		0.23	
		In-sample entry rate			
All		0.008		0.008	

Notes: In Column (1) the threshold for defining a high participation market is that on average the participation rate across all sample years exceeds 5%. In Column (2), the threshold is a 10% participation rate. Products are defined based on the concordance of Prodcom and CN product definitions as described above. Sample period is 1998-2009. Only potential entrants are included in the regression. Dependent variable is an indicator for entry at the firm-product-market level. Export history control is an indicator for past export experience. Tariffs, real exchange rates and foreign demand are included in logs. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 20: Export entry responses to shocks: Richer controls for export histories

	coeff	s.e.
τ_t^{jk}	-0.005	(0.002)**
p_t^k	0.002	(0.001)**
q_t^k	0.005	(0.001)**
$X_{t-2}^k = 1$	0.142	(0.004)**
$X_{t-2}^k = 0$, $X_{t-3}^k = 1$	0.072	(0.004)**
$X_{t-2}^k = 0$, $X_{t-3}^k = 0$, $evpart_t^k = 1$	0.040	(0.002)**
Firm-prod-yr f.e.	yes	
Prod-mkt f.e.	yes	
N	2,380,829	
R^2	0.29	
R^2-adjusted	0.24	
	In-sample entry rate	
	0.008	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is an indicator for entry at the firm-product-market level. Sample period is 1998-2009. Only potential entrants are included in the regression. Omitted category is observations with no past export experience. Tariffs, real exchange rates and foreign demand are included in logs. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 21: Export entry responses to shocks: Clustering standard errors at different levels

	(1)		(2)		(3)	
	firm		firm-prod		firm-prod-mkt	
	coeff	s.e.	coeff	s.e.	coeff	s.e.
τ_t^{jk}	-0.006	(0.003)**	-0.006	(0.003)**	-0.006	(0.002)**
p_t^k	0.001	(0.001)	0.001	(0.001)*	0.001	(0.001)**
q_t^k	0.005	(0.001)**	0.005	(0.001)**	0.005	(0.001)**
Export history control	yes		yes		yes	
Firm-prod-yr f.e.	yes		yes		yes	
Prod-mkt f.e.	yes		yes		yes	
N	2,380,829		2,380,829		2,380,829	
R^2	0.28		0.28		0.28	
R^2-adjusted	0.23		0.23		0.23	
	In-sample entry rate					
	0.008		0.008		0.008	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is an indicator for entry at the firm-product-market level. Sample period is 1998-2009. Only potential entrants are included in the regression. Export history control is an indicator for past export experience. Tariffs, real exchange rates and foreign demand are included in logs. Standard errors clustered at the firm level in column (1), at the firm-product level in column (2) and at the firm-product-market level in column (3). ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 22: Export entry responses to shocks: Different levels of fixed effects

	(1)		(2)		(3)	
	firm-prod		firm-year		market	
	coeff	s.e.	coeff	s.e.	coeff	s.e.
τ_t^{jk}	-0.012	(0.002)**	-0.006	(0.002)**	-0.004	(0.001)**
p_t^k	-0.000	(0.001)	0.001	(0.001)**	0.001	(0.001)*
q_t^k	-0.002	(0.001)**	0.005	(0.001)**	0.007	(0.001)**
Export history control	yes		yes		yes	
Firm-prod f.e.	yes		no		no	
Firm-yr f.e.	no		yes		no	
Firm-prod-yr f.e.	no		no		yes	
Prod-mkt f.e.	yes		yes		no	
Mkt f.e.	no		no		yes	
N	2,380,880		2,380,867		2,382,306	
R^2	0.18		0.20		0.24	
R^2-adjusted	0.16		0.17		0.21	
	In-sample entry rate					
	0.008		0.008		0.008	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is an indicator for entry at the firm-product-market level. Sample period is 1998-2009. Only potential entrants are included in the regression. Export history control is an indicator for past export experience. Tariffs, real exchange rates and foreign demand are included in logs. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 23: Export entry responses to shocks: Firm size and ownership

	(1)		(2)		(3)		(4)		(5)	
	Small (<100)		Medium (100-249)		Large (250+)		Domestic-owned		Foreign-owned	
	coeff	s.e.	coeff	s.e.	coeff	s.e.	coeff	s.e.	coeff	s.e.
τ_t^{jk}	-0.002	(0.002)	0.001	(0.013)	-0.061	(0.021)**	-0.003	(0.002)	-0.017	(0.013)
p_t^k	0.001	(0.001)**	0.000	(0.003)	-0.002	(0.005)	0.002	(0.001)**	-0.001	(0.003)
q_t^k	0.002	(0.000)**	0.016	(0.004)**	0.016	(0.006)**	0.002	(0.001)**	0.021	(0.004)**
Ex. history control	yes		yes		yes		yes		yes	
Firm-prod-yr f.e.	yes		yes		yes		yes		yes	
Prod-mkt f.e.	yes		yes		yes		yes		yes	
N	1,912,992		216,946		143,719		1,962,438		312,459	
R^2	0.26		0.32		0.37		0.24		0.35	
R^2-adjusted	0.21		0.22		0.28		0.19		0.26	
	In-sample entry rate									
	0.005		0.021		0.031		0.005		0.029	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is an indicator for entry at the firm-product-market level. Sample period is 1998-2009. Only potential entrants are included in the regression. Export history control is an indicator for past export experience. Tariffs, real exchange rates and foreign demand are included in logs. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 24: Export entry responses to shocks: Different sets of markets

	(1)		(2)		(3)	
	Extrastat		Extra + Intrathresh		No Eurozone	
	coeff	s.e.	coeff	s.e.	coeff	s.e.
τ_t^{jk}	-0.007	(0.002)**	-0.005	(0.003)**	-0.006	(0.002)**
p_t^k	0.000	(0.001)	0.001	(0.001)	0.001	(0.001)**
q_t^k	0.003	(0.001)**	0.005	(0.001)**	0.005	(0.001)**
Export history control	yes		yes		yes	
Firm-prod-yr f.e.	yes		yes		yes	
Prod-mkt f.e.	yes		yes		yes	
N	1,208,526		1,471,860		1,497,401	
R^2	0.30		0.31		0.27	
R^2-adjusted	0.22		0.24		0.20	
	In-sample entry rate					
	0.006		0.012		0.007	

Notes: Column (1) restricts the sample to Extrastat markets. Column (2) restricts the sample to Extrastat markets, and to Intrastat markets for firms which have total exports to Intrastat markets above the reporting threshold. Column (3) restricts the sample to non-Eurozone markets. Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is an indicator for entry at the firm-product-market level. Sample period is 1998-2009. Only potential entrants are included in the regression. Export history control is an indicator for past export experience. Tariffs, real exchange rates and foreign demand are included in logs. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 25: Export entry responses to shocks: Industry groups

	(1)		(2)		(3)		(4)		(5)	
	Consumer food		Cons non-food non-dur		Cons durables		Intermediates		Capital goods	
	coeff	s.e.	coeff	s.e.	coeff	s.e.	coeff	s.e.	coeff	s.e.
τ_t^{jk}	-0.009	(0.006)	-0.007	(0.005)	-0.001	(0.005)	-0.010	(0.004)**	-0.011	(0.009)
p_t^k	0.001	(0.002)	0.004	(0.002)**	-0.001	(0.001)	0.001	(0.001)*	-0.001	(0.002)
q_t^k	0.004	(0.002)**	0.003	(0.002)	0.001	(0.002)	0.001	(0.001)	0.013	(0.002)**
Ex. history control	yes		yes		yes		yes		yes	
Firm-prod-yr f.e.	yes		yes		yes		yes		yes	
Prod-mkt f.e.	yes		yes		yes		yes		yes	
N	360,559		311,630		254,238		817,016		460,771	
R^2	0.23		0.31		0.25		0.24		0.35	
R^2-adjusted	0.18		0.24		0.20		0.18		0.30	
	In-sample entry rate									
	0.012		0.008		0.003		0.005		0.013	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is an indicator for entry at the firm-product-market level. Sample period is 1998-2009. Only potential entrants are included in the regression. Export history control is an indicator for past export experience. Tariffs, real exchange rates and foreign demand are included in logs. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 26: Export entry responses to shocks: Splitting RER into nominal exchange rate and prices

	coeff	s.e.
τ_t^{jk}	-0.005	(0.002)**
x_t^k	0.001	(0.001)
cpi_t^k	0.002	(0.001)**
q_t^k	0.004	(0.001)**
Export history control	yes	
Firm-prod-yr f.e.	yes	
Prod-mkt f.e.	yes	
N	2,380,829	
R^2	0.28	
R^2-adjusted	0.23	
	In-sample entry rate	
	0.008	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is an indicator for entry at the firm-product-market level. Sample period is 1998-2009. Only potential entrants are included in the regression. Export history control is an indicator for past export experience. Tariffs, real exchange rates and foreign demand are included in logs. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 27: Export entry responses to shocks: Robustness on shock variables

	(1)		(2)		(3)		(4)	
	Liberal tariff		Strict tariff		No tariff		No demand	
	coeff	s.e.	coeff	s.e.	coeff	s.e.	coeff	s.e.
τ_t^{jk}	-0.006	(0.002)**	-0.005	(0.002)**			-0.011	(0.002)**
p_t^k	0.002	(0.001)**	0.001	(0.001)**	0.002	(0.001)**	0.001	(0.001)**
q_t^k	0.005	(0.001)**	0.005	(0.001)**	0.006	(0.001)**		
Export history control	yes		yes		yes		yes	
Firm-prod-yr f.e.	yes		yes		yes		yes	
Prod-mkt f.e.	yes		yes		yes		yes	
N	2,595,374		2,360,613		2,910,031		2,380,829	
R^2	0.27		0.28		0.25		0.28	
R^2-adjusted	0.22		0.23		0.21		0.23	
	In-sample entry rate							
	0.008		0.008		0.008		0.008	

Notes: Liberal tariff measure includes product-market-years where there is variation in tariffs at the sub-HS6 level, using the simple average of tariffs within the HS6 as the tariff measure. Strict tariff measure excludes product-market-years where there is tariff averaging due to concordance of HS6 over time. Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is an indicator for entry at the firm-product-market level. Sample period is 1998-2009. Only potential entrants are included in the regression. Export history control is an indicator for past export experience. Tariffs, real exchange rates and foreign demand are included in logs. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 28: Export exit responses to shocks: Baseline and alternative specifications

		(1)		(2)		(3)		(4)	
		Baseline		No $\mathbf{age}_{t-1}^{ijk}$		Interactions		Differences	
		coeff	s.e.	coeff	s.e.	coeff	s.e.	coeff	s.e.
All	τ_t^{jk}	0.176	(0.115)	0.175	(0.116)			-0.278	(0.388)
	p_t^k	0.012	(0.023)	0.009	(0.023)			0.069	(0.032)**
	q_t^k	0.009	(0.024)	-0.002	(0.025)			-0.065	(0.079)
Tenure = 1 year	τ_t^{jk}					0.121	(0.161)		
	p_t^k					0.011	(0.023)		
	q_t^k					0.013	(0.024)		
Tenure > 1 year	τ_t^{jk}					0.197	(0.117)*		
	p_t^k					0.012	(0.022)		
	q_t^k					0.008	(0.024)		
2 years		-0.066	(0.007)**			-0.006	(0.043)**	-0.067	(0.008)**
3 years		-0.097	(0.009)**			-0.036	(0.044)**	-0.095	(0.009)**
4 years		-0.111	(0.010)**			-0.051	(0.044)**	-0.112	(0.010)**
5 years		-0.094	(0.011)**			-0.034	(0.044)**	-0.096	(0.011)**
6 years		-0.129	(0.012)**			-0.069	(0.044)**	-0.129	(0.012)**
7+ years		-0.128	(0.011)**			-0.068	(0.044)**	-0.131	(0.011)**
censored		-0.148	(0.008)**			-0.087	(0.043)**	-0.152	(0.008)**
Firm-prod-yr f.e.		yes		yes		yes		yes	
Prod-mkt f.e.		yes		yes		yes		yes	
N		70,198		70,198		70,198		68,046	
R^2		0.60		0.60		0.60		0.61	
R^2-adjusted		0.49		0.48		0.49		0.50	
		In-sample exit rate†							
All		0.218							
Tenure = 1 year		0.377							
Tenure > 1 year		0.178							

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Sample period is 1998-2009. Dependent variable is an indicator for exit at the firm-product-market level. Only potential exiters are included in the regression. Omitted category in columns (1), (3) and (4) is observations with market tenure equal to 1 year. Tariffs, real exchange rates and foreign demand are included in logs in columns (1), (2) and (3), and in differences in column (4). Robust standard errors calculated. ** significant at 5%, * significant at 10%. † In-sample exit rate refer to levels specifications. Source: CSO and authors' calculations.

Table 29: Export exit responses to shocks: Alternative interactions

		(1)		(2)	
		Low tenure: <3yrs		Low tenure: <4yrs	
		coeff	s.e.	coeff	s.e.
Low tenure	τ_t^{jk}	0.077	(0.142)	0.093	(0.138)
	p_t^k	0.013	(0.023)	0.012	(0.023)
	q_t^k	0.012	(0.024)	0.011	(0.024)
High tenure	τ_t^{jk}	0.236	(0.122)*	0.235	(0.126)*
	p_t^k	0.011	(0.023)	0.012	(0.023)
	q_t^k	0.009	(0.024)	0.009	(0.024)
Export history controls		yes		yes	
Firm-prod-yr f.e.		yes		yes	
Prod-mkt f.e.		yes		yes	
N		70,198		70,198	
R^2		0.60		0.60	
R^2-adjusted		0.49		0.49	
		In-sample exit rate			
All		0.218		0.218	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Sample period is 1998-2009. Dependent variable is an indicator for exit at the firm-product-market level. Only potential exiters are included in the regression. Export history controls are indicators for market tenure equal to 2, 3, 4, 5, 6 and 7+ years, with market tenure of 1 year being the omitted category. Tariffs, real exchange rates and foreign demand are included in logs. Robust standard errors calculated. ** significant at 5%, * significant at 10%. † In-sample exit rate refer to levels specifications. Source: CSO and authors' calculations.

Table 30: Export exit responses to shocks: In differences, allowing asymmetric responses to RER increases and decreases

	coeff	s.e.
$\Delta\tau_t^{jk}$	-0.277	(0.388)
$\Delta p_t^k > 0$	0.058	(0.065)
$\Delta p_t^k < 0$	0.080	(0.065)
Δq_t^k	-0.067	(0.079)**
Export history controls	yes	
Firm-prod-yr f.e.	yes	
Prod-mkt f.e.	yes	
N	68,046	
R^2	0.61	
R^2-adjusted	0.50	
	In-sample exit rate	
	0.216	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Sample period is 1998-2009. Dependent variable is an indicator for exit at the firm-product-market level. Only potential exiters are included in the regression. Export history controls are indicators for market tenure equal to 2, 3, 4, 5, 6 and 7+ years, with market tenure of 1 year being the omitted category. Tariffs, real exchange rates and foreign demand are included in log differences. Robust standard errors calculated. ** significant at 5%, * significant at 10%. † In-sample exit rate refer to levels specifications. Source: CSO and authors' calculations.

Table 31: Export exit responses to shocks: In differences, allowing nonlinear responses to RER changes

	coeff	s.e.
$\Delta\tau_t^{jk}$	-0.278	(0.388)
$\lvert\Delta p_t^k\rvert < 0.1$	0.072	(0.050)
$\lvert\Delta p_t^k\rvert > 0.1$	0.067	(0.045)
Δq_t^k	-0.064	(0.080)**
Export history controls	yes	
Firm-prod-yr f.e.	yes	
Prod-mkt f.e.	yes	
N	68,046	
R^2	0.61	
R^2-adjusted	0.50	
	In-sample exit rate	
	0.216	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Sample period is 1998-2009. Dependent variable is an indicator for exit at the firm-product-market level. Only potential exiters are included in the regression. Export history controls are indicators for market tenure equal to 2, 3, 4, 5, 6 and 7+ years, with market tenure of 1 year being the omitted category. Tariffs, real exchange rates and foreign demand are included in log differences. Robust standard errors calculated. ** significant at 5%, * significant at 10%. † In-sample exit rate refer to levels specifications. Source: CSO and authors' calculations.

Table 32: Export exit responses to shocks: In differences, including forwards of tariff changes

	coeff	s.e.
$\Delta\tau_t^{jk}$	0.144	(0.464)
$\Delta\tau_{t+1}^{jk}$	0.027	(0.469)
Δp_t^k	0.048	(0.033)
Δq_t^k	-0.028	(0.079)
Export history controls	yes	
Firm-prod-yr f.e.	yes	
Prod-mkt f.e.	yes	
N	67,532	
R^2	0.61	
R^2-adjusted	0.50	
	In-sample exit rate	
	0.215	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Sample period is 1998-2009. Dependent variable is an indicator for exit at the firm-product-market level. Only potential exiters are included in the regression. Export history controls are indicators for market tenure equal to 2, 3, 4, 5, 6 and 7+ years, with market tenure of 1 year being the omitted category. Tariffs, real exchange rates and foreign demand are included in log differences. Robust standard errors calculated. ** significant at 5%, * significant at 10%. † In-sample exit rate refer to levels specifications. Source: CSO and authors' calculations.

Table 33: Export exit responses to shocks: Conditional logit

	coeff	s.e.
τ_t^{jk}	1.85	(0.52)**
p_t^k	-0.04	(0.21)
q_t^k	-0.14	(0.21)
Export history controls	yes	
Firm-prod-yr f.e.	yes	
Mkt dummies	yes	
N	44,551	
Pseudo-R^2	0.21	
	In-sample exit rate	
	0.25	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Sample period is 1998-2009. Dependent variable is an indicator for exit at the firm-product-market level. Only potential exiters are included in the regression. Export history controls are indicators for market tenure equal to 2, 3, 4, 5, 6 and 7+ years, with market tenure of 1 year being the omitted category. Tariffs, real exchange rates and foreign demand are included in logs. Robust standard errors calculated. ** significant at 5%, * significant at 10%. † In-sample exit rate refer to levels specifications. Source: CSO and authors' calculations.

Table 34: Export exit responses to shocks: Market interactions

		(1)		(2)	
		5% threshold		10% threshold	
		coeff	s.e.	coeff	s.e.
Low participation markets	τ_t^{jk}	0.193	(0.122)	0.208	(0.120)*
	p_t^k	0.003	(0.029)	-0.000	(0.026)
	q_t^k	0.012	(0.030)	0.021	(0.027)
High participation markets	τ_t^{jk}	-0.043	(0.339)	-0.036	(0.339)
	p_t^k	0.028	(0.030)	0.043	(0.035)
	q_t^k	0.005	(0.028)	-0.025	(0.031)
Export history controls		yes		yes	
Firm-prod-yr f.e.		yes		yes	
Prod-mkt f.e.		yes		yes	
N		70,198		70,198	
R^2		0.60		0.60	
R^2-adjusted		0.49		0.49	
		In-sample exit rate			
		0.218		0.218	

Notes: In Column (1) the threshold for defining a high participation market is that on average the participation rate across all sample years exceeds 5%. In Column (2), the threshold is a 10% participation rate. Products are defined based on the concordance of Prodcom and CN product definitions as described above. Sample period is 1998-2009. Dependent variable is an indicator for exit at the firm-product-market level. Only potential exiters are included in the regression. Export history controls are indicators for market tenure equal to 2, 3, 4, 5, 6 and 7+ years, with market tenure of 1 year being the omitted category. Tariffs, real exchange rates and foreign demand are included in logs. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 35: Export exit responses to shocks: Clustering standard errors at different levels

	(1)		(2)		(3)	
	firm		firm-prod		firm-prod-mkt	
	coeff	s.e.	coeff	s.e.	coeff	s.e.
τ_t^{jk}	0.176	(0.116)	0.176	(0.118)	0.176	(0.116)
p_t^k	0.012	(0.030)	0.012	(0.025)	0.012	(0.024)
q_t^k	0.009	(0.027)	0.009	(0.026)	0.009	(0.025)
Export history controls	yes		yes		yes	
Firm-prod-yr f.e.	yes		yes		yes	
Prod-mkt f.e.	yes		yes		yes	
N	70,198		70,198		70,198	
R^2	0.60		0.60		0.60	
R^2-adjusted	0.49		0.49		0.49	
	In-sample exit rate					
	0.218		0.218		0.218	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Sample period is 1998-2009. Dependent variable is an indicator for exit at the firm-product-market level. Only potential exiters are included in the regression. Export history controls are indicators for market tenure equal to 2, 3, 4, 5, 6 and 7+ years, with market tenure of 1 year being the omitted category. Tariffs, real exchange rates and foreign demand are included in logs. Standard errors are clustered at the firm level in Column (1), at the firm-product level in Column (2) and at the firm-product-market level in Column (3). ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 36: Export exit responses to shocks: Different levels of fixed effects

	(1)		(2)		(3)	
	firm-prod		firm-year		market	
	coeff	s.e.	coeff	s.e.	coeff	s.e.
τ_t^{jk}	0.309	(0.117)**	0.185	(0.112)*	0.330	(0.073)**
p_t^k	0.146	(0.021)**	0.023	(0.023)	0.006	(0.022)
q_t^k	0.170	(0.018)**	0.003	(0.025)	0.014	(0.023)
Export history controls	yes		yes		yes	
Firm-prod f.e.	yes		no		no	
Firm-yr f.e.	no		yes		no	
Firm-prod-yr f.e.	no		no		yes	
Prod-mkt f.e.	yes		yes		no	
Mkt f.e.	no		no		yes	
N	76,557		74,684		72,234	
R^2	0.27		0.52		0.54	
R^2-adjusted	0.19		0.42		0.45	
	In-sample exit rate					
	0.223		0.223		0.234	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Sample period is 1998-2009. Dependent variable is an indicator for exit at the firm-product-market level. Only potential exiters are included in the regression. Export history controls are indicators for market tenure equal to 2, 3, 4, 5, 6 and 7+ years, with market tenure of 1 year being the omitted category. Tariffs, real exchange rates and foreign demand are included in logs. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 37: Export exit responses to shocks: Firm size and ownership

	(1)		(2)		(3)		(4)		(5)	
	Small (<100)		Medium (100-249)		Large (250+)		Domestic		Foreign	
	coeff	s.e.	coeff	s.e.	coeff	s.e.	coeff	s.e.	coeff	s.e.
τ_t^{jk}	0.116	(0.255)	0.188	(0.238)	0.205	(0.168)	0.147	(0.278)	0.192	(0.127)
p_t^k	0.030	(0.044)	-0.031	(0.048)	0.007	(0.035)	-0.015	(0.044)	0.014	(0.027)
q_t^k	-0.038	(0.044)	0.042	(0.052)	0.027	(0.040)	0.015	(0.045)	0.007	(0.030)
Export history controls	yes		yes		yes		yes		yes	
Firm-prod-yr f.e.	yes		yes		yes		yes		yes	
Prod-mkt f.e.	yes		yes		yes		yes		yes	
N	27,835		19,208		21,375		29,957		39,076	
R^2	0.64		0.63		0.59		0.62		0.60	
R^2-adjusted	0.50		0.50		0.48		0.48		0.50	
	In-sample exit rate									
	0.232		0.208		0.185		0.234		0.199	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Sample period is 1998-2009. Dependent variable is an indicator for exit at the firm-product-market level. Only potential exiters are included in the regression. Export history controls are indicators for market tenure equal to 2, 3, 4, 5, 6 and 7+ years, with market tenure of 1 year being the omitted category. Tariffs, real exchange rates and foreign demand are included in logs. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 38: Export exit responses to shocks: Different sets of markets

	(1)		(2)		(3)	
	Extrastat		Extra + Intrathresh		No Eurozone	
	coeff	s.e.	coeff	s.e.	coeff	s.e.
τ_t^{jk}	0.130	(0.124)	0.177	(0.115)	0.153	(0.120)
p_t^k	0.012	(0.033)	0.008	(0.023)	0.013	(0.029)
q_t^k	-0.129	(0.043)**	0.009	(0.025)	-0.060	(0.038)
Export history controls	yes		yes		yes	
Firm-prod-yr f.e.	yes		yes		yes	
Prod-mkt f.e.	yes		yes		yes	
N	15,731		67,871		29,622	
R^2	0.60		0.60		0.62	
R^2-adjusted	0.42		0.49		0.44	
	In-sample exit rate					
	0.286		0.216		0.244	

Notes: Column (1) restricts the sample to Extrastat markets. Column (2) restricts the sample to Extrastat markets, and to Intrastat markets for firms which have total exports to Intrastat markets above the reporting threshold. Column (3) restricts the sample to non-Eurozone markets. Products are defined based on the concordance of Prodcom and CN product definitions as described above. Sample period is 1998-2009. Dependent variable is an indicator for exit at the firm-product-market level. Only potential exiters are included in the regression. Export history controls are indicators for market tenure equal to 2, 3, 4, 5, 6 and 7+ years, with market tenure of 1 year being the omitted category. Tariffs, real exchange rates and foreign demand are included in logs. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 39: Export exit responses to shocks: Industry groups

	(1)		(2)		(3)		(4)		(5)	
	Consumer food		Cons non-food non-dur		Cons durables		Intermediates		Capital goods	
	coeff	s.e.	coeff	s.e.	coeff	s.e.	coeff	s.e.	coeff	s.e.
τ_t^{jk}	0.360	(0.391)	0.043	(0.210)	-0.606	(0.902)	0.228	(0.183)	0.188	(0.227)
p_t^k	0.001	(0.059)	-0.142	(0.050)**	0.223	(0.125)*	0.018	(0.043)	0.071	(0.042)*
q_t^k	0.087	(0.058)	-0.100	(0.057)*	-0.054	(0.128)	0.007	(0.047)	-0.013	(0.045)
Ex. history controls	yes		yes		yes		yes		yes	
Firm-prod-yr f.e.	yes		yes		yes		yes		yes	
Prod-mkt f.e.	yes		yes		yes		yes		yes	
N	16,411		11,569		21,375		18,894		19,971	
R^2	0.59		0.62		0.69		0.62		0.60	
R^2-adjusted	0.45		0.52		0.55		0.48		0.50	
	In-sample exit rate									
	0.215		0.215		0.269		0.211		0.228	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Sample period is 1998-2009. Dependent variable is an indicator for exit at the firm-product-market level. Only potential exiters are included in the regression. Export history controls are indicators for market tenure equal to 2, 3, 4, 5, 6 and 7+ years, with market tenure of 1 year being the omitted category. Tariffs, real exchange rates and foreign demand are included in logs. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 40: Export exit responses to shocks: Splitting RER into nominal exchange rate and prices

	coeff	s.e.
τ_t^{jk}	0.175	(0.115)
x_t^k	0.013	(0.024)
cpi_t^k	0.012	(0.024)
q_t^k	0.009	(0.024)
Export history controls	yes	
Firm-prod-yr f.e.	yes	
Prod-mkt f.e.	yes	
N	70,198	
R^2	0.60	
R^2-adjusted	0.49	
	In-sample exit rate	
	0.218	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Sample period is 1998-2009. Dependent variable is an indicator for exit at the firm-product-market level. Only potential exiters are included in the regression. Export history controls are indicators for market tenure equal to 2, 3, 4, 5, 6 and 7+ years, with market tenure of 1 year being the omitted category. Tariffs, real exchange rates and foreign demand are included in logs. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 41: Export exit responses to shocks: Robustness on shock variables

	(1)		(2)		(3)		(4)	
	Liberal tariff		Strict tariff		No tariff		No demand	
	coeff	s.e.	coeff	s.e.	coeff	s.e.	coeff	s.e.
τ_t^{jk}	0.074	(0.102)	0.136	(0.121)			0.168	(0.113)
p_t^k	0.014	(0.021)	0.020	(0.023)	0.017	(0.020)	0.013	(0.023)
q_t^k	-0.006	(0.024)	0.006	(0.025)	-0.018	(0.022)		
Export history controls	yes		yes		yes		yes	
Firm-prod-yr f.e.	yes		yes		yes		yes	
Prod-mkt f.e.	yes		yes		yes		yes	
N	74,721		69,711		78,785		70,198	
R^2	0.60		0.61		0.58		0.60	
R^2-adjusted	0.48		0.49		0.47		0.49	
	In-sample exit rate							
	0.224		0.218		0.229		0.218	

Notes: Liberal tariff measure includes product-market-years where there is variation in tariffs at the sub-HS6 level, using the simple average of tariffs within the HS6 as the tariff measure. Strict tariff measure excludes product-market-years where there is tariff averaging due to concordance of HS6 over time.Products are defined based on the concordance of Prodcom and CN product definitions as described above. Sample period is 1998-2009. Dependent variable is an indicator for exit at the firm-product-market level. Only potential exiters are included in the regression. Export history controls are indicators for market tenure equal to 2, 3, 4, 5, 6 and 7+ years, with market tenure of 1 year being the omitted category. Tariffs, real exchange rates and foreign demand are included in logs. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 42: Export revenue responses to shocks: Coefficients on export history controls in baseline specification

	coeff	s.e.
Mkt tenure	2-year spell	
1 year	0.49	(0.03)**
2 years	0.47	(0.03)**
Mkt tenure	3-year spell	
1 year	0.80	(0.05)**
2 years	1.22	(0.04)**
3 years	0.70	(0.04)**
Mkt tenure	4-year spell	
1 year	0.84	(0.06)**
2 years	1.38	(0.06)**
3 years	1.36	(0.06)**
4 years	0.78	(0.06)**
Mkt tenure	5-year spell	
1 year	1.15	(0.07)**
2 years	1.70	(0.07)**
3 years	1.69	(0.07)**
4 years	1.53	(0.07)**
5 years	1.03	(0.07)**
Mkt tenure	6-year spell	
1 year	1.04	(0.09)**
2 years	1.81	(0.08)**
3 years	1.80	(0.08)**
4 years	1.80	(0.08)**
5 years	1.67	(0.09)**
6 years	0.21	(0.12)**
Mkt tenure	7+ year spell	
1 year	1.26	(0.06)**
2 years	1.99	(0.05)**
3 years	2.25	(0.05)**
4 years	2.34	(0.05)**
5 years	2.45	(0.05)**
6 years	1.41	(0.09)**
7+ years	1.35	(0.09)**
	Censored	
cens entry	1.45	(0.08)**
cens exit	1.25	(0.04)**

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is log revenue in Euro at the firm-product-market level. Tariffs, real exchange rates and foreign demand are included in logs in columns (1), (2) and (3), and in first differences in column (4). Full set of estimates including steady state revenue trajectories are in the Appendix. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 43: Export revenue responses to shocks: Baseline and alternative specifications

		(1)		(2)		(3)		(3)	
		Baseline		No interactions		No controls		Differences	
		coeff	s.e.	coeff	s.e.	coeff	s.e.	coeff	s.e.
Low exit prob	τ_t^{jk}	-3.02	(0.65)**					-0.66	(1.55)
	p_t^k	0.46	(0.08)**					0.46	(0.16)**
	q_t^k	0.24	(0.09)**					0.49	(0.22)**
High exit prob	τ_t^{jk}	0.89	(0.58)					0.50	(1.51)
	p_t^k	0.42	(0.08)**					0.31	(0.16)*
	q_t^k	0.17	(0.09)*					1.28	(0.21)**
All spells	τ_t^{jk}			-0.30	(0.55)	-0.43	(0.57)		
	p_t^k			0.42	(0.08)**	0.56	(0.09)**		
	q_t^k			0.22	(0.09)**	0.49	(0.10)**		
Export history controls		yes		yes		no		yes	
Firm-prod-yr f.e.		yes		yes		yes		yes	
Prod-mkt f.e.		yes		yes		yes		no	
N		191,780		191,780		191,780		124,298	
R^2		0.77		0.77		0.75		0.37	
R^2-adjusted		0.68		0.68		0.65		0.23	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is log revenue in Euro at the firm-product-market level. Tariffs, real exchange rates and foreign demand are included in logs in columns (1) and (2) and (3), and in first differences in column (4). Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 44: Export revenue responses to shocks: Alternative controls and interactions

		(1)		(2)	
		Tenure controls		Alt. interaction	
		coeff	s.e.	coeff	s.e.
Low exit prob	τ_t^{jk}	-3.21	(0.66)**	-3.08	(1.01)**
	p_t^k	0.54	(0.09)**	0.48	(0.08)**
	q_t^k	0.35	(0.09)**	0.34	(0.09)**
High exit prob	τ_t^{jk}	0.72	(0.58)	0.15	(0.54)
	p_t^k	0.50	(0.08)**	0.47	(0.08)**
	q_t^k	0.26	(0.09)**	0.25	(0.09)**
Tenure only controls		yes		no	
Export history controls		no		yes	
Firm-prod-yr f.e.		yes		yes	
Prod-mkt f.e.		yes		yes	
N		191,780		191,780	
R^2		0.77		0.78	
R^2-adjusted		0.68		0.69	

Notes: Tenure only controls includes only indicators for market tenure. Alternative interaction: Low exit probability observations are observations in spells which last at least 7 years, and for which market tenure is at least 3. Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is log revenue in Euro at the firm-product-market level. Tariffs, real exchange rates and foreign demand are included in logs in columns (1), (2) and (3), and in first differences in column (4). Full set of estimates including steady state revenue trajectories are in the Appendix. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 45: Export revenue responses to shocks: In differences, allowing for asymmetric responses to RER increases and decreases

		coeff	s.e.
Low exit prob	$\Delta\tau_t^{jk}$	-0.71	(1.56)
	$\Delta p_t^k > 0$	0.41	(0.28)
	$\Delta p_t^k < 0$	0.51	(0.23)**
	Δq_t^k	0.48	(0.22)**
High exit prob	$\Delta\tau_t^{jk}$	0.62	(1.51)
	$\Delta p_t^k > 0$	1.16	(0.29)**
	$\Delta p_t^k < 0$	-0.47	(0.25)*
	Δq_t^k	1.25	(0.21)**
$\mathbf{age}_t^{ijk} \otimes \mathbf{spell}_t^{ijk}$		yes	
Firm-prod-yr f.e.		yes	
Prod-mkt f.e.		yes	
N		124,298	
R^2		0.37	
R^2-adjusted		0.22	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is log revenue in Euro at the firm-product-market level. Tariffs, real exchange rates and foreign demand are included in logs. Full set of estimates including steady state revenue trajectories are in the Appendix. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 46: Export revenue responses to shocks: In differences, allowing for nonlinear responses to RER changes

		coeff	s.e.
Low exit prob	$\Delta\tau_t^{jk}$	-0.66	(1.55)
	$\lvert\Delta p_t^k\rvert < 0.1$	0.62	(0.22)**
	$\lvert\Delta p_t^k\rvert > 0.1$	0.33	(0.22)
	Δq_t^k	0.48	(0.22)**
High exit prob	$\Delta\tau_t^{jk}$	0.45	(1.51)
	$\lvert\Delta p_t^k\rvert < 0.1$	0.50	(0.26)*
	$\lvert\Delta p_t^k\rvert > 0.1$	0.20	(0.20)
	Δq_t^k	1.28	(0.21)**
$\mathbf{age}_t^{ijk} \otimes \mathbf{spell}_t^{ijk}$		yes	
Firm-prod-yr f.e.		yes	
Prod-mkt f.e.		yes	
N		124,298	
R^2		0.37	
R^2-adjusted		0.23	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is log revenue in Euro at the firm-product-market level. Tariffs, real exchange rates and foreign demand are included in logs. Full set of estimates including steady state revenue trajectories are in the Appendix. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 47: Export revenue responses to shocks: In differences, including forwards of tariff changes

		coeff	s.e.
Low exit prob	$\Delta\tau_t^{jk}$	-2.62	(3.55)
	$\Delta\tau_{t+1}^{jk}$	-1.92	(1.66)
	Δp_t^k	0.45	(0.16)**
	Δq_t^k	0.53	(0.23)
High exit prob	$\Delta\tau_t^{jk}$	0.50	(2.26)
	$\Delta\tau_{t+1}^{jk}$	3.43	(2.59)
	Δp_t^k	0.21	(0.17)
	Δq_t^k	1.41	(0.22)**
$\mathbf{age}_t^{ijk} \otimes \mathbf{spell}_t^{ijk}$		yes	
Firm-prod-yr f.e.		yes	
Prod-mkt f.e.		yes	
N		121,050	
R^2		0.38	
R^2-adjusted		0.23	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is log revenue in Euro at the firm-product-market level. Tariffs, real exchange rates and foreign demand are included in logs. Full set of estimates including steady state revenue trajectories are in the Appendix. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 48: Export revenue responses to shocks: Market interactions

		(1)		(2)	
		5% threshold		10% threshold	
		coeff	s.e.	coeff	s.e.
Low particip market, Low exit prob	τ_t^{jk}	-1.98	(0.66)**	-2.30	(0.65)**
	p_t^k	0.29	(0.11)**	0.30	(0.10)**
	q_t^k	0.37	(0.11)**	0.36	(0.10)**
Low particip market, High exit prob	τ_t^{jk}	0.84	(0.59)*	0.98	(0.59)*
	p_t^k	0.30	(0.11)**	0.32	(0.10)**
	q_t^k	0.31	(0.11)**	0.31	(0.10)**
High particip market, Low exit prob	τ_t^{jk}	-11.67	(6.70)*	-15.19	(6.74)**
	p_t^k	0.62	(0.11)**	0.49	(0.14)**
	q_t^k	0.08	(0.11)	-0.16	(0.13)
High particip market, High exit prob	τ_t^{jk}	-2.32	(7.13)	-3.80	(7.14)
	p_t^k	0.58	(0.11)**	0.45	(0.14)**
	q_t^k	0.01	(0.11)	-0.22	(0.13)*
Export history controls		yes		yes	
Firm-prod-yr f.e.		yes		yes	
Prod-mkt f.e.		yes		yes	
N		191,780		191,780	
R^2		0.77		0.77	
R^2-adjusted		0.68		0.68	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is log revenue in Euro at the firm-product-market level. Tariffs, real exchange rates and foreign demand are included in logs in columns (1), (2) and (3), and in first differences in column (4). Full set of estimates including steady state revenue trajectories are in the Appendix. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 49: Export revenue responses to shocks: Clustering standard errors at different levels

		(1)		(2)		(3)	
		firm		firm-prod		firm-prod-mkt	
		coeff	s.e.	coeff	s.e.	coeff	s.e.
Low exit prob	τ_t^{jk}	-3.02	(0.78)**	-3.02	(0.71)**	-3.02	(0.72)**
	p_t^k	0.46	(0.11)**	0.46	(0.11)**	0.46	(0.10)**
	q_t^k	0.24	(0.13)*	0.24	(0.12)**	0.24	(0.11)**
High exit prob	τ_t^{jk}	0.89	(0.61)	0.89	(0.63)	0.89	(0.63)
	p_t^k	0.42	(0.11)**	0.42	(0.11)**	0.42	(0.10)**
	q_t^k	0.17	(0.13)	0.17	(0.12)	0.17	(0.11)
$\mathbf{age}_t^{ijk} \otimes \mathbf{spell}_t^{ijk}$		yes		yes		yes	
Firm-prod-yr f.e.		yes		yes		yes	
Prod-mkt f.e.		yes		yes		yes	
N		191,780		191,780		191,780	
R^2		0.77		0.77		0.77	
R^2-adjusted		0.68		0.68		0.68	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is log revenue in Euro at the firm-product-market level. Tariffs, real exchange rates and foreign demand are included in logs. Full set of estimates including steady state revenue trajectories are in the Appendix. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 50: Export revenue responses to shocks: Different levels of fixed effects

		(1)		(2)		(3)	
		firm-prod		firm-yr		mkt	
		coeff	s.e.	coeff	s.e.	coeff	s.e.
Low exit prob	τ_t^{jk}	-3.15	(0.52)**	-3.51	(0.51)**	-3.88	(0.38)**
	p_t^k	0.95	(0.06)**	0.53	(0.07)**	0.42	(0.07)**
	q_t^k	0.13	(0.06)**	0.09	(0.08)	0.02	(0.08)
High exit prob	τ_t^{jk}	1.12	(0.50)**	0.76	(0.46)*	0.48	(0.30)
	p_t^k	0.92	(0.06)**	0.49	(0.07)**	0.38	(0.08)**
	q_t^k	0.09	(0.06)	-0.01	(0.08)	-0.06	(0.08)
$\mathbf{age}_t^{ijk} \otimes \mathbf{spell}_t^{ijk}$		yes		yes		yes	
Firm-prod f.e.		yes		no		no	
Firm-yr f.e.		no		yes		no	
Firm-prod-yr f.e.		no		no		yes	
Prod-mkt f.e.		yes		yes		no	
Mkt f.e.		no		no		yes	
N		249,525		272,574		203,166	
R^2		0.70		0.60		0.69	
R^2-adjusted		0.65		0.53		0.61	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is log revenue in Euro at the firm-product-market level. Tariffs, real exchange rates and foreign demand are included in logs. Full set of estimates including steady state revenue trajectories are in the Appendix. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 51: Export revenue responses to shocks: Firm size and ownership

		(1)		(2)		(3)		(4)		(5)	
		Small (<100)		Medium (100-249)		Large (250+)		Domestic owned		Foreign owned	
		coeff	s.e.	coeff	s.e.	coeff	s.e.	coeff	s.e.	coeff	s.e.
Low exit prob	τ_t^{jk}	0.38	(1.23)	-4.38	(1.50)**	-4.08	(1.06)**	-1.13	(1.33)	-3.48	(0.74)**
	p_t^k	0.26	(0.13)**	0.58	(0.19)**	0.46	(0.15)**	0.20	(0.13)	0.57	(0.12)**
	q_t^k	0.12	(0.15)	0.20	(0.21)	0.45	(0.17)**	0.10	(0.16)	0.30	(0.12)**
High exit prob	τ_t^{jk}	1.62	(1.13)	0.58	(1.19)	-0.29	(1.03)	1.86	(1.23)	0.57	(0.68)
	p_t^k	0.23	(0.13)*	0.58	(0.19)**	0.41	(0.15)**	0.19	(0.13)	0.53	(0.11)**
	q_t^k	0.08	(0.15)	0.12	(0.21)	0.39	(0.17)**	0.05	(0.16)	0.23	(0.12)**
$\mathbf{age}_t^{ijk} \otimes \mathbf{spell}_t^{ijk}$		yes		yes		yes		yes		yes	
Firm-prod-yr f.e.		yes		yes		yes		yes		yes	
Prod-mkt f.e.		yes		yes		yes		yes		yes	
N		72,274		44,895		64,929		70,450		115,430	
R^2		0.79		0.78		0.79		0.79		0.78	
R^2-adjusted		0.68		0.68		0.71		0.69		0.69	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is log revenue in Euro at the firm-product-market level. Tariffs, real exchange rates and foreign demand are included in logs. Full set of estimates including steady state revenue trajectories are in the Appendix. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 52: Export revenue responses to shocks: Different sets of markets

		(1)		(2)		(3)	
		Extrastat		Extra + Intrathresh		No Eurozone	
		coeff	s.e.	coeff	s.e.	coeff	s.e.
Low exit prob	τ_t^{jk}	-2.27	(0.71)**	-2.84	(0.65)**	-2.42	(0.68)**
	p_t^k	0.21	(0.13)*	0.43	(0.09)**	0.24	(0.11)**
	q_t^k	0.63	(0.15)**	0.35	(0.10)**	0.56	(0.14)**
High exit prob	τ_t^{jk}	1.05	(0.63)*	0.97	(0.58)*	0.82	(0.61)
	p_t^k	0.09	(0.13)	0.39	(0.09)**	0.09	(0.11)
	q_t^k	0.54	(0.15)	0.28	(0.10)**	0.48	(0.14)**
$\mathbf{age}_t^{ijk} \otimes \mathbf{spell}_t^{ijk}$		yes		yes		yes	
Firm-prod-yr f.e.		yes		yes		yes	
Prod-mkt f.e.		yes		yes		yes	
N		52,779		160,289		84,909	
R^2		0.72		0.78		0.76	
R^2-adjusted		0.57		0.69		0.62	

Notes: Column (1) restricts the sample to Extrastat markets. Column (2) restricts the sample to Extrastat markets, and to Intrastat markets for firms which have total exports to Intrastat markets above the reporting threshold. Column (3) restricts the sample to non-Eurozone markets. Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is log revenue in Euro at the firm-product-market level. Tariffs, real exchange rates and foreign demand are included in logs. Full set of estimates including steady state revenue trajectories are in the Appendix. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 53: Export revenue responses to shocks: Industry groups

		(1)		(2)		(3)		(4)		(5)	
		Consumer food		Cons non-food non-dur		Cons durables		Intermediates		Capital goods	
		coeff	s.e.	coeff	s.e.	coeff	s.e.	coeff	s.e.	coeff	s.e.
Low exit prob	τ_t^{jk}	-1.49	(1.37)	-1.90	(1.55)	-4.42	(2.92)	-3.48	(1.23)**	-4.73	(1.33)**
	p_t^k	-0.19	(0.19)	0.12	(0.04)**	0.41	(0.15)**	0.58	(0.17)**	0.05	(0.01)**
	q_t^k	0.21	(0.23)	0.05	(0.03)	0.39	(0.17)**	0.26	(0.20)	0.06	(0.01)**
High exit prob	τ_t^{jk}	0.47	(1.41)	0.52	(1.36)	4.89	(3.40)	0.52	(1.12)	1.03	(1.01)
	p_t^k	-0.16	(0.19)	0.62	(0.23)**	-0.24	(0.54)	0.54	(0.17)**	0.58	(0.14)**
	q_t^k	0.17	(0.23)	0.27	(0.26)	0.80	(0.54)	0.19	(0.20)	0.06	(0.15)
$\mathbf{age}_t^{ijk} \otimes \mathbf{spell}_t^{ijk}$		yes		yes		yes		yes		yes	
Firm-prod-yr f.e.		yes		yes		yes		yes		yes	
Prod-mkt f.e.		yes		yes		yes		yes		yes	
N		36,945		26,224		6,271		47,123		68,271	
R^2		0.78		0.79		0.73		0.80		0.77	
R^2-adjusted		0.68		0.71		0.13		0.69		0.68	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is log revenue in Euro at the firm-product-market level. Tariffs, real exchange rates and foreign demand are included in logs. Full set of estimates including steady state revenue trajectories are in the Appendix. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

Table 54: Export revenue responses to shocks: Splitting RER into nominal exchange rate and prices

		coeff	s.e.
Low exit prob	τ_t^{jk}	-3.05	(0.65)**
	x_t^k	0.46	(0.09)**
	cpi_t^k	0.45	(0.09)**
	q_t^k	0.24	(0.09)**
High exit prob	τ_t^{jk}	0.90	(0.58)
	x_t^k	0.42	(0.09)**
	cpi_t^k	0.43	(0.09)**
	q_t^k	0.17	(0.09)**
$\mathbf{age}_t^{ijk} \otimes \mathbf{spell}_t^{ijk}$		yes	
Firm-prod-yr f.e.		yes	
Prod-mkt f.e.		yes	
N		191,780	
R^2		0.77	
R^2-adjusted		0.68	

Notes: Products are defined based on the concordance of Prodcom and CN product definitions as described above. Dependent variable is log revenue in Euro at the firm-product-market level. Tariffs, real exchange rates and foreign demand are included in logs. Full set of estimates including steady state revenue trajectories are in the Appendix. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

7 Details of adding-up exercise

The implementation of the adding-up exercise in Section 6 of the paper requires a number of assumptions.

We assume that there is a fixed number of firms in the domestic country, and that the steady state rate of entry of non-participants into each market before tariff or exchange rate

Table 55: Export revenue responses to shocks: restricting to observations where quantity is available

		coeff	s.e.
Low exit prob	τ_t^{jk}	-2.93	(0.64)**
	p_t^k	0.42	(0.08)**
	q_t^k	0.32	(0.09)**
High exit prob	τ_t^{jk}	1.01	(0.56)
	p_t^k	0.39	(0.08)**
	q_t^k	0.25	(0.09)**
Export history controls		yes	
Firm-prod-yr f.e.		yes	
Prod-mkt f.e.		yes	
N		184,890	
R^2		0.77	
R^2-adjusted		0.68	

Notes: Sample includes only observations for which quantity is available. Products are defined based on the concordance of CN product definitions. Dependent variable is log revenue in Euro at the firm-product-market level. Export history controls include $\mathbf{a}_t^{ijk} \otimes \mathbf{s}_t^{ijk}$ and $\mathbf{cens}_t^{ijk}$. Robust standard errors calculated. ** significant at 5%, * significant at 10%. Source: CSO and authors' calculations.

shocks is equal to 0.008, which is the average entry rate for potential entrants across all the markets in our sample at the firm-product-market level (see Table 3 in the paper). We assume that the rate of exit before shocks depends on market tenure. For market participants with one year of market tenure, we assume an exit rate of 45% (see Table 9 above), and given this 1-year exit rate, we use the coefficients on market tenure in Table 5 in the paper to calculate exit rates in subsequent years. Given these exit rates, we calculate for each cohort of entrants the distribution of their eventual export spell length. We also calculate the steady state participation rate. We then assign a level of exports to each spell-length-market-tenure cell based on the estimated initial levels and growth trajectories in Table 13. This gives us total exports to each market before any shocks.

Next, we need to decide how to modify entry and exit rates and impose revenue elasticities in response to changes in tariffs and real exchange rates. For all margins, we use the coefficients from our baseline estimates. For entry rates, things are straightforward. The coefficients on both tariffs and real exchange rates in the baseline entry equation are statistically different from zero, so we apply these coefficients to the entry rate (see the first column of Table 6 in the paper). A reduction in the tariff from 10% to 0 increases the entry rate from 0.008 to 0.0086, while a 10% depreciation increases the entry rate from 0.008 to 0.0081.

For exit, the coefficients on tariffs and real exchange rates are not significantly different from zero (see the first column of Table 7 in the paper). This raises the question of whether we should allow for any impact of changes in these variables on exit rates. We calculate aggregate elasticities two ways: first, setting exit responses to zero, and second, using the

point estimates from our baseline exit equation. Under these estimates, we assume that a reduction in the tariff from 10% to 0 reduces exit rates at all levels of market tenure by 0.0176 (e.g. from 0.45 to 0.4324 for spells with tenure of one year) while a 10% depreciation *increases* all exit rates by 0.0012 (e.g. from 0.45 to 0.4512 for spells with tenure of one year).

For export revenue, we use the estimated elasticities with respect to tariffs and real exchange rates for observations with low exit probability (see the first column of Table 8 in the paper). We apply these elasticities to all spell-length-market-tenure cells, under the assumption that the estimates for observations with high exit probability are contaminated by selection bias. These estimates imply that export revenue increases in response to tariff reductions, with an elasticity of 3.02. Export revenue increases in response to a real depreciation, with an elasticity of 0.46. In the version of the exercise where we allow for responses of exit rates to shocks, there is a further consideration. We assume that when an export spell ends up being longer or shorter under the new tariff or real exchange rate than it would have been under the old regime, the revenue trajectory it follows (exclusive of the revenue response to the shock) is governed by its "spell length" on entry.

8 Details of model for simulation exercise

We take the model straight from Fitzgerald, Haller and Yedid-Levi (2016). We make the following assumptions about functional forms:

$$\Phi\left(D_t^{ijk}\right) = \left(D_t^{ijk}\right)^{\alpha}$$

$$d\left(D_{t-1}^{ijk}, X_t^{ijk}\right) = (1-\delta)\, X_{t-1}^{ik} D_{t-1}^{ik} + A_t^{ik}$$

$$c\left(D_t^{ik}, A_t^{ik}\right) = \begin{cases} A_t^{ik} + \phi\left(\frac{A_t^{ik}}{D_t^{ik}} - \delta\right)^2 D_t^{ik} & \text{if } A_t^{ik} > 0 \\ \\ 0 & \text{otherwise.} \end{cases}$$

We make the following assumptions about stochastic processes:

$$C_t^{ij} = 1$$

$$W_t = 1$$

$$S_t^{ijk} = 0 \text{ with probability } \lambda,\ \infty \text{ with probability } 1-\lambda \text{ (iid)}$$

$$F_t^{ijk} = F \text{ with probability } 1-\omega,\ \infty \text{ with probability } \omega \text{ (iid)}$$

$$\varepsilon_t^{ijk} = \nu^{ijk} + \eta_t^{ijk}$$

$$\eta_t^{ijk} = \rho\eta_{t-1}^{ijk} + \zeta_t^{ik}$$

$$\nu^{ijk} \sim N\left(0, \sigma_\nu^2\right)$$

$$\zeta_t^{ik} \sim N\left(0, \sigma_\eta^2\right)$$

The learning process is as follows. Let N_{t-1}^{ijk} be an indicator variable that takes the value 0 if the firm is uninformed in market k entering period t, and 1 if it is informed. All entrants are uninformed. At the end of period t, each participant for which $N_{t-1}^{ijk} = 0$ draws a value of N_t^{ijk}. It is equal to 1 with probability γ, and 0 with probability $1-\gamma$. The firm's information set I_t^{ijk} evolves as follows:

$$I_t^{ik} = \begin{cases} \left\{\nu^{ijk}, \eta_{t-1}^{ijk}\right\} & \text{if } \left\{X_{t-1}^{ijk} = 1, N_{t-1}^{ijk} = 1\right\} \\ \\ \emptyset & \text{if } \left\{X_{t-1}^{ijk} = 0\right\} \text{ or } \left\{X_{t-1}^{ijk} = 1, N_{t-1}^{ijk} = 0\right\}. \end{cases}$$

The model is set up at a bi-annual frequency (i.e. two periods in a year). Parameter values are reported in Table 56.

Table 56: Parameter values for model simulation

Parameter											
β	α	δ	ϕ	γ	ρ	σ_ν	σ_η	$\frac{F}{E(R_1)}$	ω	λ	θ
$1.05^{-0.5}$	0.50	0.46	3.03	0.58	0.40	0.52	0.34	0.31	0.03	$\lambda = 0.01/(1-\omega)$	2

Notes: Estimation of parameters is described in Fitzgerald, Haller and Yedid-Levi (2016).