Online Data Appendix to The Extensive Margin of Exporting Products: A Firm-level Analysis*

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1 Notational Conventions

We observe Brazilian and Chilean merchandize exports for the year 2000 in two three-dimensional panel data sets, indexed by firm ω (tax ID for Brazil), destination country d, and product h (Harmonized System six-digit product code).

We report most product-related statistics for Brazil at the Harmonized System (HS) 6-digit level, which is globally comparable by standards of the World Customs Organization (WCO). In general, Brazil as a member of Mercosur (the Southern Cone Customs Union) reports products at the Common Mercosur Nomenclature NCM (Nomenclatura Comum do Mercosul) 8-digit level; the first six digits are identical to the Harmonized System six-digit product code. We present key statistics for Brazil also at the NCM 8-digit level. For Chile, we only have merchandize exports by Harmonized System six-digit product code.

The panel data are unbalanced: firms ship different sets of products by destination. We compare key statistics to similar data on French merchandize exports in 1986 at the firm-destination level (Eaton et al. 2004), and to U.S. data at the firm-destination-product level (Bernard et al. 2007). We adopt the following notational conventions.

- Destination country: $d \in \{1, \ldots, N\}$ (countable in data and model).

  Source country: $s \in \{1, \ldots, N\}$ in model, $s \in \{\text{Brazil}, \text{Chile}, \text{France}, \text{USA}\}$ in data.

- Firms: $\omega \in \mathbf{\Omega}$ worldwide (countable in data, continuum in model).

  The set of firms (potential entrants) can be partitioned by source or destination country, or both: $\mathbf{\Omega} = \cup_{d=1}^{N} \mathbf{\Omega}_d = \cup_{s=1}^{N} \mathbf{\Omega}_s = \cup_{d=1}^{N} \cup_{s=1}^{N} \mathbf{\Omega}_{sd}$.

  Every firm has a productivity scalar $\phi(\omega)$.

- Commodity: $h \in \{1, \ldots, H\}$ (at HS six-digit or NCM eight-digit level in data, countable in model).

- Industry: $i = 1, \ldots, I$ (*SIC* as in Eaton et al. (2004)).
  Every firm ω belongs to a unique source-country industry is ($\mathbf{\Omega}_{is} \subset \mathbf{\Omega}$).

- Variety: $(\omega, h) \in \mathbf{\Omega} \times \{1, \ldots, H\}$ (homogeneous across destinations).

- A firm's product sold to a destination: $g_d(\omega) \in \{1, \ldots, G_d(\omega)\}$.

  We call $G_d(\omega)$ firm ω's *exporter scope* (# of products) at d.

  Every $g_d(\omega)$ belongs to a unique h; $g_d(\omega)$ is defined at the HS six-digit or NCM eight-digit level.

  The number of observations in our Brazilian *SECEX* (Chilean customs) data in 2000 is $\sum_{\omega \in \mathbf{\Omega}_s} \sum_{d=1}^{D} G_d(\omega)$, where $s =$ Brazil ($s =$ Brazil) and $\mathbf{\Omega}_s \subset \mathbf{\Omega}$.

- A firm's exports per product: $p_{dg_d(\omega)}(\omega) \cdot x_{dg_d(\omega)}(\omega)$ (price times quantity).

  We also call the firm's exports per product $p_{dg_d(\omega)}(\omega) \cdot x_{dg_d(\omega)}(\omega)$ firm ω's *exporter*

scale (Exports/prod.) for its product numbered $g_d(\omega)$ and sold to d.

We call $g_d(\omega)$ the *product rank* after adopting the convention that $g_d(\omega)$ weakly decreases in exporter scale (every firm's top selling product at a destination has index 1, the second-to-top selling product has index 2, and so on, while the lowest-selling product has index $G_d(\omega)$).

We now simplify notation to $g = g_d(\omega)$.

- A firm ω's total exports to a destination: $t_d(\omega) \equiv \sum_{g=1}^{G_d(\omega)} p_{dg}(\omega)\, x_{dg}(\omega)$.

  Firm ω's total exports $t_d(\omega)$ to d can be rewritten as: $t_d(\omega) = G_d(\omega)\, a_d(\omega)$, where $a_d(\omega) \equiv \sum_{g=1}^{G_d(\omega)} p_{dg}(\omega)\, x_{dg}(\omega)/G_d(\omega)$ is the firm's *exporter scale*.

- A firm ω's *product line*:

  $$\left[\sum_{g=1}^{G_d(\omega)} x_{dg}(\omega)^{\frac{\varepsilon-1}{\varepsilon}}\right]^{\frac{\varepsilon}{\varepsilon-1}},$$

  where ε is the elasticity of substitution between a firm's products. The product line is what monopolistic-competition models of trade (such as Krugman 1980) used to call a "variety."

- Total exports from source country s to destination d: $T_{sd} \equiv \sum_{\omega\in\mathbf{\Omega}_{sd}} t_d(\omega)$.

  1. Total exports T_{sd} can be decomposed into: $T_{sd} = M_{sd}\, \bar{t}_{sd}$.
     M_{sd} is the number of exporters in s with shipments to destination d, and $\bar{t}_{sd} \equiv T_{sd}/M_{sd}$ are these exporters' mean sales to d (as in Eaton et al. 2004).
  2. Total exports T_{sd} can alternatively be decomposed into: $T_{sd} = V_{sd}\, \bar{a}_{sd}$.
     $V_{sd} \equiv \sum_{\omega\in\mathbf{\Omega}_{sd}} G_d(\omega) = M_{sd}\, \bar{G}_{sd}$ is the number of varieties shipped to d. The exporter scale of these varieties is $\bar{a}_{sd} = [\sum_{\omega\in\mathbf{\Omega}_{sd}} t_d(\omega)]/[\sum_{\omega\in\mathbf{\Omega}_{sd}} G_d(\omega)] = \bar{t}_{sd}/\bar{G}_{sd}$ (similar to Broda and Weinstein 2006, identical under the convention that every source country is a single exporter $M_{sd} = 1$).
  3. Total exports T_{sd} can also be decomposed into: $T_{sd} = M_{sd}\, G_{sd}\, \bar{\bar{a}}_{sd}$.
     M_{sd} is the number of exporters in s with shipments to destination d, $G_{sd} \equiv \sum_{\omega\in\mathbf{\Omega}_{sd}} G_d(\omega)$ is the total number of products exported from s to d, and $\bar{\bar{a}}_{sd} \equiv \bar{t}_{sd}/G_{sd}$ is the "average value of exports per product per firm" (Bernard et al. 2007, p. 121). This decomposition generalizes decomposition 1 but does not naturally generalize decomposition 2 because $\bar{\bar{a}}_{sd} \equiv (\bar{G}_{sd}/G_{sd})\, \bar{a}_{sd}$.
  4. Most closely related to the extensive margin of exporting products, total exports T_{sd} can be decomposed into: $T_{sd} = M_{sd}\, \bar{G}_{sd}\, \bar{a}_{sd}$.
     M_{sd} is the number of exporters in s with shipments to destination d, $\bar{G}_{sd} \equiv \sum_{\omega\in\mathbf{\Omega}_{sd}} G_d(\omega)/M_{sd}$ is the exporters' mean exporter scope, and $\bar{a}_{sd} \equiv \bar{t}_{sd}/\bar{G}_{sd}$ is their varieties' exporter scale. This is the preferred decomposition for our purposes because it generalizes both decomposition 1 and decomposition 2 and

because a firm's exporter scope $G_d(\omega)$ is a central variable in our theory (Arkolakis and Muendler 2010).

Note that $\bar{a}_{sd}$ is the weighted arithmetic mean of $a_d(\omega)$ over all ω, with weights $G_d(\omega)$: $\bar{a}_{sd} = \sum_{\omega\in\mathbf{\Omega}_{sd}} G_d(\omega)\, a_d(\omega)/(\sum_{\omega\in\mathbf{\Omega}_{sd}} G_d(\omega)) = \bar{t}_{sd}/\bar{G}_{sd}$.

5. Total exports T_{sd} can finally be decomposed into: $T_{sd} = M_{sd}\, G_{sd}\, d_{sd}\, \bar{a}_{sd}$.
M_{sd} is the number of exporters in s with shipments to destination d, $G_{sd} \equiv \sum_{\omega\in\mathbf{\Omega}_{sd}} G_d(\omega)$ is the total number of products exported from s to d, d_{sd} is the fraction of firm-product combinations with positive exports which Bernard et al. (2011) call the "density of trade", and $\bar{a}_{sd} \equiv \bar{t}_{sd}/\bar{G}_{sd}$ is the varieties' exporter scale. This quadruple decomposition can be transformed back into any of the former two triple decompositions by setting either $\bar{\bar{a}}_{sd} = d_{sd}\, \bar{a}_{sd}$ (as in Bernard et al. 2007) or $\bar{G}_{sd} = G_{sd}\, d_{sd}$ (as in Arkolakis and Muendler 2010).

- A source-country industry's total exports to a destination: $T_{isd} \equiv \sum_{\omega\in\mathbf{\Omega}_{isd}} t_d(\omega)$.

1. Total exports T_{isd} can be decomposed into: $T_{isd} = \lambda_{sd}\, T_{sd}\, B_{isd}$.
T_{sd} is the market size of destination country d (manufacturing absorption), $\lambda_{sd} \equiv \sum_i T_{isd}/T_{sd}$ is the market share of source country s's total exports in destination d absorption, and industry bias $B_{isd} \equiv T_{isd}/\sum_i T_{isd}$ is the share of source country s's industry i exports in the country's total exports to destination d (Eaton et al. 2004).
2. Total exports T_{isd} can alternatively be decomposed into: $T_{isd} = M_{isd}\, \bar{t}_{isd}$.
M_{isd} is the number of source country s's exporters in industry i with shipments to destination d, and $\bar{t}_{isd} \equiv T_{isd}/M_{isd}$ are these exporters' mean sales to d (Eaton et al. 2004).
3. Total exports T_{isd} can equivalently be decomposed into: $T_{isd} = V_{isd}\, \bar{a}_{isd}$.
$V_{isd} \equiv \sum_{\omega\in\mathbf{\Omega}_{isd}} G_{isd}(\omega) = M_{isd}\, \bar{G}_{isd}$ is the number of export varieties from source country s's industry i shipped to destination d and these varieties' exporter scale is $\bar{a}_{isd} = [\sum_{\omega\in\mathbf{\Omega}_{isd}} t_d(\omega)]/[\sum_{\omega\in\mathbf{\Omega}_{isd}} G_d(\omega)] = \bar{t}_{isd}/\bar{G}_{isd}$ (similar to Broda and Weinstein 2006).
4. Total exports T_{isd} can also be decomposed into: $T_{isd} = M_{isd}\, G_{isd}\, \bar{\bar{a}}_{isd}$.
M_{isd} is the number of exporters in industry i of country s with shipments to destination d, $G_{isd} \equiv \sum_{\omega\in\mathbf{\Omega}_{sd}} G_d(\omega)$ is the total number of industry i products exported from s to d, and $\bar{\bar{a}}_{isd} \equiv \bar{t}_{isd}/G_{isd}$ is the "average value of exports per product per firm" in industry i (similar to Bernard et al. 2007).
5. Total exports T_{isd} can finally be decomposed into: $T_{isd} = M_{isd}\, \bar{G}_{isd}\, \bar{a}_{isd}$.
M_{isd} is the number of source country s's exporters in industry i with shipments to destination d, $\bar{G}_{isd} \equiv \sum_{\omega\in\mathbf{\Omega}_{isd}} G_d(\omega)/M_{isd}$ is these exporters' mean exporter scope, and $\bar{a}_{isd} \equiv \bar{t}_{isd}/\bar{G}_{isd}$ is their exporter scale (Arkolakis and Muendler 2010).

Note that $\bar{a}_{isd}$ is the weighted arithmetic mean of $a_d(\omega)$ over all ω, with weights $G_d(\omega)$: $\bar{a}_{isd} = \sum_{\omega \in \mathbf{\Omega}_{isd}} G_d(\omega)\, a_d(\omega) / [\sum_{\omega \in \mathbf{\Omega}_{isd}} G_d(\omega)] = \bar{t}_{isd} / \bar{G}_{isd}$.

2 Manufacturers and Intermediaries with Manufacturing Products

To obtain the Pareto shape parameter ($\tilde{\theta}$) of the exporter size distribution (total exports by firm) for the Brazilian exporter data, we regress log mean export sales $\ln \bar{t}_{sd,\text{Pr}}$ of all exporters to destination d at or above a given percentile $(1-\text{Pr}_d)$ on the log percentile $\ln(1-\text{Pr}_d)$. The coefficient on the log percentile is the negative inverse of the Pareto shape parameter $(-1/\tilde{\theta})$.

We pool the data of the 70 destination countries to which at least 100 Brazilian exporters ship and obtain the ordinary-least squares estimates

$$\ln \bar{t}_{sd,\text{Pr}} = \underset{(.0505)}{3.068} - \underset{(.0134)}{.8383} \ln(1-\text{Pr}_d).$$

The R^2 is .357 (standard errors in parentheses). The coefficient estimate on the log percentile implies a Pareto shape parameter of 1.193.

When we allow for random coefficients across the 70 destination countries, we find

$$\ln \bar{t}_{sd,\text{Pr}} = \underset{(.1476)}{3.058} - \underset{(.0091)}{.8354} \ln(1-\text{Pr}_d).$$

The coefficient estimate on the log percentile implies a Pareto shape parameter of 1.197, similar to ordinary least squares before.

Finally, when we obtain 70 individual ordinary-least squares estimates for all the destination markets with at least 100 Brazilian exporters, compute the 70 implied Pareto shape estimates and then take their unweighted average, we find a mean $\tilde{\theta}$ of 1.208.

In contrast, when we sum the export shipments over destinations to a single world aggregate, we obtain the ordinary-least squares estimates

$$\ln \bar{t}_{s,\text{Pr}} = \underset{(.0157)}{6.321} - \underset{(.0042)}{.9285} \ln(1-\text{Pr}).$$

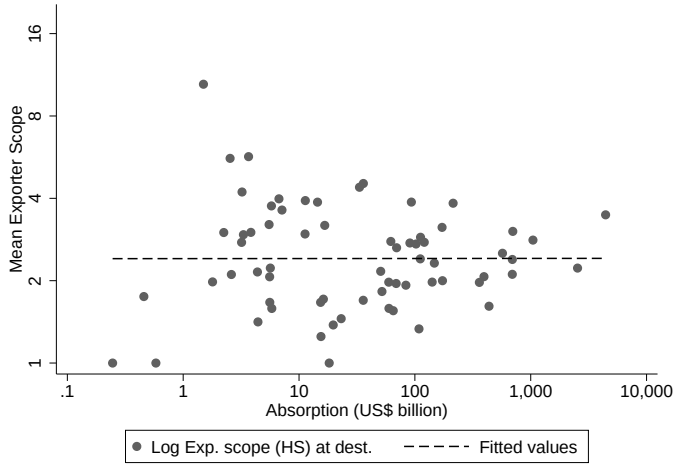
The R^2 now is .998, but the coefficient estimate on the log percentile implies a Pareto shape parameter of only 1.077.

Table 2.1: Sample Characteristics by Source and Destination

From source s	Brazil Manufacturers				Chile Manf.	Brazil Intm.
to destination d	USA	Argentina	OECD	World	World	World
	(1)	(2)	(3)	(4)	(5)	(6)
# of Firms (M)	3,083	4,590	5,041	10,215	4,099	2,627
# of Destinations (N)	1	1	23	170	140	132
# of HS-6 products (G)	2,144	2,814	2,772	3,717	3,199	2,777
# of Observations	10,775	21,623	36,359	162,570	37,183	35,960
Destination share in Total exp.	.257	.144	.559	1	1	1
Firm shares in Total exports						
Single-prod. firms	.123	.086	.142	.090	.041	.086
Multi-prod. firms' top product	.662	.555	.625	.597	.715	.595
Multi-prod. firms' other prod.	.215	.359	.233	.313	.243	.319
Median Total exports ($T_d(m)$)	.120	.068	.137	.089	.038	.041
Median Exporter scope ($G_d(m)$)	1	2	2	2	2	2
Median Avg. Exp. scale ($a_d(m)$)	.068	.031	.070	.037	.014	.012
Mean Total exports ($\bar{t}_d$)	3.170	1.192	4.217	3.720	2.779	1.101
Mean Exporter scope ($\bar{G}_d$)	3.495	4.711	3.933	5.278	5.454	9.426
Mean Avg. Exp. scale ($\bar{a}_d$)	.907	.253	1.072	.705	.510	.117

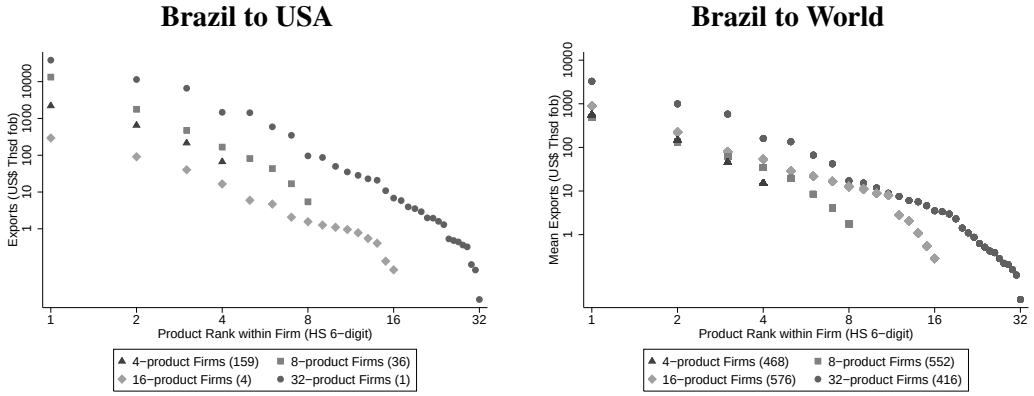
Sources: *SECEX* 2000 for Brazil, manufacturing firms and their manufactured products as well as commercial intermediaries and their manufactured products; Chilean customs data 2000 (Álvarez, Faruq and López 2007) for manufacturing firms.

Note: Aggregate regions (world, OECD) treated as single destinations, collapsing product shipments to different countries into single product shipment. The worldwide average number of products across destination countries is 3.518 among Brazilian manufacturers, for instance, but 5.278 for the world as single destination; it is 2.909 across destination countries worldwide among Chilean manufacturers but 5.454 for the world; and it is 5.740 across destination countries worldwide among Brazilian intermediaries but 9.426 for the world as single destination. Products at the Harmonized-System 6-digit level. Exports in US$ million fob. OECD includes all OECD members in 1990. The U.S. is Brazil's top export destination in 2000, Argentina second to top. Firms' average exporter scale (a_d in US$ million fob) is the scope-weighted arithmetic mean of exporters' average exporter scales.



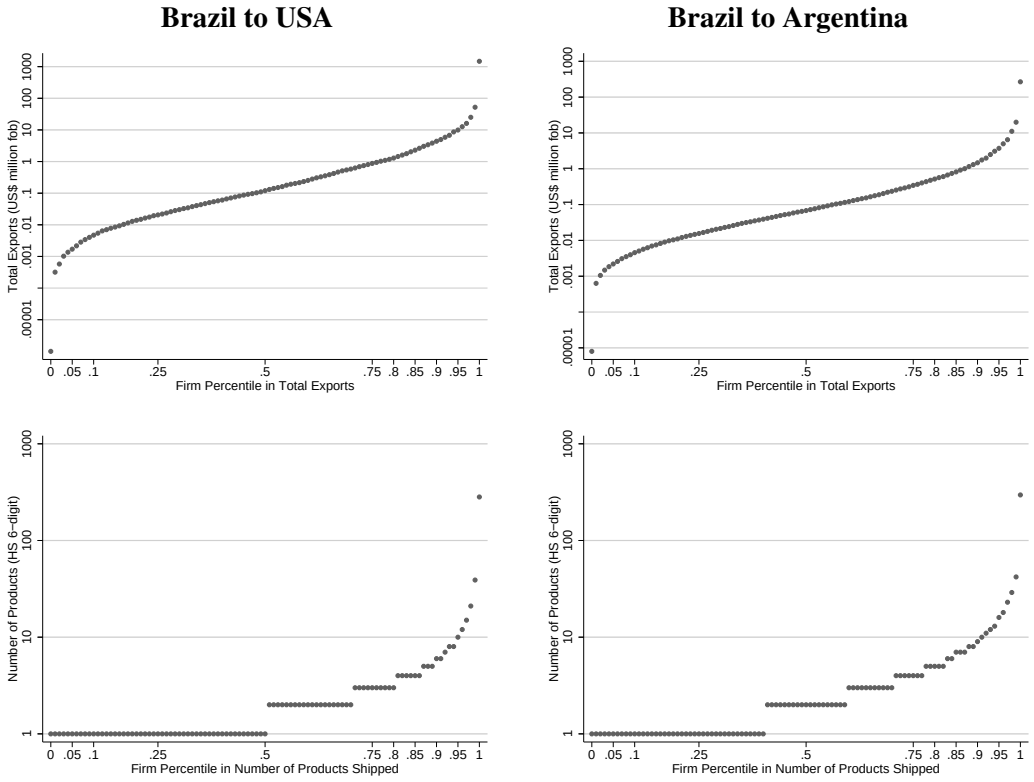
Source: *SECEX* 2000 manufacturing firms and their manufactured products at the HS 6-digit level, destinations linked to *WTF* (Feenstra, Lipsey, Deng, Ma and Mo 2005) and *Unido* Industrial Statistics (UNIDO 2005).

Figure 2.1: **Mean Exporter Scope and Absorption by Destination**



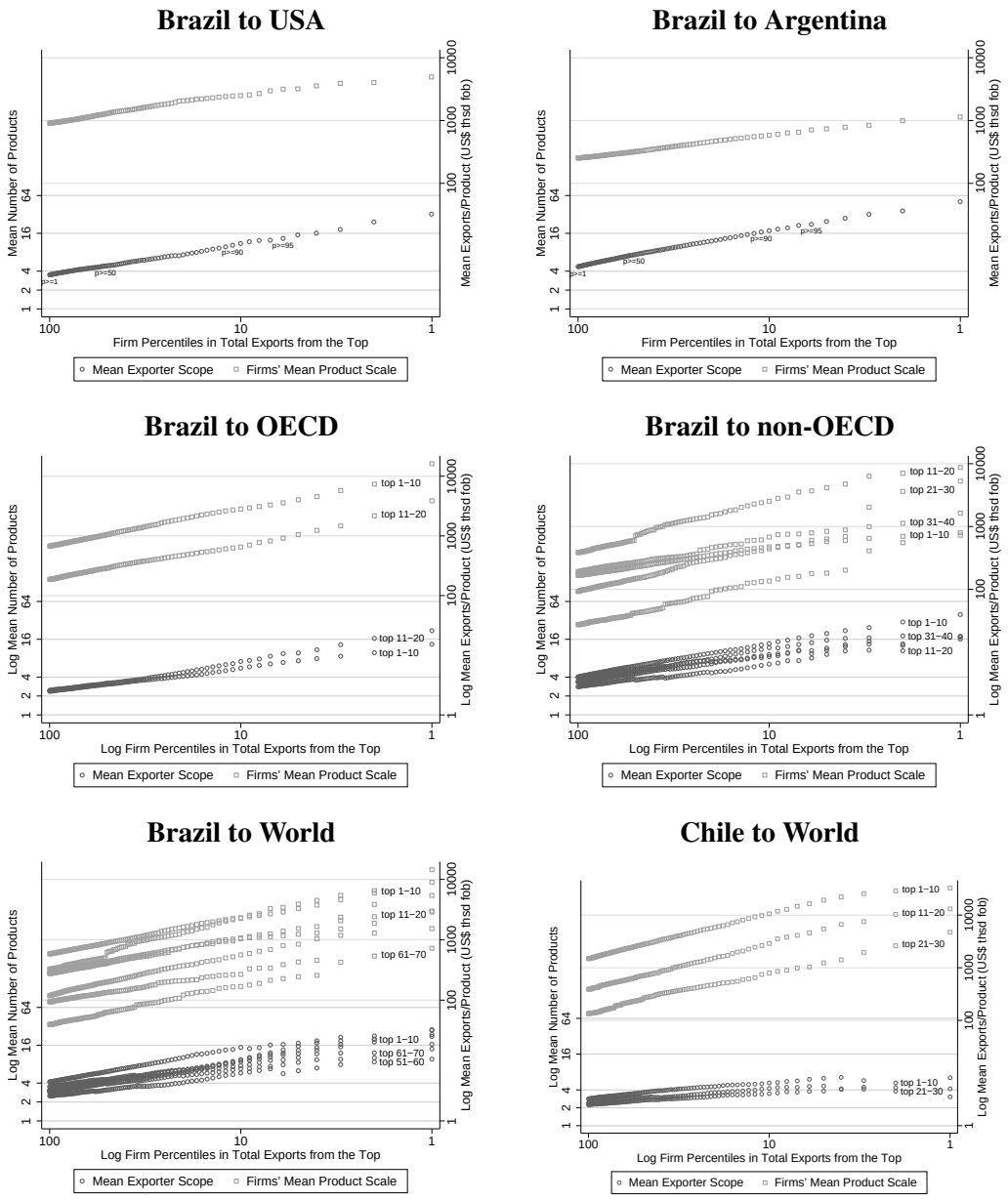
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level. World average from pooling destinations to which firms in a given exporter-scope group ship. Statistics also reported in Figure 5.14. For products at the Common Mercosur Nomenclature 8-digit level see Figure 2.6.

Figure 2.2: **Within-firm Sales Distribution**



Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level. Statistics in upper panel also reported in Figure 5.2, lower panel also reported in Figure 5.3. For products at the Common Mercosur Nomenclature 8-digit level see Figure 2.7.

Figure 2.3: **Total Sales and Exporter Scope Distributions**



Source: *SECEX* 2000 for Brazil, manufacturing firms and their manufactured products; Chilean customs data 2000 (Álvarez et al. 2007) for manufacturing firms.
Note: Left-most observations are all exporters; at the next percentile are exporter observations with shipments in the top 99 percentiles; up to the right-most observations with exporters whose shipments are in the top percentile. Aggregate regions include only destinations with more than 100 firms; destinations ranked by total exports and lumped into groups of ten destinations for which unweighted means over distributions are shown (20 OECD countries for Brazil, 49 non-OECD for Brazil, 70 worldwide for Brazil, 28 for Chile). Products at the Harmonized-System 6-digit level. Non-OECD includes all non-members in 1990; OECD includes all OECD members in 1990. Firms' mean product scale ($\bar{z}_d$ in US$ thousand fob) is the scope-weighted arithmetic mean of exporters' average product scales. Related statistics also reported in Figure 5.7. For products at the Common Mercosur Nomenclature 8-digit level see Figure 2.8.

Figure 2.4: **Scope, Average Scale and the Total Exports Distribution**

Table 2.2: Log Exporter Scope and Local Total-Exports Percentile Correlations

Log # Products	Brazil				Chile			
estimator	OLS	OLS	Firm FE	Firm FE	OLS	OLS	Firm FE	Firm FE
controls		Dest eff.		Dest. eff.		Dest eff.		Dest. eff.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Log lcl. pctl.[a]	.483	.458	.463	.378	.223	.227	.339	.299
	(.005)	(.005)	(.004)	(.004)	(.008)	(.007)	(.009)	(.009)
Observations	68,057	68,057	68,057	68,057	12,425	12,425	12,425	12,425
Firm panels			10,209	10,209			4,091	4,091
R^2 (within)[b]	.118	.188	.218	.323	.063	.153	.156	.212

[a]Log of firm's local total-exports percentile
[b]R^2 is within fit for firm FE regressions in columns 3, 4, 7 and 8.

Sources: Brazilian *SECEX* 2000 and Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Notes: Log local percentile for total exports by firm and destination. Products at the Harmonized-System 6-digit level. R^2 is within fit for FE regressions in columns 3 and 6. Standard errors in parentheses.

Table 2.3: Log-Linear Fits of Cumulative Scope and Average Scale Distributions

From source s	Brazil			Chile		
to destination d	USA	Argentina	World	USA	Argentina	World
	(1)	(2)	(3)	(4)	(5)	(6)
Log # Products						
Log Percentile $(1-\Pr)$	-.479	-.540	-.417	-.175	-.273	-.145
	(.002)	(.003)	(.006)	(.008)	(.008)	(.010)
R^2	.998	.996	.402	.828	.917	.076
Log exports/product						
Log Percentile $(1-\Pr)$	-.422	-.357	-.469	-.733	-.594	-.752
	(.006)	(.002)	(.013)	(.009)	(.004)	(.027)
R^2	.979	.996	.165	.985	.996	.223
Implied scope elasticity of comb. incr. scope cost $(\delta+\alpha(\sigma-1))$	1.882	1.661	2.123	5.179	3.180	6.187

Sources: Brazilian *SECEX* 2000 and Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Ordinary-least-squares regressions of firms' mean scope at given percentile or above and firms' mean exporter scale (the scope-weighted arithmetic mean of exporters' average exporter scales $\bar{a}_d$ in US$ thousand fob) at given percentile or above on log percentile $\ln(1-\Pr)$ and a constant, using one hundred percentile observations per destination. World includes only destinations with more than 100 source-country firms (70 countries for Brazil, 28 for Chile); destination observations weighted by total exports. Products at the Harmonized-System 6-digit level. Standard errors in parentheses.

Table 2.4: Decomposition of Exporter Scale and Exporter Scope Correlations

Log Exp./prod.	Firm data[a]	Firm-destination data[b]			Firm-destination-good data[c]		
	Ind. FE	Ind. FE	Ind. & dest. FE	Firm & dest. FE	Firm & dest. FE	Ind., prod. & dest. FE	Firm, prod. & dest. FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Brazilian Producers exporting Manufactures							
Log # Products	.473	.067	.072	.260	1.180	.651	.977
	(.020)	(.011)	(.011)	(.013)	(.014)	(.014)	(.014)
Obs.	10,215	46,208	46,208	46,208	76,964	76,964	76,964
R^2	.051	.0008	.074	.131	.133	.181	.229
Corr. Firm FE, $X'\beta$				-.155	-.202		-.187
Chilean Producers exporting Manufactures							
Log # Products	.180	-.092	-.023	.226	.840	.370	.792
	(.031)	(.023)	(.023)	(.027)	(.028)	(.029)	(.028)
Obs.	4,099	12,777	12,777	12,777	21,142	21,142	21,142
R^2	.008	.001	.058	.124	.082	.200	.176
Corr. Firm FE, $X'\beta$				-.203	-.113		-.094
Brazilian Commercial Intermediaries exporting Manufactures							
Log # Products	-.070	-.270	-.184	.055	.845	.458	.757
	(.032)	(.024)	(.025)	(.034)	(.024)	(.027)	(.025)
Obs.	2,627	6,265	6,265	6,265	14,781	14,781	14,781
R^2	.002	.020	.097	.100	.121	.207	.196
Corr. Firm FE, $X'\beta$				-.047	-.130		-.008

[a]Aggregation: worldwide exports by firm.
[b]Aggregation: exports by firm and destination.
[c]Aggregation: exports by firm, destination, product group (Harmonized System 2-digit level).

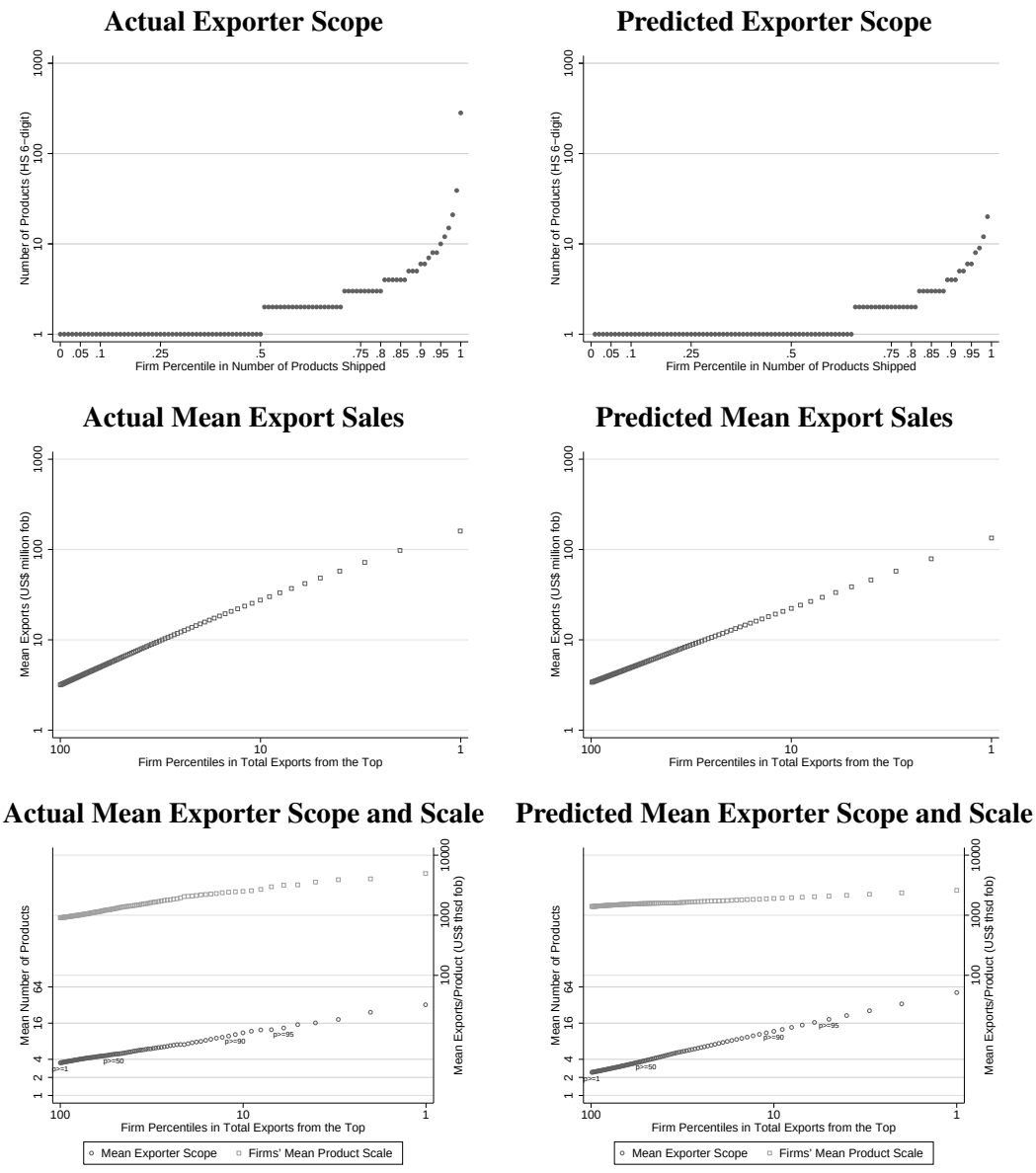
Sources: Brazilian *SECEX* 2000 and Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level; product-group fixed effects at the Harmonized-System 2-digit level. Industry fixed effects at the *CNAE* two-digit level for Brazil and at the *ISIC* two-digit level for Chile. Constant, destination fixed and product fixed effects not reported. R^2 is within fit for firm FE regressions. Correlation coefficient between firm fixed effects and log number of products.

Table 2.5: Overlaps between Reference Countries and Rest of World by Product Rank

Product rank in Ref. country	Reference country: USA				Reference country: Argentina			
	Overlap (1)	Overlap top prd. (2)	#Dest./ firm (3)	#Firms (4)	Overlap (5)	Overlap top prd. (6)	#Dest./ firm (7)	#Firms (8)
1	.83	.83	8.9	2,280	.77	.77	7.8	3,071
2	.54	.77	13.0	1,033	.54	.76	10.7	1,672
4	.36	.73	18.9	368	.38	.67	14.2	797
8	.34	.69	24.1	137	.30	.63	18.5	307
16	.26	.59	24.3	63	.24	.54	22.6	136
32	.24	.53	30.2	22	.22	.50	29.7	48
64	.15	.49	38.9	10	.29	.40	35.9	19
128	.13	.69	42.4	5	.11	.33	43.8	12

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Destination counts in columns 3 and 7 are mean numbers of destinations to which firms with at least as many products as reported for a rank ship. Overlap in columns 1 and 5 is the proportion of destinations that a product of reported rank reaches relative to the overall destination counts (in columns 3 and 7). Overlap in columns 2 and 6 is the proportion of destinations that the top-selling product of firms with at least as many products as reported for a rank reaches relative to the overall destination counts (in columns 3 and 7). Products at the HS 6-digit level, ranked by decreasing export value within firm in reference country. Sample restricted to firm-products that ship to reference country and at least one other destination.

2.1 Estimates of Countable Products Model



Source: *SECEX* 2000, manufacturing firms and their manufactured products to the United States.
Note: Products at HS 6-digit level. Left panels repeat Figure 5.7. For simulations, we set $\alpha(\sigma-1) = 2.69$ and $\delta = -1.41$ from Table 2.6 (column 3), $\theta = 8.00$ following Eaton and Kortum (2002), and $\sigma = 7.61$ so that $\tilde{\theta} = 1.21$.

Figure 2.5: **Exporter Scope and Exporter Scale and Their Model Predictions for the USA**

Table 2.6: Individual Product Sales

	OLS-FE			REML
	(1)	(2)	(3)	(4)
Log # Products	1.332	1.217	1.590	1.279
	(.232)	(.243)	(.264)	(.001)
Log Product Rank	-2.634	-2.646	-2.630	-2.690
	(.129)	(.152)	(.137)	(.001)
Log local Exports Percentile[a]		-1.823		-1.745
		(.180)		(.006)
Log Employment/Minimum Employment[b]			.248	
			(.009)	
Scope elast. of local entry cost (δ)	-1.302	-1.429	-1.040	-1.411
	(.106)	(.093)	(.131)	(.001)
Scope elast. of prod. efficiency $(\alpha(\sigma-1))$	2.634	2.646	2.630	2.690
	(.129)	(.152)	(.137)	(.001)
Observations	162,570	147,891	159,645	147,891
Industry-destination panels	10,129	9,906	10,072	
R^2 (within)	.562	.692	.582	

[a]Log of firm's local total-exports percentile among exporters with minimum exporter scope.
[b]Log of firm's employment per employment of exporter with minimum exporter scope.

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Notes: Products at the Harmonized-System 6-digit level. Standard errors in parentheses, two-way clustered at the industry-destination and product-rank levels in OLS-FE (Cameron, Gelbach and Miller 2011).

OLS-FE fixed effects estimation based on regression equation

$$\ln p_{d\phi g}\, x_{d\phi g} = [\delta + \alpha(\sigma-1)] \ln G_{d\phi} \;-\; [\alpha(\sigma-1)] \ln g_{d\phi} \;+\; \ln \sigma f_{id}(1) \;-\; (1/\tilde{\theta}) \ln(1 - \Pr{}^{G}_{d\phi}) \;+\; \ln \epsilon_{d\phi g}$$

under industry-destination fixed effects for firm ϕ in industry i exporting $G_{d\phi}$ products, each with rank g, to destination d.

REML (maximum restricted likelihood) estimation of fixed and random coefficients based on

$$\ln p_{d\phi g}\, x_{d\phi g} = [\delta_i + \alpha_i(\sigma-1)] \ln G_{d\phi} \;-\; [\alpha_i(\sigma-1)] \ln g_{d\phi} \;+\; \ln \sigma f_i f_d(1) \;-\; (1/\tilde{\theta}) \ln(1 - \Pr{}^{G}_{d\phi}) \;+\; \ln \epsilon_{d\phi g}$$

with random coefficients δ_i, $\alpha_i(\sigma-1)$ and f_i (reported BLUP estimates across 259 *CNAE* manufacturing industries).

Table 2.7: Individual Product Sales: Discrete Case and Industry-Specific Parameters

	α const.		α_i specific	
	δ_i	$\alpha(\sigma-1)$	δ_i	$\alpha_i(\sigma-1)$
ISIC Rev. 2 industry	(1)	(2)	(3)	(4)
311 Food	-1.447	2.619	-1.390	2.462
312 Food	-1.451	2.619	-1.330	2.285
313 Beverages	-1.491	2.619	-1.509	2.657
314 Tobacco	-1.394	2.619	-1.364	2.457
321 Textiles	-1.279	2.643	-1.288	2.717
322 Wearing apparel, except footwear	-1.331	2.619	-1.156	1.925
323 Leather and leather products	-1.490	2.619	-1.527	2.755
324 Footwear, except rubber or plastic footwear	-1.354	2.619	-1.285	2.486
331 Wood and wood and cork products	-1.528	2.619	-1.536	2.675
332 Furniture and fixtures	-1.412	2.619	-1.433	2.684
341 Paper and paper products	-1.566	2.619	-1.640	2.988
342 Printing and publishing	-1.594	2.619	-1.710	3.421
351 Industrial chemicals	-1.399	2.619	-1.402	2.640
352 Other chemical products	-1.434	2.619	-1.399	2.511
353 Petroleum refineries	-1.603	2.619	-1.633	2.768
354 Misc. products of petroleum and coal	-1.399	2.619	-1.494	3.189
355 Rubber products	-1.452	2.619	-1.512	2.870
356 Plastic products n.e.c.	-1.513	2.619	-1.585	2.973
361 Pottery, china and earthenware	-1.576	2.619	-1.611	2.770
362 Glass and glass products	-1.441	2.619	-1.422	2.522
369 Other non-metallic mineral products	-1.417	2.619	-1.469	2.807
371 Iron and steel basic industries	-1.408	2.619	-1.443	2.805
372 Non-ferrous metal basic industries	-1.432	2.619	-1.462	2.757
381 Fabricated metal products	-1.487	2.619	-1.565	3.036
382 Machinery except electrical	-1.375	2.619	-1.348	2.517
383 Electrical apparatus, appliances and supplies	-1.385	2.619	-1.451	2.892
384 Transport equipment	-1.432	2.619	-1.295	2.277
385 Professional and measuring equipment	-1.345	2.619	-1.362	2.678
390 Other manufacturing	-1.462	2.619	-1.469	2.650

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level.

Underlying regression equation (for $g \leq G_{d\phi}$ and ISIC Rev. 2 industry $i(\phi)$) for columns 1 and 2:

$$\ln p_{d\phi g}\, x_{d\phi g} = \sum_i [\delta_i + \alpha(\sigma-1)] \ln G_{d\phi} - \sum_i [\alpha(\sigma-1)] \ln g_{d\phi} + \ln \sigma f_{id}(1) - (1/\tilde{\theta}) \ln(1-\text{Pr}^G_{d\phi}) + \ln \epsilon_{d\phi g},$$

with a coefficient estimate of -1.841 on the firm's local total-exports percentile among exporters with minimum exporter scope, controlling for 9,667 industry-destination effects (140,803 observations).

Underlying regression equation for columns 3 and 4:

$$\ln p_{d\phi g}\, x_{d\phi g} = \sum_i [\delta_i + \alpha_i(\sigma-1)] \ln G_{d\phi} - \sum_i [\alpha_i(\sigma-1)] \ln g_{d\phi} + \ln \sigma f_{id}(1) - (1/\tilde{\theta}) \ln(1-\text{Pr}^G_{d\phi}) + \ln \epsilon_{d\phi g}$$

also with a coefficient estimate of -1.841 on the firm's percentile, controlling for 9,667 industry-destination effects (140,803 observations).

Table 2.8: Individual Product Sales: National Firms (no Inward FDI Stock)

	OLS-FE			REML
	(1)	(2)	(3)	(4)
Log # Products	1.392	1.218	1.580	1.126
	(.239)	(.249)	(.255)	(.001)
Log Product Rank	-2.672	-2.674	-2.667	-2.752
	(.148)	(.159)	(.154)	(.002)
Log local Exports Percentile[a]		-1.918		-1.741
		(.179)		(.012)
Log Employment/Minimum Employment[b]			.198	
			(.009)	
Scope elast. of local entry cost (δ)	-1.279	-1.455	-1.087	-1.626
	(.092)	(.093)	(.104)	(.002)
Scope elast. of prod. efficiency $(\alpha(\sigma-1))$	2.672	2.674	2.667	2.752
	(.148)	(.159)	(.154)	(.002)
Observations	45,697	44,429	44,771	44,429
Industry-destination panels	5,153	5,080	5,105	
R^2 (within)	.579	.700	.592	

[a]Log of firm's local total-exports percentile among exporters with minimum exporter scope.
[b]Log of firm's employment per employment of exporter with minimum exporter scope.

Source: *SECEX* 2000, manufacturing firms and their manufactured products, excluding firms with inward FDI stocks in 2000 (inward FDI information courtesy of Poole 2010). *RAIS* 2000 for employment.
Notes: Products at the Harmonized-System 6-digit level. Standard errors in parentheses, two-way clustered at the industry-destination and product-rank levels in OLS-FE (Cameron et al. 2011).

OLS-FE fixed effects estimation based on regression equation

$$\ln p_{d\phi g}\, x_{d\phi g} = [\delta + \alpha(\sigma-1)] \ln G_{d\phi} \;-\; [\alpha(\sigma-1)] \ln g_{d\phi} \;+\; \ln \sigma f_{id}(1) \;+\; (\sigma-1) \ln \left(\phi / \phi_d^{*,G} \right) \;+\; \ln \epsilon_{d\phi g}$$

under industry-destination fixed effects for firm ϕ in industry i exporting $G_{d\phi}$ products, each with rank g, to destination d, where $(\sigma-1)\ln(\phi/\phi_d^{*,G}) = -(1/\tilde{\theta})\ln(1-\Pr_{d\phi}^{G})$, except for column 3 with $(\sigma-1)\ln(\phi/\phi_d^{*,G}) = \ln(\ell/\ell_d^{*,G})$.

REML (maximum restricted likelihood) estimation of fixed and random coefficients based on

$$\ln p_{d\phi g}\, x_{d\phi g} = \left[\tilde{\delta}_i + \tilde{\alpha}_i(\sigma-1) \right] \ln G_{d\phi} \;-\; [\tilde{\alpha}_i(\sigma-1)] \ln g_{d\phi} \;+\; \ln \sigma \tilde{f}_i f_d(1) \;+\; (\sigma-1) \ln \left(\phi / \phi_d^{*,G} \right) \;+\; \ln \epsilon_{d\phi g}$$

with random coefficients $\tilde{\delta}_i$, $\tilde{\alpha}_i(\sigma-1)$ and $\tilde{f}_i$ (reported BLUP estimates across 231 *CNAE* manufacturing industries).

Table 2.9: Individual Product Sales in Fixed Effects Regressions

		Firm-destination-prod. data			
	estimator	Ind. FE	Ind. FE	Firm FE	Firm-region FE
	controls		Dest.	Dest.	
Log Exports/product		(1)	(2)	(3)	(4)
Log # Products		1.396	1.319	1.557	1.315
		(.007)	(.007)	(.008)	(.007)
Log Product Rank		-2.558	-2.574	-2.624	-2.611
		(.007)	(.007)	(.006)	(.007)
Scope elast. of local entry cost (δ)		-1.162	-1.256	-1.067	-1.296
Scope elast. of prod. efficiency $(\alpha(\sigma-1))$		2.558	2.574	2.624	2.611
Observations		162,570	162,570	162,570	162,570
Panels		259	259	10,215	11,663
R^2 (within)		.462	.510	.582	.528
Corr. Firm FE, $X'\beta$				.085	.004

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level. Firm-region fixed effects in column 4 (groups of destinations with common *WTF* (Feenstra et al. 2005) two-digit codes). R^2 is within fit. Standard errors in parentheses. Regression equation

$$\ln p_{d\phi g}\, x_{d\phi g} = [\delta + \alpha(\sigma-1)] \ln G_{d\phi} \;-\; [\alpha(\sigma-1)] \ln g_{d\phi} \;+\; \ln \sigma f_{id}(1) \;+\; (\sigma-1) \ln \left(\phi/\phi_d^{*,G}\right) \;+\; \ln \epsilon_{d\phi g}.$$

Table 2.10: Individual Product Sales in Fixed Effects Regressions: Discrete Case and Industry-Specific Parameters

	α const.		α_i specific	
	δ_i	$\alpha(\sigma-1)$	δ_i	$\alpha_i(\sigma-1)$
ISIC Rev. 2 industry	(1)	(2)	(3)	(4)
311 Food	-.871	2.643	-.873	2.721
312 Food	-1.022	2.643	-.888	2.324
313 Beverages	-1.119	2.643	-1.204	2.861
314 Tobacco	-1.190	2.643	-2.362	4.135
321 Textiles	-1.279	2.643	-1.288	2.717
322 Wearing apparel, except footwear	-1.414	2.643	-1.196	1.916
323 Leather and leather products	-1.353	2.643	-1.428	3.099
324 Footwear, except rubber or plastic footwear	-.987	2.643	-.913	2.558
331 Wood and wood and cork products	-1.414	2.643	-1.453	2.944
332 Furniture and fixtures	-1.340	2.643	-1.350	2.713
341 Paper and paper products	-1.308	2.643	-1.489	3.682
342 Printing and publishing	-1.498	2.643	-1.593	3.384
351 Industrial chemicals	-1.286	2.643	-1.320	2.842
352 Other chemical products	-1.341	2.643	-1.298	2.554
353 Petroleum refineries	-1.419	2.643	-1.435	2.804
354 Misc. products of petroleum and coal	-1.411	2.643	-1.541	3.678
355 Rubber products	-1.386	2.643	-1.453	2.972
356 Plastic products n.e.c.	-1.451	2.643	-1.516	3.049
361 Pottery, china and earthenware	-1.475	2.643	-1.483	2.749
362 Glass and glass products	-1.288	2.643	-1.317	2.781
369 Other non-metallic mineral products	-1.382	2.643	-1.414	2.796
371 Iron and steel basic industries	-1.329	2.643	-1.427	3.350
372 Non-ferrous metal basic industries	-1.360	2.643	-1.443	3.142
381 Fabricated metal products	-1.446	2.643	-1.506	3.024
382 Machinery except electrical	-1.374	2.643	-1.316	2.459
383 Electrical apparatus, appliances and supplies	-1.351	2.643	-1.396	2.878
384 Transport equipment	-1.398	2.643	-1.217	2.226
385 Professional and measuring equipment	-1.338	2.643	-1.308	2.506
390 Other manufacturing	-1.445	2.643	-1.465	2.771

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level. Underlying regression equation (for $g \leq G_{d\phi}$ and ISIC Rev. 2 industry $i(\phi)$) for columns 1 and 2:

$$\ln p_{d\phi g}\, x_{d\phi g} = [\delta_i + \alpha(\sigma-1)] \ln G_{d\phi} \; - \; [\alpha(\sigma-1)] \ln g_{d\phi} \; + \; \ln \sigma f_{id}(1) \; + \; (\sigma-1) \ln \left(\phi / \phi_d^{*,G} \right) \; + \; \ln \epsilon_{d\phi g}.$$

Underlying regression equation for columns 3 and 4:

$$\ln p_{d\phi g}\, x_{d\phi g} = [\delta_i + \alpha_i(\sigma-1)] \ln G_{d\phi} \; - \; [\alpha_i(\sigma-1)] \ln g_{d\phi} \; + \; \ln \sigma f_{id}(1) \; + \; (\sigma-1) \ln \left(\phi / \phi_d^{*,G} \right) \; + \; \ln \epsilon_{d\phi g}.$$

Table 2.11: Individual Product Sales by Country and Sector: Discrete Case

		Firm-destination-good data			
	estimator	OLS	OLS	Firm FE	Firm-dest. FE
	controls		Dest.	Dest.	
Log Exp./prod.		(1)	(2)	(3)	(4)
Brazilian Producers exporting Manufactures					
Log # Products		1.168	1.203	1.591	1.275
		(.007)	(.007)	(.008)	(.007)
Log Product Rank		-2.508	-2.523	-2.623	-2.654
		(.008)	(.008)	(.006)	(.006)
Scope elast. of local entry cost (δ)		-1.340	-1.320	-1.032	-1.379
Scope elast. of prod. efficiency $(\alpha(\sigma-1))$		2.508	2.523	2.623	2.654
Chilean Producers exporting Manufactures					
Log # Products		.826	.889	1.161	.964
		(.016)	(.016)	(.017)	(.015)
Log Product Rank		-2.239	-2.244	-2.346	-2.342
		(.018)	(.018)	(.013)	(.014)
Scope elast. of local entry cost (δ)		-1.412	-1.355	-1.184	-1.378
Scope elast. of prod. efficiency $(\alpha(\sigma-1))$		2.239	2.244	2.346	2.342
Brazilian Commercial Intermediaries exporting Manufactures					
Log # Products		1.048	1.138	1.324	1.100
		(.014)	(.014)	(.018)	(.016)
Log Product Rank		-1.974	-1.980	-2.088	-2.097
		(.015)	(.014)	(.011)	(.011)
Scope elast. of local entry cost (δ)		-.927	-.841	-.764	-.997
Scope elast. of prod. efficiency $(\alpha(\sigma-1))$		1.974	1.980	2.088	2.097
Observations (pooled)		235,702	235,702	235,702	235,702
Panels				16,941	36,247
R^2		.482	.515	.580	.596
Corr. FE, $X'\beta$				.065	-.052
F statistic: Zero FE				13.426	6.567

Sources: Pooled Brazilian *SECEX* 2000, manufacturing firms as well as commercial intermediaries shipping manufactured products, and Chilean customs data 2000 (Álvarez et al. 2007).
Note: Products at the Harmonized-System 6-digit level. Constant, destination fixed effects, and sample fixed effects not reported. R^2 is within fit for FE regressions (columns 3 and 4). Standard errors in parentheses. Regression equation (for $g \leq G_{sd\omega}$):

$$\ln p_{sdg\omega} x_{sdg\omega} = [\delta + \alpha(\sigma-1)] \ln G_{sd\omega} - (\sigma-1) \ln g + \ln \left(\omega / \omega_{sd}^{*,G} \right) + \ln \sigma f_{sd}(1) \; + \; \ln \epsilon_{sdg\omega}.$$

Table 2.12: Non-linear Average Product Sales: Discrete Case

Log Exports/product	parameter restriction	$\tilde{\theta} = 1.06$	$\tilde{\theta} = 1.21$	$\tilde{\theta} = 1.49$
		(1)	(2)	(3)
Brazilian Producers exporting Manufactures				
Scope elast. of comb. incr. scope cost $(\delta + \alpha(\sigma-1))$		1.608	1.607	1.604
		(.012)	(.012)	(.012)
Scope elast. of prod. introd. cost $(\alpha(\sigma-1))$		2.554	2.554	2.553
		(.009)	(.009)	(.009)
Obs.		51,584	51,584	51,584
R^2		.657	.657	.657
Obs.		51,584	51,584	51,584
R^2		.657	.657	.657
Chilean Producers exporting Manufactures				
Scope elast. of comb. incr. scope cost $(\delta + \alpha(\sigma-1))$		.736	.735	.733
		(.030)	(.030)	(.030)
Scope elast. of prod. introd. cost $(\alpha(\sigma-1))$		2.162	2.161	2.160
		(.022)	(.022)	(.022)
Obs.		10,102	10,102	10,102
R^2		.611	.611	.611
Brazilian Commercial Intermediaries exporting Manufactures				
Scope elast. of comb. incr. scope cost $(\delta + \alpha(\sigma-1))$		1.291	1.290	1.288
		(.018)	(.018)	(.018)
Scope elast. of prod. introd. cost $(\alpha(\sigma-1))$		2.048	2.047	2.046
		(.013)	(.013)	(.013)
Obs.		20,571	20,571	20,571
R^2		.611	.611	.611

Sources: Brazilian *SECEX* 2000, manufacturing firms as well as commercial intermediaries shipping manufactured products, and Chilean customs data 2000 (Álvarez et al. 2007).
Note: Products at the Harmonized-System 6-digit level. Constant and destination fixed effects not reported. Standard errors in parentheses. Regression equation for average product sales:

$$\begin{aligned}\ln m_{G_{sd},g} \;=\; & \ln \sigma\tilde{\theta} f_{sd}(1)/(\tilde{\theta}-1) + [\delta + \alpha(\sigma-1)] \ln G_{sd} - \alpha(\sigma-1) \ln g \\ & + \ln \left[1 - [G_{sd}/(G_{sd}+1)]^{(\tilde{\theta}-1)(\delta+\alpha(\sigma-1))}\right] - \ln \left[1 - [G_{sd}/(G_{sd}+1)]^{\tilde{\theta}(\delta+\alpha(\sigma-1))}\right] \;+\; \ln \epsilon_{sdg\omega}\end{aligned}$$

with $g \leq G_{sd}$, where $m_{G_{sd},g} = \int_{\omega_{sd}^{*,G}}^{\omega_{sd}^{*,G+1}} p_{sdg}(\omega; g)\, x_{sdg}(\omega; g) \frac{\theta}{\omega^{\theta+1}} \frac{1}{(\omega_{sd}^{*,G})^{-\theta} - (\omega_{sd}^{*,G+1})^{-\theta}}\, \mathrm{d}\omega$ is average product sales for a product of given rank g over all firms with given exporter scope G_{sd} at a destination.

2.2 Estimates of Continuum of Products Model

Table 2.13: Non-linear Estimates of Individual Product Sales: Continuum Case

Log Exp./prod.	sample	Any sales			Sales ≥ US$100		
	controls		Dest.	Dest.&Ind.		Dest.	Dest.&Ind.
		(1)	(2)	(3)	(4)	(5)	(6)
Brazilian Producers exporting Manufactures							
Scope elasticity of							
incr. local entry cost (δ)		-1.453	-1.426	-1.332	-1.072	-1.069	-1.057
		(.005)	(.005)	(.005)	(.005)	(.005)	(.006)
prod. efficiency ($\alpha(\varepsilon-1)$)		2.985	2.965	2.951	1.872	1.945	2.079
		(.015)	(.014)	(.012)	(.013)	(.013)	(.011)
Curvature of							
prod. efficiency (β)		.833	.753	.623	-.065	-.031	.014
		(.025)	(.023)	(.019)	(.017)	(.017)	(.015)
Obs.		162,570	162,570	162,570	141,163	141,163	141,163
R^2		.496	.541	.646	.370	.433	.562
Chilean Producers exporting Manufactures							
Scope elasticity of							
incr. local entry cost (δ)		-1.495	-1.394	-1.281	-1.195	-1.074	-1.009
		(.011)	(.012)	(.011)	(.012)	(.012)	(.012)
prod. efficiency ($\alpha(\varepsilon-1)$)		2.628	2.552	2.634	1.743	1.701	1.860
		(.038)	(.036)	(.033)	(.033)	(.031)	(.029)
Curvature of							
prod. efficiency (β)		.590	.430	.562	-.109	-.195	-.028
		(.054)	(.048)	(.047)	(.040)	(.035)	(.037)
Obs.		37,172	37,172	37,172	34,024	34,024	34,024
R^2		.419	.451	.557	.329	.375	.496
Brazilian Commercial Intermediaries exporting Manufactures							
Scope elasticity of							
incr. local entry cost (δ)		-1.281	-1.247	-1.107	-1.079	-1.015	-.913
		(.008)	(.009)	(.009)	(.009)	(.009)	(.009)
prod. efficiency ($\alpha(\varepsilon-1)$)		4.023	3.561	3.352	3.044	2.548	2.408
		(.047)	(.039)	(.034)	(.042)	(.033)	(.029)
Curvature of							
prod. efficiency (β)		10.450	7.165	5.740	9.062	4.795	3.420
		(.306)	(.226)	(.182)	(.313)	(.192)	(.142)
Obs.		35,960	35,960	35,960	31,326	31,326	31,326
R^2		.489	.536	.599	.409	.469	.539

Source: Brazilian *SECEX* 2000, manufacturing firms as well as commercial intermediaries shipping manufactured products, and Chilean customs data 2000 (Álvarez et al. 2007).
Note: Products at the Harmonized-System 6-digit level. Industry fixed effects at the *CNAE* two-digit level for Brazil and at the most frequent HS 2-digit level for Chile (highest-sale or, if tie, mode HS 2-digit product group). Constant and destination fixed effects not reported. Standard errors in parentheses. Regression equation (for $g \leq G_{sd\omega}$):

$$\ln p_{sdg\omega} x_{isdg\omega} = \ln \gamma_{sd} w_d + \ln \sigma \gamma_i / \bar{\sigma} + \delta \ln G_{isd\omega} + \alpha(\varepsilon-1) \log\{G_{isd\omega}+\beta\} - \alpha(\varepsilon-1) \log\{g+\beta\} + \ln \epsilon_{isdg\omega},$$

where i indexes the industry, s the source country, d the destination, and ω the firm.

Table 2.14: Linear Estimates of Individual Product Sales: Continuum Case

		Firm-destination-product data			
	estimator	OLS	OLS	Ind. FE	Firm FE
Log Exp./prod.	controls		Dest.	Dest.	Dest.
		(1)	(2)	(3)	(4)
Brazilian Producers exporting Manufactures					
Log # Products		1.168	1.204	1.319	1.557
		(.007)	(.007)	(.007)	(.008)
Log Product Rank		-2.508	-2.525	-2.574	-2.624
		(.007)	(.007)	(.007)	(.008)
Obs.		162,570	162,570	162,570	162,570
Panels				259	10,215
R^2 (within)		.493	.538	.510	.582
Scope elast. of incr. local entry cost (δ)		-1.340	-1.321	-1.256	-1.067
Scope elast. of prod. efficiency $(\alpha(\varepsilon-1))$		2.508	2.525	2.574	2.624
Chilean Producers exporting Manufactures					
Log # Products		.826	.929	1.058	1.177
		(.017)	(.017)	(.015)	(.017)
Log Product Rank		-2.239	-2.258	-2.259	-2.349
		(.017)	(.017)	(.015)	(.017)
Obs.		37,172	37,172	37,172	37,172
Panels				91	4,099
R^2 (within)		.418	.450	.429	.543
Scope elast. of incr. local entry cost (δ)		-1.412	-1.330	-1.201	-1.172
Scope elast. of prod. efficiency $(\alpha(\varepsilon-1))$		2.239	2.258	2.259	2.349
Brazilian Commercial Intermediaries exporting Manufactures					
Log # Products		1.048	1.047	1.160	1.311
		(.013)	(.013)	(.013)	(.016)
Log Product Rank		-1.974	-1.999	-2.012	-2.090
		(.013)	(.013)	(.013)	(.016)
Obs.		35,960	35,960	35,960	35,960
Panels				70	2,627
R^2 (within)		.456	.513	.506	.652
Scope elast. of incr. local entry cost (δ)		-.927	-.951	-.853	-.779
Scope elast. of prod. efficiency $(\alpha(\varepsilon-1))$		1.974	1.999	2.012	2.090

Sources: Brazilian *SECEX* 2000, manufacturing firms as well as commercial intermediaries shipping manufactured products, and Chilean customs data 2000 (Álvarez et al. 2007).
Note: Products at the Harmonized-System 6-digit level. Industry fixed effects at the *CNAE* two-digit level for Brazil and at the *ISIC* two-digit level for Chile. Constant and destination fixed effects not reported. R^2 is within fit for FE regressions (columns 3 and 4). Standard errors in parentheses. F tests on implied scope elasticities (δ and α) show significance at the 1-percent level in all cases. Regression equation (for $g \leq G_{sd\omega}$ and $\beta = 0$):

$$\ln p_{sdg\omega}\, x_{isdg\omega} = \ln \gamma_{sd} w_d + \ln \sigma \gamma_i / \bar{\sigma} + [\delta + \alpha(\varepsilon-1)] \ln G_{isd\omega} - \alpha(\varepsilon-1) \ln g + \ln \epsilon_{isdg\omega},$$

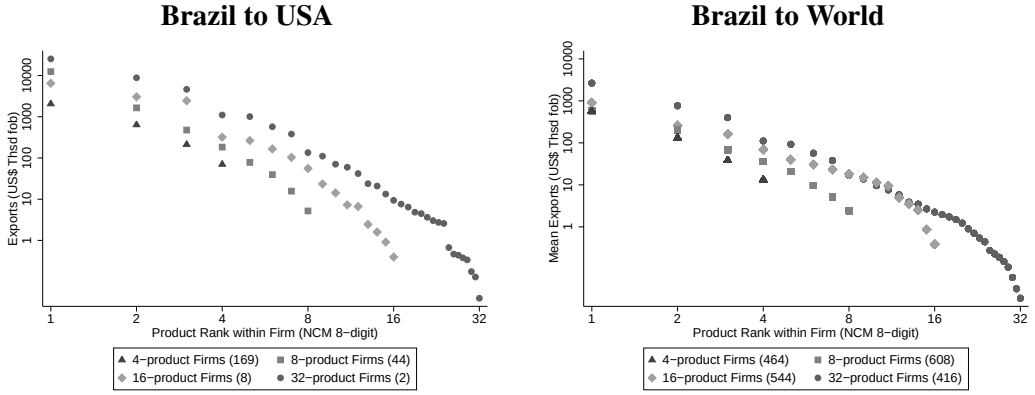
where i indexes the industry, s the source country, d the destination, and ω the firm.

2.3 Statistics for Products at Common Mercosur Nomenclature NCM (Nomenclatura Comum do Mercosul) 8-digit level

Table 2.15: Sample Characteristics by Source and Destination

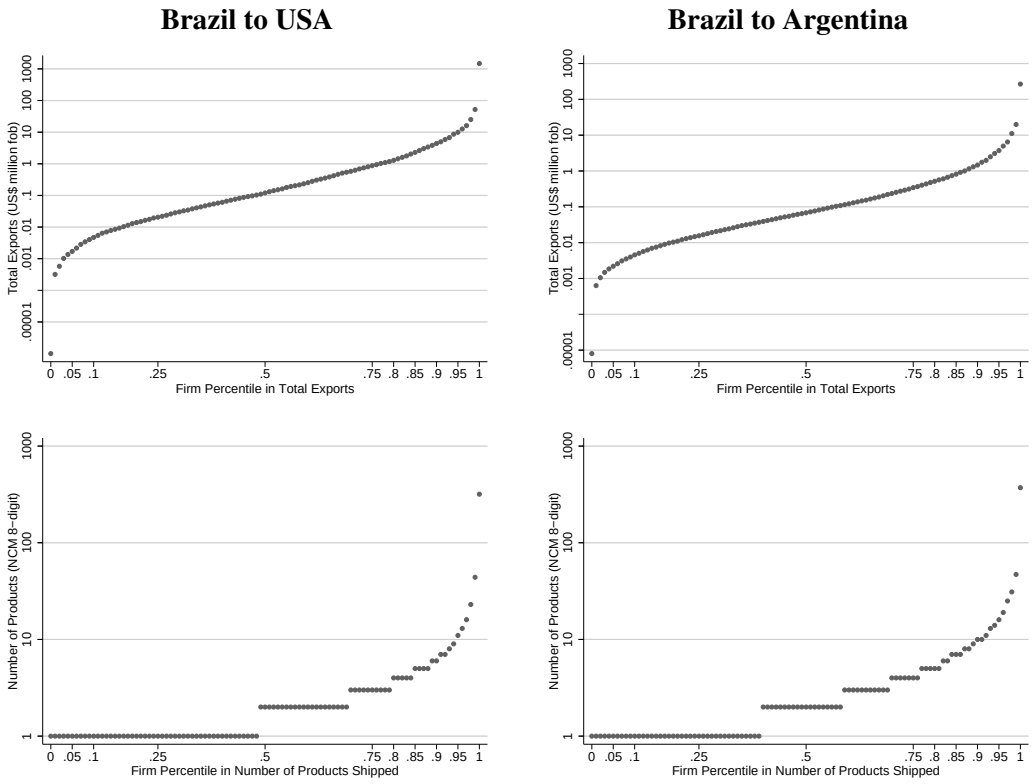
From source s	Brazil Manufacturers			Brazil Intm.
to destination d	USA	Argentina	World	World
	(1)	(2)	(3)	(4)
# of Observations (MNH)	11,743	23,696	176,675	38,798
# of Destinations (N)	1	1	170	132
# of Firms (M)	3,083	4,590	10,215	2,627
Destination share in Total exp.	.257	.144	1	1
Single-prod. firms: Total exports share	.119	.083	.086	.082
Multi-prod. firms' top product: Total exports share	.601	.537	.566	.594
Multi-prod. firms' other prod.: Total exports share	.280	.381	.347	.324
Median Total exports ($T_d(m)$)	.120	.068	.089	.041
Median Exporter scope ($G_d(m)$)	2	2	2	2
Median Avg. Exp. scale ($a_d(m)$)	.066	.030	.035	.012
Mean Total exports ($\bar{t}_d$)	3.170	1.192	3.720	1.101
Mean Exporter scope ($\bar{G}_d$)	3.809	5.163	5.833	10.304
Mean Avg. Exp. scale ($\bar{a}_d$)	.832	.231	.638	.107

Sources: *SECEX* 2000 for Brazil, manufacturing firms and their manufactured products as well as commercial intermediaries and their manufactured products
Note: Aggregate region world treated as single destination, collapsing product shipments to different countries into single product shipment. Products at the Common Mercosur Nomenclature 8-digit level. Exports in US$ million fob. The U.S. is Brazil's top export destination in 2000, Argentina second to top. Firms' average exporter scale (a_d in US$ million fob) is the scope-weighted arithmetic mean of exporters' average exporter scales.



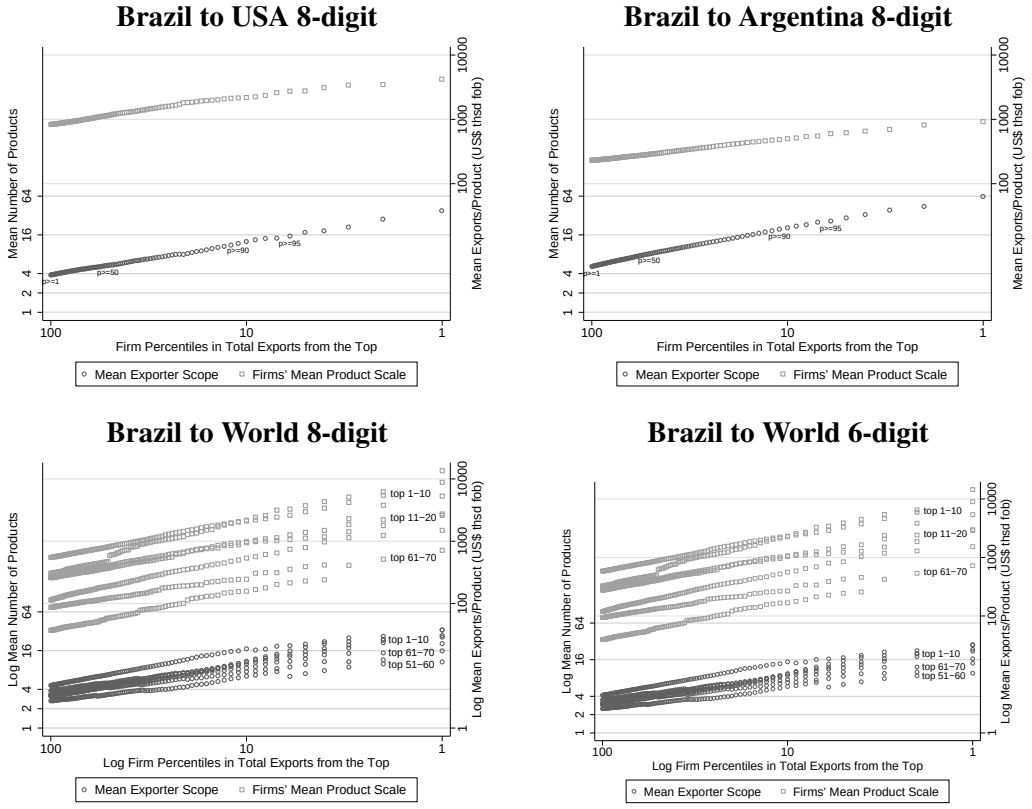
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Common Mercosur Nomenclature 8-digit level. World average from pooling destinations to which firms in a given exporter-scope group ship. For products at the Harmonized-System 6-digit level see Figure 2.2.

Figure 2.6: **Within-firm Sales Distribution**



Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Common Mercosur Nomenclature 8-digit level. For products at the Harmonized-System 6-digit level see Figure 2.3.

Figure 2.7: **Total Sales and Exporter Scope Distributions**



Source: *SECEX* 2000 for Brazil, manufacturing firms and their manufactured products.
Note: Left-most observations are all exporters; at the next percentile are exporter observations with shipments in the top 99 percentiles; up to the right-most observations with exporters whose shipments are in the top percentile. Aggregate regions include only destinations with more than 100 firms; destinations ranked by total exports and lumped into groups of ten destinations for which unweighted means over distributions are shown (70 worldwide). Products at the Common Mercosur Nomenclature 8-digit, except right-lower graph for Harmonized-System 6-digit level. For additional statistics at the Harmonized-System 6-digit level see Figure 2.4.

Figure 2.8: **Scope, Average Scale and the Total Exports Distribution**

Table 2.16: Overlaps between Reference Countries and Rest of World by Product Rank

Prod. rank in Ref. country	Reference country: USA				Reference country: Argentina			
	Overlap (1)	Overlap top prd. (2)	#Dest./ firm (3)	#Firms (4)	Overlap (5)	Overlap top prd. (6)	#Dest./ firm (7)	#Firms (8)
1	.81	.81	8.84	2,264	.76	.76	7.79	3,027
2	.54	.76	13.01	1,047	.54	.75	10.48	1,692
4	.37	.72	18.47	391	.38	.66	13.86	835
8	.33	.68	23.40	146	.28	.61	18.02	358
16	.27	.57	24.22	69	.23	.56	23.23	146
32	.25	.55	29.00	24	.21	.47	28.22	58
64	.22	.54	38.00	11	.20	.38	36.91	23
128	.14	.55	49.83	6	.15	.28	40.58	12

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Destination counts in columns 3 and 7 are mean numbers of destinations to which firms with at least as many products as reported for a rank ship. Overlap in columns 1 and 5 is the proportion of destinations that a product of reported rank reaches relative to the overall destination counts (in columns 3 and 7). Overlap in columns 2 and 6 is the proportion of destinations that the top-selling product of firms with at least as many products as reported for a rank reaches relative to the overall destination counts (in columns 3 and 7). Products at the Common Mercosur Nomenclature 8-digit level, ranked by decreasing export value within firm in reference country. Sample restricted to firm-products that ship to reference country and at least one other destination.

Table 2.17: Individual Product Sales

	OLS-FE			REML
	(1)	(2)	(3)	(4)
Log # Products	1.332	1.213	1.580	1.289
	(.224)	(.234)	(.255)	(.001)
Log Product Rank	-2.540	-2.553	-2.537	-2.602
	(.118)	(.140)	(.125)	(.001)
Log local Exports Percentile[a]		-1.815		-1.727
		(.178)		(.006)
Log Employment/Minimum Employment[b]			.236	
			(.010)	
Scope elast. of local entry cost (δ)	-1.208	-1.340	-.957	-1.312
	(.108)	(.096)	(.133)	(.001)
Scope elast. of prod. efficiency $(\alpha(\sigma-1))$	2.540	2.553	2.537	2.602
	(.118)	(.140)	(.125)	(.001)
Observations	176,675	159,722	173,646	159,722
Industry-destination panels	10,129	9,905	10,072	
R^2 (within)	.564	.689	.582	

[a]Log of firm's local total-exports percentile among exporters with minimum exporter scope.
[b]Log of firm's employment per employment of exporter with minimum exporter scope.

Source: *SECEX* 2000, manufacturing firms and their manufactured products. *RAIS* 2000 for employment.
Notes: Products at the Common Mercosur Nomenclature 8-digit level. Standard errors in parentheses, two-way clustered at the industry-destination and product-rank levels in OLS-FE (Cameron et al. 2011).

OLS-FE fixed effects estimation based on regression equation

$$\ln p_{d\phi g}\, x_{d\phi g} = [\delta + \alpha(\sigma-1)] \ln G_{d\phi} \;-\; [\alpha(\sigma-1)] \ln g_{d\phi} \;+\; \ln \sigma f_{id}(1) \;+\; (\sigma-1) \ln \left(\phi/\phi_d^{*,G}\right) \;+\; \ln \epsilon_{d\phi g}$$

under industry-destination fixed effects for firm ϕ in industry i exporting $G_{d\phi}$ products, each with rank g, to destination d, where $(\sigma-1)\ln(\phi/\phi_d^{*,G}) = -(1/\tilde{\theta})\ln(1-\Pr_{d\phi}^{G})$, except for column 3 with $(\sigma-1)\ln(\phi/\phi_d^{*,G}) = \ln(\ell/\ell_d^{*,G})$.

REML (maximum restricted likelihood) estimation of fixed and random coefficients based on

$$\ln p_{d\phi g}\, x_{d\phi g} = \left[\tilde{\delta}_i + \tilde{\alpha}_i(\sigma-1)\right] \ln G_{d\phi} \;-\; [\tilde{\alpha}_i(\sigma-1)] \ln g_{d\phi} \;+\; \ln \sigma \tilde{f}_i f_d(1) \;+\; (\sigma-1) \ln \left(\phi/\phi_d^{*,G}\right) \;+\; \ln \epsilon_{d\phi g}$$

with random coefficients $\tilde{\delta}_i$, $\tilde{\alpha}_i(\sigma-1)$ and $\tilde{f}_i$ (reported BLUP estimates across 259 *CNAE* manufacturing industries).
For similar statistics at the Harmonized-System 6-digit level see Table 2.6.

3 Manufacturing Firms: Eaton et al. (2004) replication and extensions

Table 3.1: Number of Manufacturing Firms in Brazil, France and the U.S.

SIC industry	Brazil 2000 (1)	France 1986 (2)	U.S. 1987 (3)
[20, 21] Food and tobacco products	105,239	59,637	11,887
[22, 23] Textiles and apparel	112,817	24,952	17,456
[24, 25] Lumber and furniture	80,038	29,196	22,518
[26] Paper and allied products	11,654	1,757	4,512
[27] Printing and publishing	45,958	18,879	27,842
[28] Chemicals, etc.	35,287	3,901	7,312
[30] Rubber and plastics	46,089	4,722	8,758
[31] Leather and leather products	23,251	4,491	1,052
[32] Stone, clay, glass, and concrete	49,765	9,952	10,292
[33] Primary metal industries	29,573	1,425	4,626
[34] Fabricated metal products	44,524	25,923	21,940
[35] Machinery and computer equipment	71,600	17,164	27,003
[36] Electronic and electrical equipment	15,025	9,382	9,525
[37] Transportation equipment	10,192	3,786	5,439
[38] Instruments, etc.	7,370	7,567	4,232
[39] Miscellaneous manufacturing	8,877	11,566	7,254
Manufacturing (ex. petroleum refining)	697,259	234,300	191,648

Sources: *RAIS* and *SECEX* 2000 manufacturing firms for Brazil. Eaton et al. (2004) for France 1986 and U.S. 1987.
Note: Manufacturing total excludes petroleum refining.

Table 3.2: Percentage of Exporters in Brazil, France and the U.S.

SIC industry	Brazil 2000 (1)	France 1986 (2)	U.S. 1987 (3)
[20, 21] Food and tobacco products	.8	5.5	13.1
[22, 23] Textiles and apparel	.8	24.1	6.2
[24, 25] Lumber and furniture	1.7	12.1	6.7
[26] Paper and allied products	1.8	45.3	18.0
[27] Printing and publishing	.3	15.1	2.9
[28] Chemicals, etc.	2.7	55.4	30.3
[30] Rubber and plastics	2.0	44.3	22.2
[31] Leather and leather products	3.2	26.3	17.0
[32] Stone, clay, glass, and concrete	.9	16.3	9.0
[33] Primary metal industries	1.5	52.8	22.1
[34] Fabricated metal products	1.3	16.8	15.2
[35] Machinery and computer equipment	2.1	26.8	19.6
[36] Electronic and electrical equipment	3.0	30.2	34.6
[37] Transportation equipment	2.5	32.9	23.5
[38] Instruments, etc.	3.6	13.3	43.1
[39] Miscellaneous manufacturing	3.5	21.0	13.0
Manufacturing (ex. petroleum refining)	1.5	17.4	14.6

Sources: *RAIS* and *SECEX* 2000 manufacturing firms for Brazil. Eaton et al. (2004) for France 1986 and U.S. 1987.
Note: Percentages of manufacturing firms that export. Manufacturing total excludes petroleum refining.

Table 3.3: Export Market Penetration by Brazilian and French Manufacturing Firms

	Brazil 2000						France 1986					
	Single mkt.		10+ mkts.		50+ mkts.		Single mkt.		10+ mkts.		50+ mkts.	
SIC industry	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
[20, 21] Food and tobacco products	32.9	(0.7)	19.9	(88.4)	1.6	(42.6)	36.2	(1.8)	18.4	(78.5)	1.6	(35.9)
[22, 23] Textiles and apparel	46.0	(2.0)	7.5	(66.7)	0.0	(0.0)	26.8	(1.4)	24.9	(83.8)	0.4	(19.9)
[24, 25] Lumber and furniture	35.1	(4.7)	13.3	(52.3)	0.1	(2.6)	50.6	(5.4)	4.8	(45.4)	0.0	(0.0)
[26] Paper and allied products	41.6	(0.2)	15.3	(94.2)	1.4	(15.0)	25.4	(0.2)	24.6	(89.9)	1.0	(30.2)
[27] Printing and publishing	62.8	(6.5)	4.4	(53.2)	0.6	(0.7)	46.8	(2.8)	9.1	(61.1)	0.6	(23.4)
[28] Chemicals, etc.	36.1	(0.9)	16.8	(74.6)	0.4	(6.5)	19.6	(0.1)	38.4	(96.9)	6.2	(69.1)
[30] Rubber and plastics	44.1	(1.4)	9.0	(78.9)	0.4	(23.8)	30.9	(1.1)	18.1	(91.4)	0.9	(54.9)
[31] Leather and leather products	37.4	(1.9)	14.0	(68.4)	0.2	(7.3)	29.5	(1.2)	21.3	(83.5)	0.8	(30.8)
[32] Stone, clay, glass, and concrete	40.5	(3.2)	20.0	(59.8)	1.3	(16.8)	47.4	(2.2)	12.6	(89.3)	1.3	(57.1)
[33] Primary metal industries	45.1	(3.3)	10.1	(78.9)	0.4	(14.0)	23.0	(0.1)	25.1	(81.1)	2.4	(40.3)
[34] Fabricated metal products	42.8	(0.6)	11.9	(70.2)	0.6	(4.1)	41.9	(3.0)	13.1	(71.7)	0.5	(19.3)
[35] Machinery and computer eqpmt.	41.5	(1.6)	10.7	(77.8)	0.6	(22.2)	30.6	(0.5)	26.1	(93.5)	2.5	(58.8)
[36] Electronic and electrical eqpmt.	37.0	(0.5)	14.7	(84.1)	0.6	(12.2)	29.7	(0.3)	23.3	(94.1)	2.8	(58.9)
[37] Transportation eqpmt.	32.5	(0.1)	22.2	(95.6)	2.7	(63.5)	28.9	(0.1)	24.2	(96.0)	2.3	(65.1)
[38] Instruments, etc.	34.8	(3.0)	16.2	(87.0)	0.3	(3.0)	27.3	(1.1)	30.0	(90.9)	2.7	(42.5)
[39] Miscellaneous manufacturing	37.5	(1.5)	8.0	(63.0)	0.6	(20.8)	34.8	(1.9)	17.5	(82.5)	0.8	(24.2)
Manufacturing (ex. petroleum ref.)	39.6	(1.2)	13.1	(82.2)	0.6	(28.2)	34.5	(0.7)	19.7	(89.6)	1.5	(51.6)

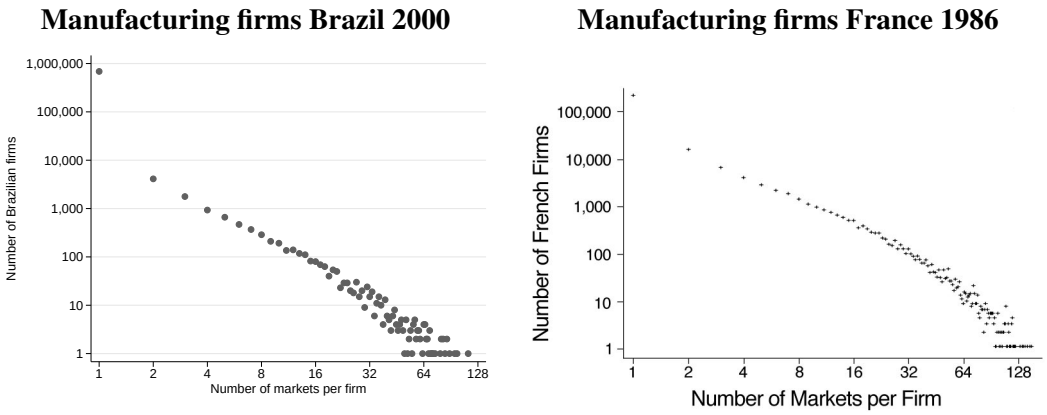
Sources: *SECEX* 2000 manufacturing firms for Brazil. Eaton et al. (2004) for France 1986.
Note: Manufacturing total excludes petroleum refining. Percentage of firms shipping to exactly one destination, to 10 or more, and to 50 or more destinations. Percentage of total exports that such exporters represent in brackets.

Table 3.4: Export Market Penetration by Brazil's Manufactured Export Varieties and Brazilian Manufacturing Firms

	Brazilian Manufactured Varieties 2000[a]						Brazilian Manufacturing Firms 2000[b]					
	Single mkt.		10+ mkts.		50+ mkts.		Single mkt.		10+ mkts.		50+ mkts.	
SIC industry	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
[20, 21] Food and tobacco products	53.6	(3.8)	8.2	(68.0)	0.2	(6.4)	32.9	(0.7)	19.9	(88.4)	1.6	(42.6)
[22, 23] Textiles and apparel	59.3	(8.3)	2.7	(44.7)	0.0	(0.0)	46.0	(2.0)	7.5	(66.7)	0.0	(0.0)
[24, 25] Lumber and furniture	50.4	(8.6)	6.3	(38.1)	0.0	(1.2)	35.1	(4.7)	13.3	(52.3)	0.1	(2.6)
[26] Paper and allied products	58.7	(2.0)	5.5	(82.7)	0.2	(3.0)	41.6	(0.2)	15.3	(94.2)	1.4	(15.0)
[27] Printing and publishing	70.7	(14.1)	2.3	(38.4)	0.3	(0.7)	62.8	(6.5)	4.4	(53.2)	0.6	(0.7)
[28] Chemicals, etc.	57.8	(6.3)	4.3	(44.6)	0.0	(0.8)	36.1	(0.9)	16.8	(74.6)	0.4	(6.5)
[30] Rubber and plastics	60.5	(4.6)	4.2	(54.5)	0.1	(17.2)	44.1	(1.4)	9.0	(78.9)	0.4	(23.8)
[31] Leather and leather products	51.4	(5.4)	7.5	(52.1)	0.0	(5.8)	37.4	(1.9)	14.0	(68.4)	0.2	(7.3)
[32] Stone, clay, glass, and concrete	56.8	(6.4)	9.0	(50.3)	0.3	(9.7)	40.5	(3.2)	20.0	(59.8)	1.3	(16.8)
[33] Primary metal industries	57.1	(5.8)	5.7	(50.9)	0.0	(2.4)	45.1	(3.3)	10.1	(78.9)	0.4	(14.0)
[34] Fabricated metal products	51.1	(2.2)	10.5	(39.7)	0.3	(2.7)	42.8	(0.6)	11.9	(70.2)	0.6	(4.1)
[35] Machinery and computer eqpmt.	59.1	(7.2)	4.7	(55.0)	0.0	(5.6)	41.5	(1.6)	10.7	(77.8)	0.6	(22.2)
[36] Electronic and electrical eqpmt.	59.8	(5.5)	3.9	(56.6)	0.0	(1.5)	37.0	(0.5)	14.7	(84.1)	0.6	(12.2)
[37] Transportation eqpmt.	38.9	(0.6)	18.7	(83.6)	0.1	(1.4)	32.5	(0.1)	22.2	(95.6)	2.7	(63.5)
[38] Instruments, etc.	56.1	(5.1)	7.6	(71.1)	0.0	(1.1)	34.8	(3.0)	16.2	(87.0)	0.3	(3.0)
[39] Miscellaneous manufacturing	51.6	(3.6)	6.6	(54.7)	0.0	(0.0)	37.5	(1.5)	8.0	(63.0)	0.6	(20.8)
Manufacturing (ex. petroleum refining)	55.0	(4.1)	6.9	(62.0)	0.1	(3.9)	39.6	(1.2)	13.1	(82.2)	0.6	(28.2)

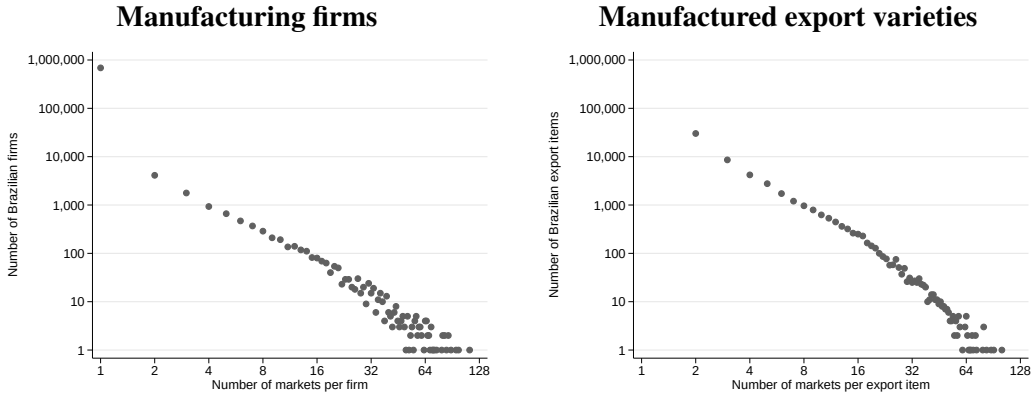
[a] A manufactured export variety is a manufacturing firm's export product.
[b] As also reported in columns 1 through 6 in Table 3.3.

Source: *SECEX* 2000 manufactured export varieties at the Harmonized-System 6-digit level.
Note: Each manufacturing firm's export product is one variety. Manufacturing total excludes petroleum refining. Percentage of varieties shipped to exactly one destination, to 10 or more, and to 50 or more destinations. Percentage of total exports that such export varieties represent in brackets.



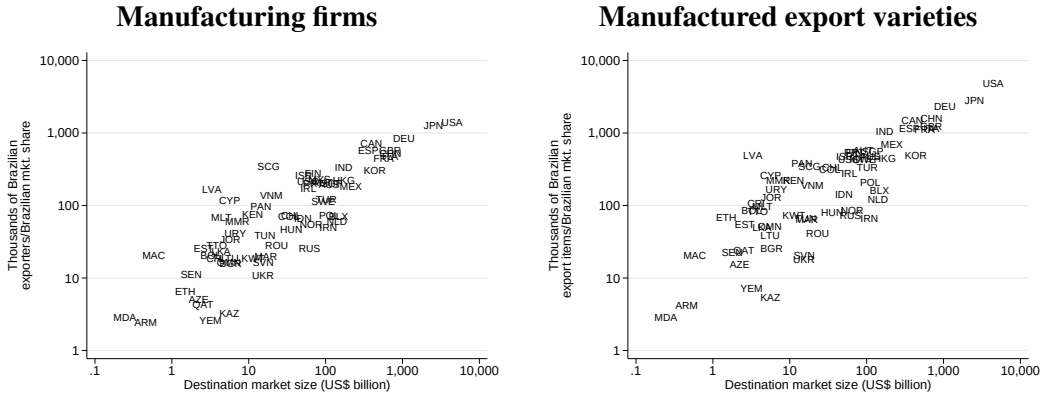
Sources: *SECEX* 2000 manufacturing firms for Brazil 2000; Eaton et al. (2004) for France 1986.
Note: Each manufacturing firm's export product is one variety. Left graph under the assumption that every Brazilian manufacturer has sales of at least one Real in the domestic Brazilian market. The elasticity of the Brazilian number of firms with respect to the number of markets is -2.48 (standard error .065). The elasticity of the number of French exporters with respect to the number of markets is -2.5 Eaton et al. (2004).

Figure 3.1: **Export-market presence of Brazilian and French exporters**



Source: *SECEX* 2000 manufacturing firms and manufactured export varieties at the Harmonized-System 6-digit level.
Note: Each manufacturing firm's export product is one variety. Left graph under the assumption that every Brazilian manufacturer has sales of at least one Real in the domestic Brazilian market. The elasticity of the number of firms with respect to the number of markets is -2.48 (standard error .065). In right graph, a manufactured export variety is a manufacturing firm's export product. The elasticity of the number of export varieties with respect to number of markets is -2.87 (standard error .061).

Figure 3.2: **Export-market presence of Brazilian firms and varieties**



Sources: *SECEX* 2000 manufacturing firms and manufactured export varieties at the Harmonized-System 6-digit level, linked to *WTF* (Feenstra et al. 2005) and *Unido* Industrial Statistics (UNIDO 2005).
Note: Each manufacturing firm's export product is one variety. For the left graph, the elasticity of the number of Brazilian firms with respect to destination market size (absorption) is .626, conditional on Brazilian exporters' market share in the destination economy (standard error .043, see Table 3.5). In the right graph, a manufactured export variety is a manufacturing firm's export product. The elasticity of the number of Brazilian firms with respect to destination market size (absorption) is .876, conditional on Brazilian exporters' market share in the destination economy (standard error .079, see Table 3.7).

Figure 3.3: **Export-market presence and market size**

Table 3.5: Export-Market Presence Regressions for Brazil and France

Log # Firms (M_{sd}, M_{isd})	Brazil 2000[a]			France 1986[b]		
	Dest. data	Dest. & Ind. data		Dest. data	Dest. & Ind. data	
	(1)	(2)	(3)	(4)	(5)	(6)
Log Market share (λ_{sd})	.719	.640	.652	.875	.826	(not rep.)
	(.065)***	(.017)***	(.017)***	(.030)***	(.023)***	
Log Market size (T_d)	.626	.494	.502	.617	.585	(not rep.)
	(.043)***	(.022)***	(.012)***	(.021)***	(.019)***	
Log Industry bias (B_{isd})		.356	.385		.418	(not rep.)
		(.028)***	(.013)***		(.051)***	
Const.	-5.710	-4.348	-4.374	9.088	7.442	(not rep.)
	(1.108)***	(.371)***	(.288)***	(.150)***	(.258)***	
Industry FE			yes			yes
Obs.	67	857	857	113	1,808	1,808
R^2	.833	.766	.815	.903	.837	.894

[a]Data exclude shipments to the Brazilian domestic market.

[b]Data include shipments to the French domestic market.

Sources: *SECEX* 2000 manufacturing firms, linked to *WTF* (Feenstra et al. 2005) and *Unido* Industrial Statistics (UNIDO 2005). Eaton et al. (2004) for France 1986.

Note: 16 SIC industries, 67 destinations in Brazilian data (excluding domestic Brazilian market) and 113 destinations in French data (including domestic French market). Unbalanced destination-industry information in Brazilian data. Total exports T_{isd} from industry i in source country s (Brazil, France) to destination market d can be decomposed into: $M_{isd}\bar{t}_{isd}$, where M_{isd} is the number of source country s's exporters in industry i with shipments to destination country d, and $\bar{t}_{isd}$ are these exporters' average sales in destination country d. The same total exports T_{isd} can also be decomposed into: $\lambda_{sd}T_dB_{isd}$, where λ_{sd} is the market share of source country s's exports in destination d, T_d is the market size of destination country d (manufacturing absorption), and industry bias B_{isd} is the share of source country s's industry i exports in the country's total exports to destination d. By definition, $M_{isd}\bar{t}_{isd} = \lambda_{sd}T_dB_{isd}$. Regressions in columns (2), (3), (5), and (6) show what fraction of $\lambda_{sd}T_dB_{isd}$ is associated with the market presence of additional firms M_{isd} (as opposed to additional sales per firm $\bar{t}_{isd}$). For regressions in columns (1) and (4), set $B_{isd} \equiv 1$ and $M_{sd} \equiv \sum_i M_{isd}$. Standard errors in parentheses (clustered at the industry level in columns 2, 3, 5 and 6): * significance at ten, ** five, *** one percent.

Table 3.6: Export-Market Presence Regressions and Exporter Scope

Log # Firms (M_{sd}, M_{isd})	Unconditional			Conditional on Exporter Scope		
	Dest. data	Dest. & Ind. data		Dest. data	Dest. & Ind. data	
	(1)	(2)	(3)	(4)	(5)	(6)
Log Market share (λ_{sd})	.719	.640	.652	.661	.643	.628
	(.065)***	(.017)***	(.017)***	(.075)***	(.024)***	(.018)***
Log Market size (T_d)	.626	.494	.502	.625	.494	.498
	(.043)***	(.022)***	(.012)***	(.043)***	(.022)***	(.012)***
Log Industry bias (B_{isd})		.356	.385		.357	.367
		(.028)***	(.013)***		(.029)***	(.014)***
Log # Prod. (G_{sd}, G_{isd})				.366	-.019	.188
				(.239)	(.157)	(.047)***
Const.	-5.710	-4.348	-4.374	-6.355	-4.326	-4.625
	(1.108)***	(.371)***	(.288)***	(1.175)***	(.412)***	(.292)***
Industry FE			yes			yes
Obs.	67	857	857	67	857	857
R^2	.833	.766	.815	.839	.766	.818

Sources: *SECEX* 2000 manufactured export varieties at the Harmonized-System 6-digit level, linked to *WTF* (Feenstra et al. 2005) and *Unido* Industrial Statistics (UNIDO 2005).

Note: Each manufacturing firm's export product is one variety. 16 SIC industries, 67 destinations (excluding domestic Brazilian market), with unbalanced destination-industry information. Total exports T_{isd} from industry i in source country s (Brazil, France) to destination market d can be decomposed into: $M_{isd}\bar{G}_{isd}\bar{a}_{isd}$, where M_{isd} is the number of source country s's exporters in industry i with shipments to destination country d, $\bar{G}_{isd}$ is these exporters' average number of products shipped to destination d (the average scope of these exporters), and $\bar{a}_{isd}$ are their export products' average sales in destination d (the average scale of the export varieties). The same total exports T_{isd} can also be decomposed into: $\lambda_{sd}T_dB_{isd}$ (similar to the decomposition in Table 3.5 before), where λ_{sd} is the market share of source country s's export varieties in destination country d, T_d is the market size of destination country d (manufacturing absorption), and B_{isd} is the share of source country s's industry i exports in the country's total exports to destination d. By definition, $M_{isd}\bar{G}_{isd}\bar{a}_{isd} = \lambda_{sd}T_dB_{isd}$. Regressions in columns (2), (3), (5), and (6) show what fraction of $\lambda_{sd}T_dB_{isd}$ is associated with the market presence of additional firms M_{isd} (as opposed to additional sales per firm $\bar{a}_{isd}$), unconditional or conditional on the log exporter scope $\bar{G}_{isd}$. For regressions in columns (1) and (4), set $B_{isd} \equiv 1$ and $M_{sd} \equiv \sum_i M_{isd}$, and set $\bar{g}_{sd} \equiv \sum_i \bar{G}_{isd}$. Standard errors in parentheses (clustered at the industry level in columns 2, 3, 5 and 6): * significance at ten, ** five, *** one percent.

Table 3.7: Export Variety Presence and Exporter Scope Regressions

	Log # Exp. Varieties (V_{sd}, V_{isd})			Log # Products ($\bar{G}_{sd}, \bar{G}_{isd}$)		
	Dest. data	Dest. & Ind. data		Dest. data	Dest. & Ind. data	
	(1)	(2)	(3)	(4)	(5)	(6)
Log Market share (λ_{sd})	.876	.777	.779	.087	.146	.061
	(.079)***	(.035)***	(.023)***	(.057)	(.102)	(.021)***
Log Market size (T_d)	.630	.522	.526	-.058	.036	-.027
	(.052)***	(.029)***	(.015)***	(.046)	(.062)	(.015)*
Log Industry bias (B_{isd})		.424	.482		.073	.058
		(.043)***	(.018)***		(.071)	(.014)***
Log # Firms (M_{sd}, M_{isd})				.098	-.015	.101
				(.064)	(.126)	(.025)***
Const.	-3.947	-3.202	-3.039	2.324	1.082	1.776
	(1.341)***	(.724)***	(.379)***	(.676)***	(.470)**	(.236)***
Industry FE			yes			yes
Obs.	67	857	857	67	857	857
R^2	.802	.712	.769	.281	.107	.212

Sources: *SECEX* 2000 manufactured export varieties at the Harmonized-System 6-digit level, linked to *WTF* (Feenstra et al. 2005) and *Unido* Industrial Statistics (UNIDO 2005).

Note: Each manufacturing firm's export product is one variety. 6 SIC industries, 67 destinations (excluding domestic Brazilian market), with unbalanced destination-industry information. Total exports T_{isd} from industry i in source country s (Brazil, France) to destination market d can be decomposed into (Broda and Weinstein 2006): $V_{isd}\bar{a}_{isd}$, where V_{isd} is the number of export varieties from source country s's industry i shipped to destination country d and $\bar{a}_{isd}$ is average sales of these export varieties in destination country d (the average scale of the export varieties). As in Tables 3.5 and 3.6 before, V_{isd} can be further decomposed into $M_{isd}\bar{G}_{isd}$, where M_{isd} is the number of source country s's exporters in industry i with shipments to destination country d and $\bar{G}_{isd}$ is these exporters' average number of products shipped to destination d (the average scope of these exporters). As in Tables 3.5 and 3.6 before, total exports T_{isd} can also be decomposed into: $\lambda_{sd}T_dB_{isd}$, where λ_{sd} is the market share of source country s's export varieties in destination country d, T_d is the market size of destination country d (manufacturing absorption), and B_{isd} is the share of source country s's industry i exports in the country's total exports to destination d. By definition, $V_{isd}a^g_{sd} = M_{isd}\bar{G}_{isd}a^g_{sd} = \lambda_{sd}T_dB_{isd}$. Regressions in columns (1) through (3) show what fraction of $\lambda_{sd}T_dB_{isd}$ is associated with the market presence of additional export varieties V_{sd} or V_{isd} (as opposed to additional sales per variety $\bar{a}_{isd}$). Regressions in columns (4) through (6) show what fraction of $\lambda_{sd}T_dB_{isd}$ is associated with exporter scope $\bar{g}_{sd}$ or $\bar{G}_{isd}$. For regressions in columns (1) and (4), set $B_{isd} \equiv 1$, $V_{sd} \equiv \sum_i V_{isd}$, and $\bar{g}_{sd} \equiv \sum_i \bar{G}_{isd}$. These regressions are cross-section analogs to the time series regression in Broda and Weinstein (2006). Standard errors in parentheses (clustered at the industry level in columns 2, 3, 5 and 6): * significance at ten, ** five, *** one percent.

4 Manufacturing Firms: Replications of Bernard et al. (2007) and Bernard et al. (2011) gravity decompositions

Table 4.1: Exporting Activity By Manufacturing Firms in Brazil and the U.S.

	U.S. 2002		Brazil 2000	
	% Firms	% Exporters	% Firms	% Exporters
NAICS industry	(1)	(2)	(3)	(4)
311 Food Manufacturing	6	12	15	.7
312 Beverage and Tobacco Product	0	23	1	1.4
313 Textile Mills	1	25	2	2.5
314 Textile Product Mills	1	12	2	1.5
315 Apparel Manufacturing	3	8	15	.6
316 Leather and Allied Product	0	24	3	3.7
321 Wood Product Manufacturing	5	8	7	2.0
322 Paper Manufacturing	1	24	2	1.7
323 Printing and Related Support	11	5	0	.0
324 Petroleum and Coal Products	0	18	0	4.5
325 Chemical Manufacturing	3	36	5	2.7
326 Plastics and Rubber Products	4	28	6	1.8
327 Nonmetallic Mineral Product	4	9	8	.9
331 Primary Metal Manufacturing	1	30	3	1.9
332 Fabricated Metal Product	19	14	10	1.1
333 Machinery Manufacturing	9	33	6	2.9
334 Computer and Electronic Product	4	38	1	3.3
335 Electrical Equipment, Appliance	1	38	2	3.0
336 Transportation Equipment	3	28	3	2.6
337 Furniture and Related Product	6	7	7	1.3
339 Miscellaneous Manufacturing	9	2	3	2.7
Aggregate Manufacturing	100	18	100	1.6

Sources: *RAIS* and *SECEX* 2000 manufacturing firms for Brazil. Bernard et al. (2007) for the U.S. 2002.
Note: Columns 1 and 3 report the percentage of manufacturing firms across three-digit NAICS manufacturing industries. Columns 2 and 4 report the share of firms in each industry that export.

Table 4.2: Exporter Distribution by Exporter Scope and Destinations, 2000

	# Destinations					
# Products	1	2	3	4	5+	*All*
			U.S. 2000 (HS 10-digit level)			
1	40.4	1.2	.3	.1	.2	42.2
2	10.4	4.7	.8	.3	.4	16.4
3	4.7	2.3	1.3	.4	.5	9.3
4	2.5	1.3	1.0	.6	.7	6.2
5+	6.0	3.0	2.7	2.3	11.9	25.9
All	64.0	12.6	6.1	3.6	13.7	100.0
			Brazil 2000 (HS 6-digit level)			
1	26.2	5.8	2.2	1.1	2.6	37.9
2	6.6	5.0	2.1	1.4	3.4	18.6
3	3.0	2.6	1.6	1.0	3.4	11.5
4	1.2	1.2	1.0	.7	2.6	6.8
5+	2.6	2.7	2.3	2.3	15.2	25.2
All	39.7	17.3	9.2	6.5	27.3	100.0
			Brazil 2000 (MCN 8-digit level)			
1	26.0	5.5	2.0	.9	2.4	36.8
2	6.6	4.9	2.1	1.4	3.0	18.1
3	3.1	2.7	1.7	1.0	3.2	11.7
4	1.3	1.3	.9	.6	2.5	6.6
5+	2.8	2.9	2.5	2.5	16.2	26.9
All	39.7	17.3	9.2	6.5	27.3	100.0

Sources: *RAIS* and *SECEX* 2000 manufacturing firms for Brazil. Bernard et al. (2007) for the U.S. 2000.
Note: Joint distribution of manufacturing firms that export, according to the number of their export products (rows) and their number of destinations (columns). Products at the Harmonized-System 10-digit level for the U.S., and for Brazil at the Harmonized-System 6-digit and the Mercosur-Common-Nomenclature 8-digit level (an 8-digit refinement of HS-6).

Table 4.3: Total Exports Distribution by Exporter Scope and Destinations, 2000

	# Destinations					
# Products	1	2	3	4	5+	*All*
			U.S. 2000 (HS 10-digit level)			
1	.20	.06	.02	.02	.07	.40
2	.19	.12	.04	.03	.15	.50
3	.19	.07	.05	.03	.19	.50
4	.12	.08	.08	.04	.27	.60
5+	2.63	1.23	1.02	.89	92.20	98.00
All	3.30	1.50	1.20	1.00	92.90	100.00
			Brazil 2000 (HS 6-digit level)			
1	.78	.73	.70	.48	4.70	7.39
2	.20	.37	.47	.54	3.57	5.15
3	.16	.22	.26	.23	5.04	5.90
4	.08	.09	.12	.13	4.69	5.11
5+	.09	.30	.52	.74	74.80	76.44
All	1.30	1.71	2.07	2.12	92.80	100.00
			Brazil 2000 (MCN 8-digit level)			
1	.78	.71	.68	.42	4.48	7.07
2	.20	.35	.46	.55	3.35	4.91
3	.16	.21	.23	.25	4.38	5.23
4	.06	.10	.12	.13	4.37	4.78
5+	.11	.33	.57	.78	76.22	78.01
All	1.30	1.71	2.07	2.12	92.80	100.00

Sources: *RAIS* and *SECEX* 2000 manufacturing firms for Brazil. Bernard et al. (2007) for the U.S. 2000.
Note: Joint distribution of manufacturing firms' total exports, according to the number of their export products (rows) and their number of destinations (columns). Products at the Harmonized-System 10-digit level for the U.S., and for Brazil at the Harmonized-System 6-digit and the Mercosur-Common-Nomenclature 8-digit level (an 8-digit refinement of HS-6).

Table 4.4: Employment Distribution by Exporter Scope and Destinations, 2000

# Products	# Destinations 1	2	3	4	5+	*All*
			U.S. 2000 (HS 10-digit level)			
1	7.0	.0	.0	.0	.0	7.1
2	1.9	2.6	.1	.0	.0	4.6
3	1.3	1.0	.8	.0	.2	3.3
4	.5	.4	.3	.2	.2	1.6
5+	3.5	2.6	4.3	4.1	68.8	83.3
All	14.2	6.7	5.5	4.3	69.2	100.0
			Brazil 2000 (HS 6-digit level)			
1	8.0	2.5	1.5	.6	2.2	14.8
2	2.0	2.6	1.2	1.0	2.9	9.8
3	1.1	1.2	1.1	.8	4.2	8.3
4	.5	.6	.6	.9	4.1	6.7
5+	.9	1.4	1.8	2.7	53.6	60.3
All	12.6	8.3	6.1	6.0	67.0	100.0
			Brazil 2000 (MCN 8-digit level)			
1	8.0	2.3	1.4	.5	2.0	14.2
2	2.0	2.6	1.2	1.0	2.4	9.2
3	1.1	1.3	1.1	.8	3.7	8.1
4	.5	.6	.5	.8	3.8	6.3
5+	1.0	1.5	1.9	2.8	55.0	62.2
All	12.6	8.3	6.1	6.0	67.0	100.0

Sources: *RAIS* and *SECEX* 2000 manufacturing firms for Brazil. Bernard et al. (2007) for the U.S. 2000.
Note: Joint distribution of manufacturing firm employment, according to the number of their export products (rows) and their number of destinations (columns). Products at the Harmonized-System 10-digit level for the U.S., and for Brazil at the Harmonized-System 6-digit and the Mercosur-Common-Nomenclature 8-digit level (an 8-digit refinement of HS-6).

Table 4.5: Gravity and Exports Decomposition for U.S., Brazil and Chile 2000

	Log Total Exports	Log # Firms	Log # Total Products	Log Sales/ prod. & firm
	(1)	(2)	(3)	(4)
	U.S. Exports 2000 (HS 10-digit level)			
Log GDP	.98	.71	.52	-.25
	(.04)***	(.04)***	(.03)***	(.04)***
Log Distance	-1.36	-1.14	-1.06	.84
	(.17)***	(.16)***	(.15)***	(.19)***
Obs.	175	175	175	175
R^2	.82	.74	.64	.25
	Brazilian Exports 2000 (MCN 8-digit level)			
Log GDP	.98	.57	.60	-.19
	(.05)***	(.04)***	(.04)***	(.04)***
Log Distance	-2.01	-1.93	-2.39	2.31
	(.26)***	(.18)***	(.20)***	(.21)***
Obs.	175	175	175	175
R^2	.67	.63	.65	.43
	Chilean Exports 2000 (HS 8-digit level)			
Log GDP	.86	.52	.55	-.21
	(.08)***	(.05)***	(.05)***	(.05)***
Log Distance	-1.02	-1.21	-1.59	1.78
	(.41)**	(.22)***	(.26)***	(.26)***
Obs.	161	161	161	161
R^2	.40	.47	.45	.27

Sources: Bernard et al. (2007) for U.S. 2000 manufacturing firms; Brazilian *SECEX* 2000 and Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms.

Note: Products at the Harmonized-System 10-digit level for the U.S.; at the Mercosur-Common-Nomenclature 8-digit level (an 8-digit refinement of HS-6) for Brazil; at the Harmonized-System 8-digit level for Chile. Total exports T_{sd} are decomposed into $T_{sd} = M_{sd}\, G_{sd}\, \bar{\bar{a}}_{sd}$, where M_{sd} is the number of exporters in s with shipments to destination d, $G_{sd} \equiv \sum_{\omega \in \mathbf{\Omega}_{sd}} G_d(\omega)$ is the total number of products exported from s to d, and $\bar{\bar{a}}_{sd} \equiv \bar{t}_{sd}/G_{sd}$ is the average value of exports per product per firm (Bernard et al. 2007). Results from country-level ordinary least squares regressions of the dependent variable noted at the top of each column on the covariates listed in the first column. Estimates for the constant suppressed. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 4.6: Gravity and Exports Decomposition for U.S., Brazil and Chile 2000

	Log Total Exports	Log # Firms	Log # Total Products	Log Sales/ prod. & firm
	(1)	(2)	(3)	(4)
	U.S. Exports 2000 (HS 10-digit level)			
Log GDP	.98 (.04)***	.71 (.04)***	.52 (.03)***	-.25 (.04)***
Log Distance	-1.36 (.17)***	-1.14 (.16)***	-1.06 (.15)***	.84 (.19)***
Obs.	175	175	175	175
R^2	.82	.74	.64	.25
	Brazilian Exports 2000 (HS 6-digit level)			
Log GDP	.97 (.05)***	.56 (.04)***	.59 (.04)***	-.18 (.04)***
Log Distance	-2.03 (.26)***	-1.95 (.18)***	-2.37 (.20)***	2.29 (.21)***
Obs.	174	174	174	174
R^2	.67	.63	.64	.42
	Chilean Exports 2000 (HS 6-digit level)			
Log GDP	.86 (.08)***	.52 (.05)***	.55 (.05)***	-.21 (.05)***
Log Distance	-1.02 (.41)**	-1.21 (.22)***	-1.57 (.26)***	1.76 (.26)***
Obs.	161	161	161	161
R^2	.40	.47	.45	.27

Sources: Bernard et al. (2007) for U.S. 2000 manufacturing firms; Brazilian *SECEX* 2000 and Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms.

Note: Products at the Harmonized-System 10-digit level for the U.S.; at the Harmonized-System 6-digit level for Brazil and for Chile. Total exports T_{sd} are decomposed into $T_{sd} = M_{sd}\, G_{sd}\, \bar{\bar{a}}_{sd}$, where M_{sd} is the number of exporters in s with shipments to destination d, $G_{sd} \equiv \sum_{\omega \in \mathbf{\Omega}_{sd}} G_d(\omega)$ is the total number of products exported from s to d, and $\bar{\bar{a}}_{sd} \equiv \bar{t}_{sd}/G_{sd}$ is the average value of exports per product per firm (Bernard et al. 2007). Results from country-level ordinary least squares regressions of the dependent variable noted at the top of each column on the covariates listed in the first column. Estimates for the constant suppressed. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 4.7: Gravity and Alternative Exports Decomposition for Brazil and Chile 2000

	Log Total Exp.	Log # Firms	Log # Products/firm	Log Sales/ # prod./firm
	(1)	(2)	(3)	(4)
	Brazilian Exports 2000 (HS 6-digit level)			
Log GDP	.97 (.05)***	.56 (.04)***	.03 (.01)**	.38 (.03)***
Log Distance	-2.03 (.26)***	-1.95 (.18)***	-.42 (.07)***	.34 (.16)**
Obs.	174	174	174	174
R^2	.67	.63	.19	.48
	Brazilian Exports 2000 (MCN 8-digit level)			
Log GDP	.98 (.05)***	.57 (.04)***	.04 (.01)**	.38 (.03)***
Log Distance	-2.01 (.26)***	-1.93 (.18)***	-.46 (.07)***	.38 (.16)**
Obs.	175	175	175	175
R^2	.67	.63	.21	.48
	Chilean Exports 2000 (HS 6-digit level)			
Log GDP	.86 (.08)***	.52 (.05)***	.03 (.01)**	.31 (.05)***
Log Distance	-1.02 (.41)**	-1.21 (.22)***	-.37 (.06)***	.56 (.25)**
Obs.	161	161	161	161
R^2	.40	.47	.19	.22
	Chilean Exports 2000 (HS 8-digit level)			
Log GDP	.86 (.08)***	.52 (.05)***	.03 (.01)**	.31 (.05)***
Log Distance	-1.02 (.41)**	-1.21 (.22)***	-.38 (.06)***	.57 (.25)**
Obs.	161	161	161	161
R^2	.40	.47	.19	.22

Sources: Brazilian *SECEX* 2000 and Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms. *Note*: Products at the Harmonized-System 6-digit and the Mercosur-Common-Nomenclature 8-digit level (an 8-digit refinement of HS-6) for Brazil; at the Harmonized-System 6-digit and 8-digit levels for Chile. Total exports T_{sd} are decomposed into $T_{sd} = M_{sd}\,\bar{G}_{sd}\,\bar{a}_{sd}$, wheres M_{sd} is the number of exporters in s with shipments to destination d, $\bar{G}_{sd} \equiv \sum_{\omega \in \mathbf{\Omega}_{sd}} G_d(\omega)/M_{sd}$ is the exporters' mean exporter scope, and $\bar{a}_{sd} \equiv \bar{t}_{sd}/\bar{G}_{sd}$ is their varieties' mean exporter scale. Results from country-level ordinary least squares regressions of the dependent variable noted at the top of each column on the covariates. Estimates for the constant suppressed. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 4.8: Short and Long Gravity and Alternative Exports Decomposition for Brazil 2000

	Log Total Exp.	Log # Firms	Log # Products/firm	Log Sales/ # prod./firm
	(1)	(2)	(3)	(4)
Brazilian Exports 2000, short gravity (HS 6-digit level)				
Log GDP	.97 (.05)***	.56 (.04)***	.03 (.01)**	.38 (.03)***
Log Distance	-2.03 (.26)***	-1.95 (.18)***	-.42 (.07)***	.34 (.16)**
Obs.	174	174	174	174
R^2	.67	.63	.19	.48
Brazilian Exports 2000, long gravity (HS 6-digit level)				
Log Population	.85 (.06)***	.46 (.04)***	.06 (.02)***	.33 (.04)***
Log GDP per capita	1.19 (.08)***	.74 (.05)***	-.008 (.02)	.46 (.05)***
Log Distance	-2.02 (.25)***	-1.94 (.17)***	-.42 (.07)***	.34 (.16)**
Obs.	174	174	174	174
R^2	.69	.68	.23	.49

Sources: Brazilian *SECEX* 2000, manufacturing firms.

Note: Short gravity is same as upper-most panel in Table 4.7. Products at the Harmonized-System 6-digit level. Total exports T_{sd} are decomposed into $T_{sd} = M_{sd}\,\bar{G}_{sd}\,\bar{a}_{sd}$, where M_{sd} is the number of exporters in s with shipments to destination d, $\bar{G}_{sd} \equiv \sum_{\omega\in\mathbf{\Omega}_{sd}} G_d(\omega)/M_{sd}$ is the exporters' mean exporter scope, and $\bar{a}_{sd} \equiv \bar{t}_{sd}/\bar{G}_{sd}$ is their varieties' mean exporter scale. Results from country-level ordinary least squares regressions of the dependent variable noted at the top of each column on the covariates. Estimates for the constant suppressed. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 4.9: Quadruple Gravity and Exports Decomposition for U.S. 2002, Brazil and Chile 2000

	Log Total Exports	Log # Firms	Log # Total Products	Log Share Pos. Prod. exp.	Log Sales/ # prod./firm
	(1)	(2)	(3)	(4)	(5)
U.S. Exports 2002 (HS 10-digit level)					
Log GDP	1.01	.71	.55	-.48	.23
	(.04)***	(.03)***	(.03)***	(.03)***	(.02)***
Log Distance	-1.37	-1.17	-1.10	.84	.05
	(.17)***	(.15)***	(.15)***	(.13)***	(.10)
Obs.	175	175	175	175	175
R^2	.82	.76	.68	.66	.37
Brazilian Exports 2000 (HS 6-digit level)					
Log GDP	.97	.56	.59	-.56	.38
	(.05)***	(.04)***	(.04)***	(.04)***	(.03)***
Log Distance	-2.03	-1.95	-2.37	1.95	.34
	(.26)***	(.18)***	(.20)***	(.18)***	(.16)**
Obs.	174	174	174	174	174
R^2	.67	.63	.64	.63	.48
Brazilian Exports 2000, long gravity (HS 6-digit level)					
Log Population	.85	.46	.52	-.46	.33
	(.06)***	(.04)***	(.05)***	(.04)***	(.04)***
Log GDP p. capita	1.19	.74	.73	-.74	.46
	(.08)***	(.05)***	(.06)***	(.05)***	(.05)***
Log Distance	-2.02	-1.94	-2.37	1.94	.34
	(.25)***	(.17)***	(.19)***	(.17)***	(.16)**
Obs.	174	174	174	174	174
R^2	.69	.68	.66	.68	.49
Chilean Exports 2000 (HS 6-digit level)					
Log GDP	.85	.51	.54	-.51	.30
	(.09)***	(.05)***	(.05)***	(.05)***	(.05)***
Log Distance	-1.05	-1.22	-1.59	1.22	.54
	(.41)**	(.23)***	(.26)***	(.23)***	(.25)**
Obs.	160	160	160	160	160
R^2	.39	.47	.45	.47	.21

Sources: Bernard et al. (2011) for U.S. 2002 manufacturing firms; Brazilian *SECEX* 2000 and Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms.

Note: Products at the Harmonized-System 10-digit level for the U.S.; at the Harmonized-System 6-digit level for Brazil and for Chile. Total exports T_{sd} are decomposed into $T_{sd} = M_{sd}\, G_{sd}\, d_{sd}\, \bar{a}_{sd}$, where M_{sd} is the number of exporters in s with shipments to destination d, $G_{sd} \equiv \sum_{\omega \in \mathbf{\Omega}_{sd}} G_d(\omega)$ is the total number of products exported from s to d, d_{sd} is the fraction of firm-good combinations with positive exports which Bernard et al. (2011) call the "density of trade", and $\bar{a}_{sd} = [\sum_{\omega \in \mathbf{\Omega}_{sd}} t_d(\omega)]/[\sum_{\omega \in \mathbf{\Omega}_{sd}} G_d(\omega)]$ is the mean exporter scale. Results from country-level ordinary least squares regressions of the dependent variable noted at the top of each column on the covariates listed in the first column. Estimates for the constant suppressed. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

5 Manufacturing Firms and Products

Table 5.1: Sample Characteristics by Destination

	World	Mercosur	OECD	non-OECD	USA	Argentina
	(1)	(2)	(3)	(4)	(5)	(6)
# of Observations (MNH)	162,570	45,429	36,359	126,211	10,775	21,623
# of Destinations (N)	170	3	23	147	1	1
Regional share in Tot. exports	1.000	.172	.559	.441	.257	.144
			Firms			
# of Firms (M)	10,215	6,428	5,041	8,664	3,083	4,590
Median Total exports (T_{md})	.089	.051	.137	.066	.120	.068
Median Exporter scope (G_{md})	2	2	2	2	1	2
Median Avg. Exp. scale (a_{md})	.037	.022	.070	.028	.068	.031
Mean Total exports ($\bar{t}_d$)	3.720	1.017	4.217	1.932	3.170	1.192
Mean Exporter scope ($\bar{G}_d$)	5.278	4.908	3.933	5.176	3.495	4.711
Mean Avg. Exp. scale (a_d)	.705	.207	1.072	.373	.907	.253
Shares in Total exports						
Single-prod. firms	.090	.078	.142	.069	.123	.086
Multi-prod. firms' top product	.597	.555	.625	.573	.662	.555
Multi-prod. firms' other prod.	.313	.367	.233	.359	.215	.359
			Varieties			
# of Varieties (MH)	53,910	31,548	19,826	44,841	10,775	21,623
Median Variety sales	.006	.005	.009	.005	.009	.006
Mean Variety sales	.705	.207	1.072	.373	.907	.253

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Aggregate regions (world, Mercosur, OECD, non-OECD) treated as single destinations, collapsing product shipments to different countries into single product shipment. The worldwide average number of products across destination countries is 3.518, for instance, but 5.278 for the world as single destination. Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Exports in US$ million fob. Mean average exporter scale (a_d) is the scope-weighted arithmetic mean of exporters' average exporter scales.

Table 5.2: Top 25 Export Products

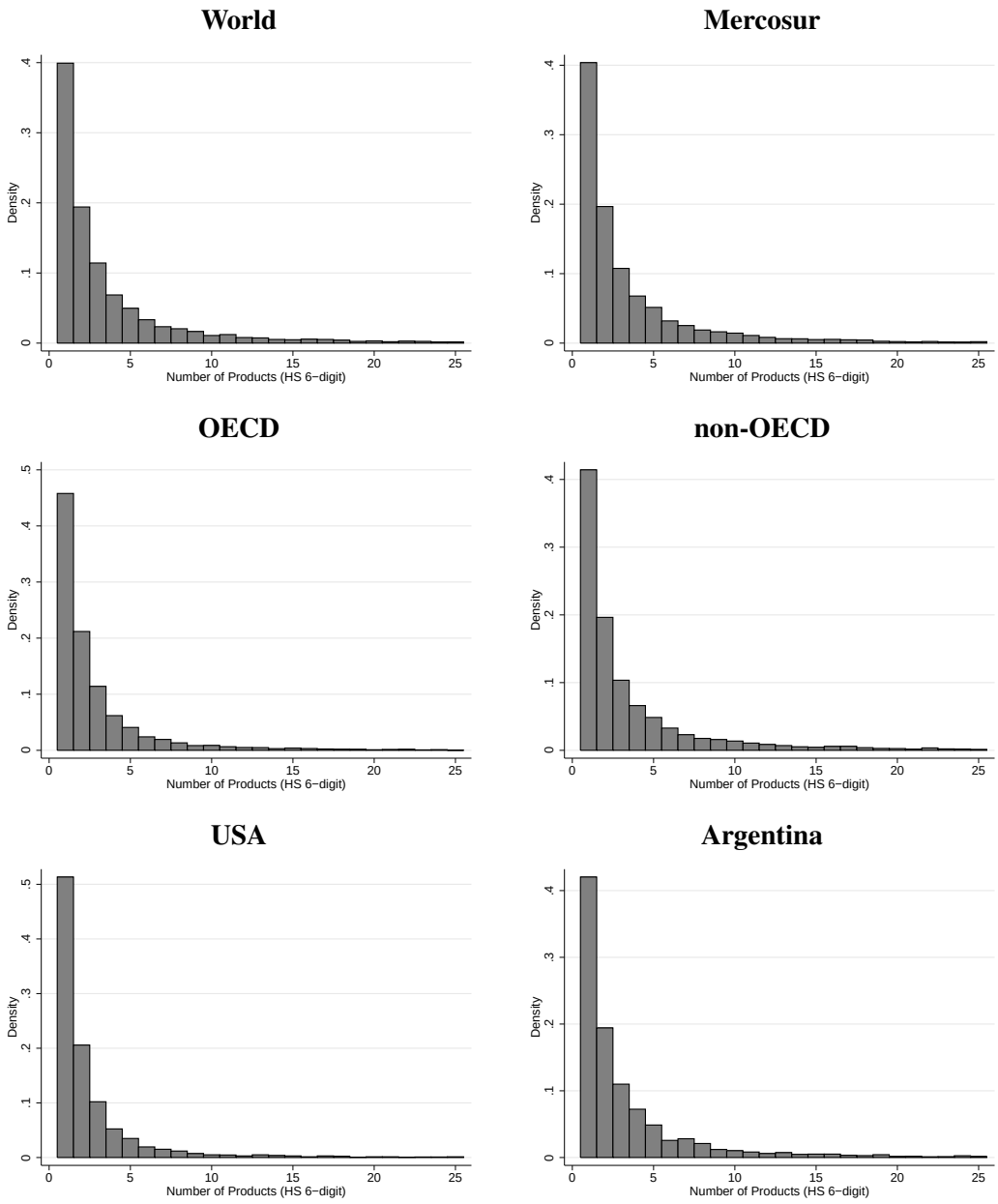
Rank	Product	Exports (US$ mill.)	Share in tot. exports (%)	# of Dest.
1.	Airplane & a/c unladen wght > 2t, nov 15t	2,619	6.9	16
2.	Chem woodpulp, soda etc, n dis s bl & bl nonconif	1,523	4.0	29
3.	Soybean oilcake & oth solid residue, wh/not ground	1,246	3.3	36
4.	Pass veh spk-ig int com rcpr p eng >1500 nov 3m cc	1,197	3.2	32
5.	Transmission appr incorporating reception apparats	927	2.4	31
6.	Footwear, outer sole rub etc & leather upper nesoi	855	2.3	91
7.	Smfd irn/nal stl lt .25 pct crb rect cs wid 2x thk	803	2.1	17
8.	Unwrought aluminum, not alloyed	765	2.0	13
9.	Orange juice, frozen, sweetened or not	561	1.5	40
10.	Cane sugar, raw, solid form, w/o added flav/color	521	1.4	31
11.	Chicken cuts and edible offal (inc livers), frozen	419	1.1	61
12.	Compressors used in refrigerating equipment	415	1.1	63
13.	Parts and accessories of motor vehicles, nesoi	413	1.1	104
14.	Nonalloy pig iron 0.5 prcnt or less phosphorus	368	1.0	16
15.	Spark-ignition int combustion piston eng pts nesoi	362	1.0	95
16.	Meat & offal of chickens, not cut in pieces, frozen	358	0.9	61
17.	Spark-ignition reciprocating int com pistn eng pts	353	0.9	93
18.	Trucks, nesoi, diesel eng, gvw 5 metric tons & und	331	0.9	31
19.	Semifinished products of alloy steel not stainless	316	0.8	18
20.	Cane/beet sug chem pure sucrose refind nesoi	316	0.8	45
21.	Food preparations nesoi	308	0.8	52
22.	Pass veh com-ig int com eng > 1500 nov 2500 cc	296	0.8	19
23.	Bovine leather without hair on otherwise pretanned	276	0.7	43
24.	Meat of bovine animals, boneless, frozen	265	0.7	52
25.	Bovine & equine leather nesoi, par-dr full grn etc	253	0.7	55

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Export values in US$ million fob. Products at the Harmonized-System 6-digit level.

Table 5.3: Top 25 Export Destinations

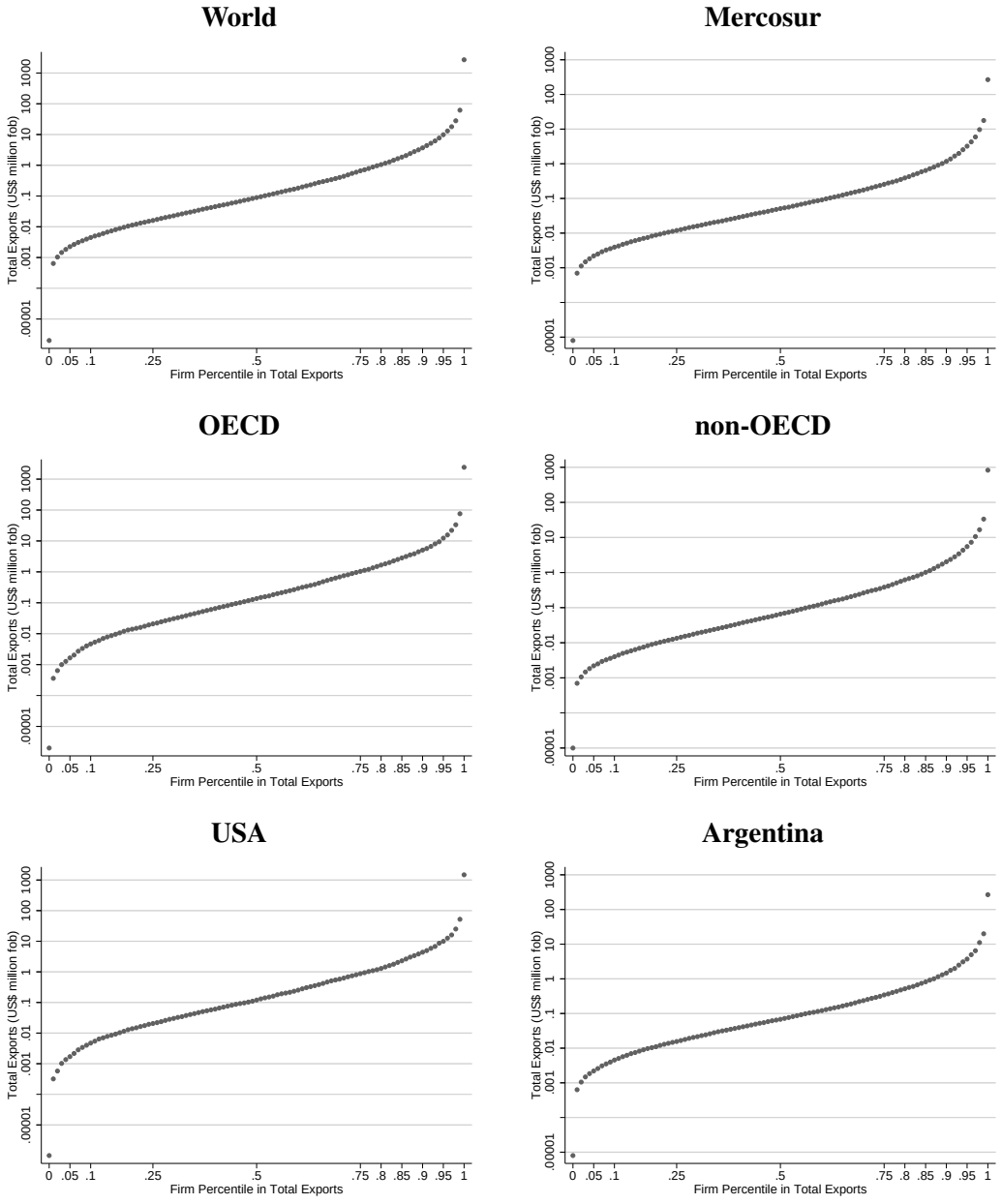
Rank	Destination	Exports (US$ mill.)	Share in tot. exports (%)	# of Products
1.	USA	9,773	25.7	2,146
2.	Argentina	5,472	14.4	2,814
3.	Mexico	1,554	4.1	1,443
4.	Netherlands	1,488	3.9	628
5.	Italy	1,442	3.8	949
6.	Germany	1,365	3.6	1,174
7.	Belgium-Luxembourg	1,184	3.1	584
8.	Japan	1,176	3.1	663
9.	Chile	1,145	3.0	2,117
10.	UK	1,141	3.0	805
11.	France Monaco	1,095	2.9	892
12.	Venezuela	658	1.7	1,599
13.	Paraguay	561	1.5	2,144
14.	Uruguay	505	1.3	2,318
15.	Spain	470	1.2	761
16.	Colombia	466	1.2	1,350
17.	Switzerland, Liechtenstein	426	1.1	361
18.	China Hong Kong SAR	418	1.1	408
19.	Canada	414	1.1	742
20.	China	346	0.9	610
21.	Peru	330	0.9	1,556
22.	Korea Rep.	328	0.9	283
23.	Saudi Arabia	300	0.8	398
24.	Australia	296	0.8	653
25.	Russian Federation	285	0.7	224

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Export values in US$ million fob. Products at the Harmonized-System 6-digit level.



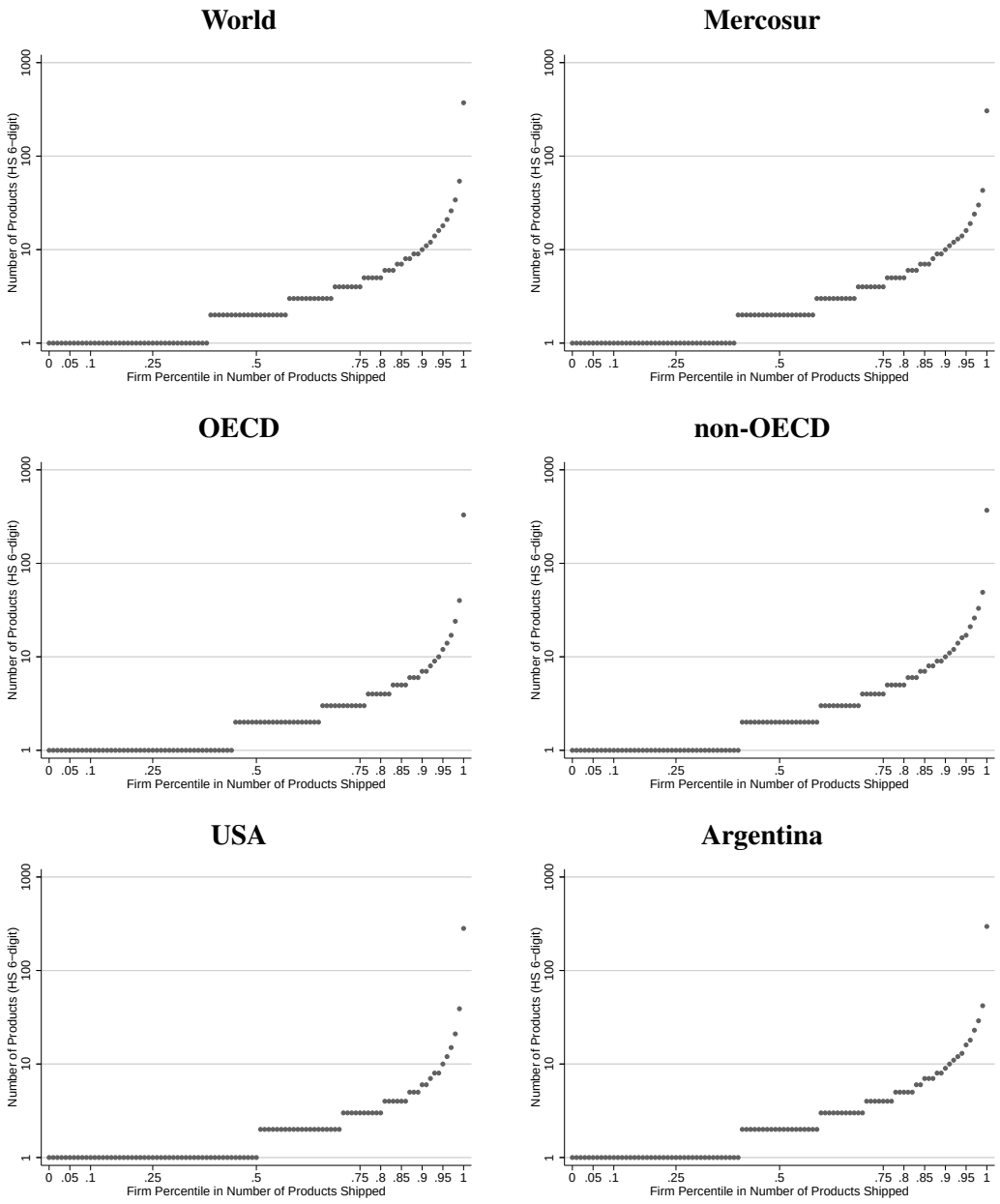
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members of the OECD in 1990. Products at the Harmonized-System 6-digit level.

Figure 5.1: **Exporter Scope Distribution for Up to 25 Products**



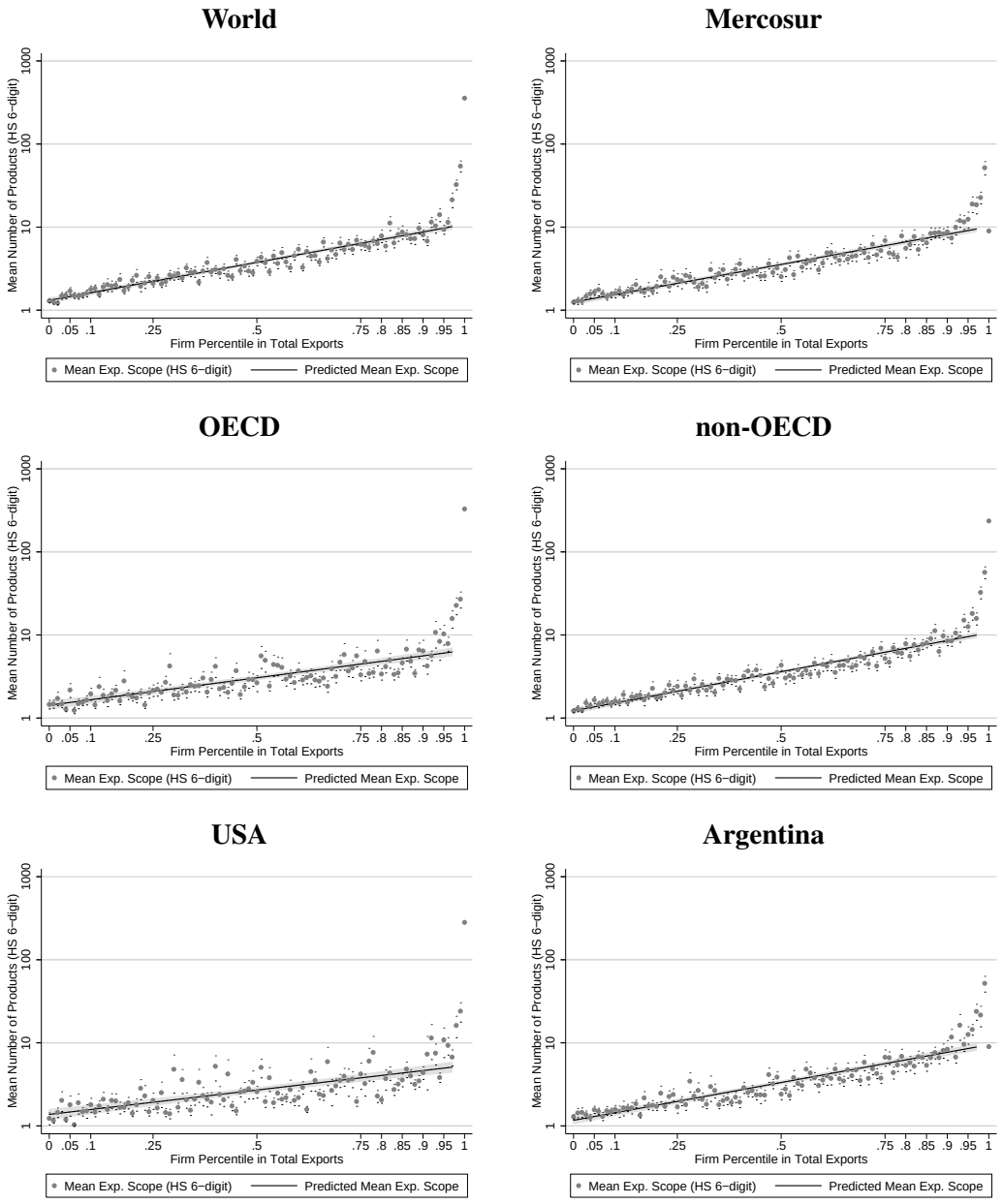
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.

Figure 5.2: **Total Sales Distribution**



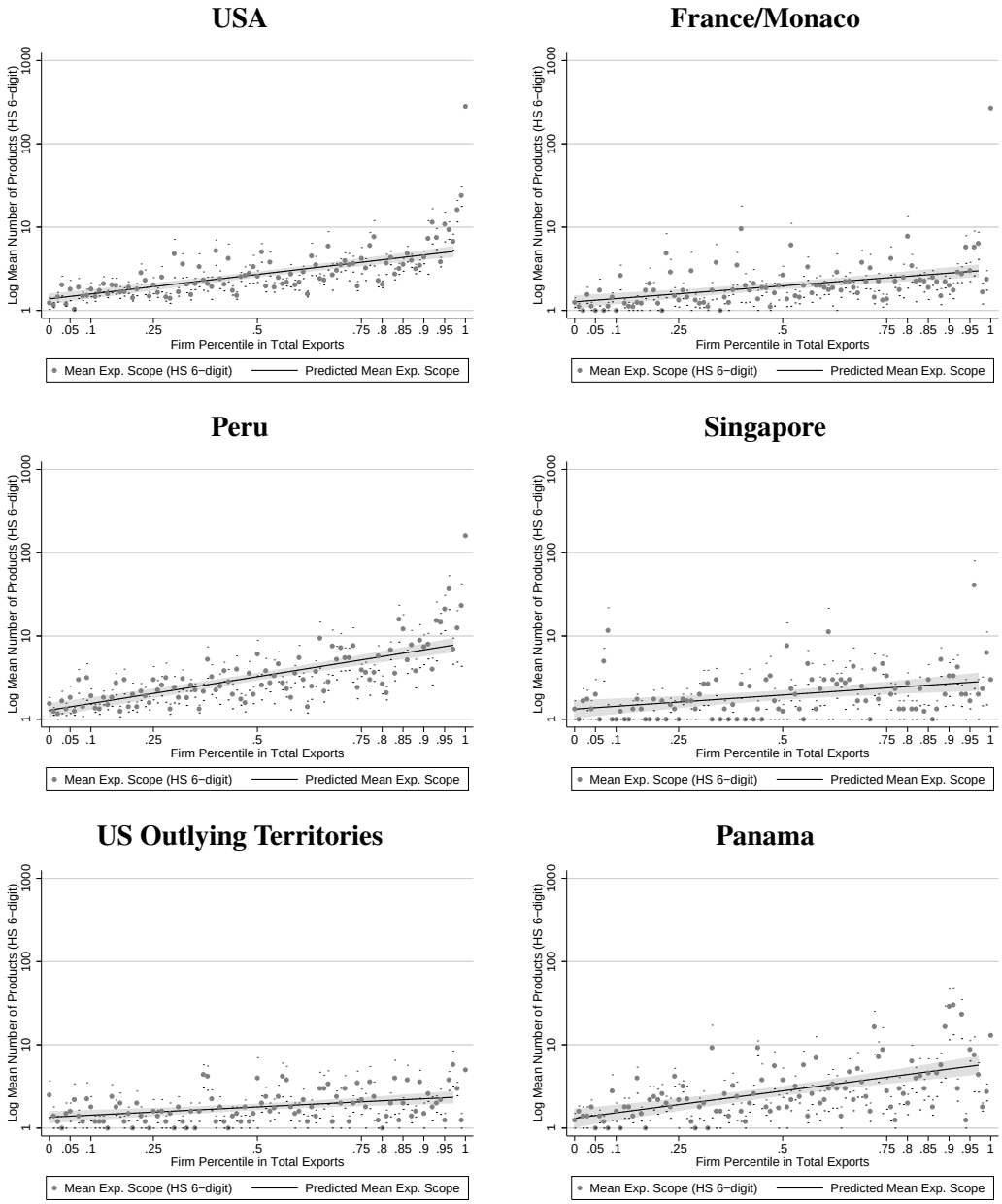
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.

Figure 5.3: **Exporter Scope Distribution**



Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Large circles depict the mean number of products by percentile, small dots above and below indicate a one-standard-error deviation. Fitted line from an ordinary least squares regression of the mean number of products on the percentile, up to the 98th percentile, with a 95-percent confidence band around.

Figure 5.4: **Exporter Scope and Total Exports Distribution**



Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Selection of the six countries at the fiftieth through hundredth percentiles among Brazil's top 100 export destinations (Panama, US outlying territories, Singapore, Peru, France/Monaco, USA). Products at the Harmonized-System 6-digit level. Large circles depict the mean number of products by percentile, small dots above and below indicate a one-standard-error deviation. Fitted line from an ordinary least squares regression of the mean number of products on the percentile, up to the 98th percentile, with a 95-percent confidence band around.

Figure 5.5: **Exporter Scope and Total Exports Distribution by Country**

Table 5.4: Correlations between Local and Worldwide Total Exports Percentiles

Local and World pctl.	Corr. coeff.	Spearman's rank corr. coeff.	Local on world regression coeff.		Local, firm FE corr. coeff. Dest. & firm FE
			OLS	Dest. FE	
	(1)	(2)	(3)	(4)	(5)
Coefficient	.558	.577	.695	.809	.655
p value[a]	0	0	0	0	0
Obs.	71,567	71,567	71,567	71,567	71,567
# Dest.				170	170
Panels					10,215

[a]Null hypothesis: Coefficient is zero.

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Aggregation to exports by firm and destination. Percentiles in discrete numbers. Unconditional and Spearman's rank correlation coefficients in columns 1 and 2. Regression coefficients of local total-exports percentiles on a firm's worldwide total-exports percentile in columns 3 (OLS with constant) and 4 (destination FE regression). In column 5, correlation coefficient between local total-exports percentiles and the firm-fixed effect from a local total-exports percentile regression on firm and destination fixed effects.

Table 5.5: Exporter Scope and Local Total-Exports Percentile Correlations

Log # Products	OLS	Firm FE	Dest. FE	Dest. & Firm FE
	(1)	(2)	(3)	(4)
Log Local total-exp. percentile	.483 (.005)***	.463 (.004)***	.458 (.005)***	.378 (.004)***
Const.	1.586 (.006)***	1.569 (.004)***	1.540 (.017)***	1.635 (.011)***
Observations	68,054	68,054	68,054	68,054
Panels		10,209		10,209
R^2 (R^2 within)[a]	.118	.219	.189	.323

[a]R^2 is within fit for firm FE regressions in columns 2 and 4.

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Aggregation to exports by firm and destination. Products at the Harmonized-System 6-digit level. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 5.6: Correlates of Destination Effects on Exporter Scope

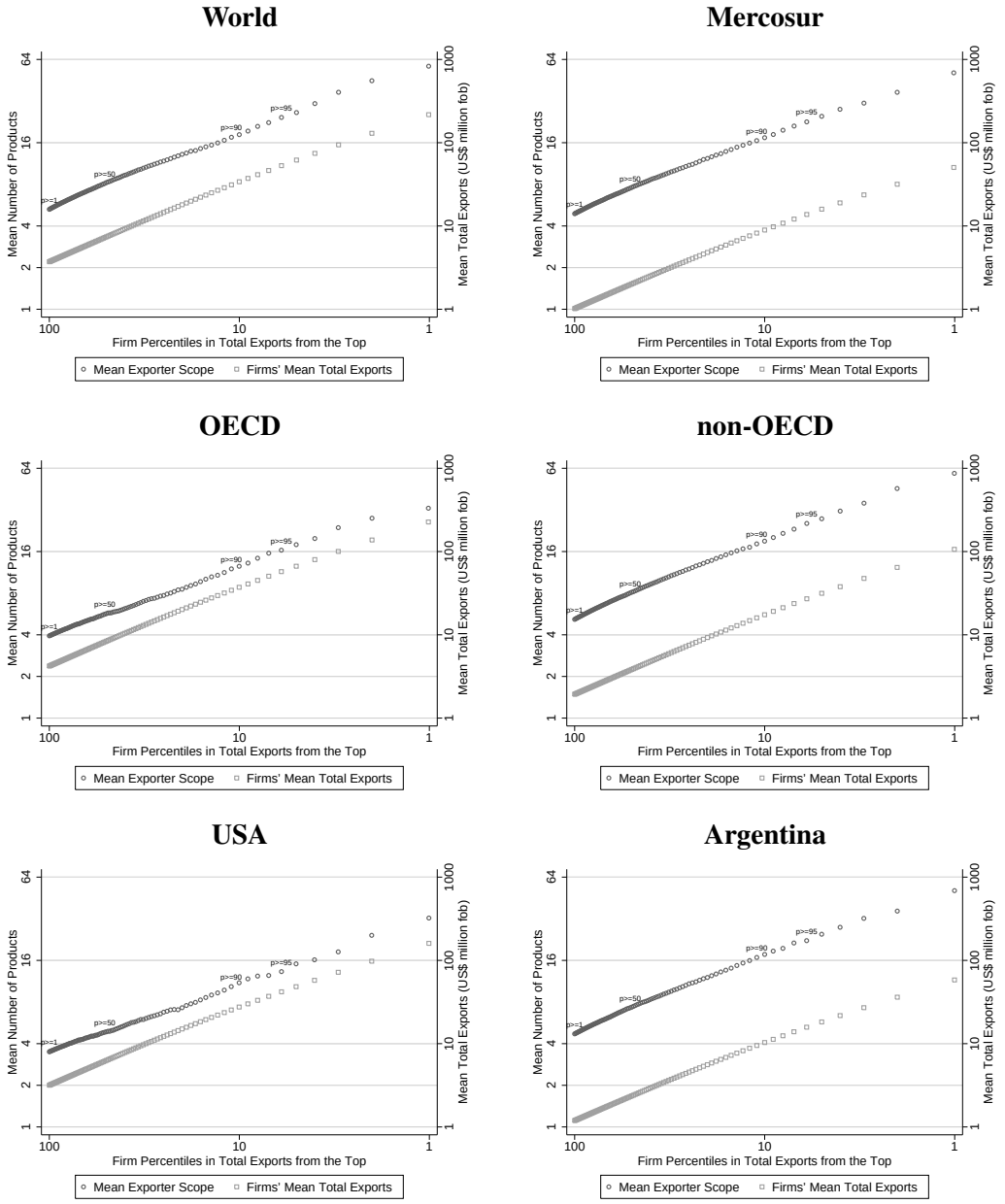
Log # Products	Unconditional Scope			Scope Dest. FE (Table 5.5, col. 3)		
	(1)	(2)	(3)	(4)	(5)	(6)
Mean Log Market size			-.042			-.046
			(.012)***			(.033)
Log Population		.041	.069		.055	.050
		(.016)***	(.019)***		(.023)**	(.043)
Log GDP per cap.		-.063	-.035		.007	-.002
		(.018)***	(.017)**		(.025)	(.051)
Log GDP	-.0006			.034		
	(.014)			(.019)*		
Log Distance	-.317	-.335	-.300	-.442	-.446	-.353
	(.050)***	(.042)***	(.044)***	(.106)***	(.105)***	(.138)**
Common borders	-.009	-.052	-.085	.021	.021	.047
	(.094)	(.077)	(.074)	(.213)	(.212)	(.252)
Common language	-.009	.010	-.032	.094	.102	.212
	(.098)	(.062)	(.051)	(.243)	(.242)	(.270)
Observations	66,328	66,328	60,489	151	151	102
R^2	.045	.050	.051	.172	.188	.234

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Aggregation to exports and exporter scope by firm and destination. Regressions of exporter scope (columns 1 through 3) and of destination fixed effects (columns 4 through 6) on destination-level predictors, where latter destination fixed effects in exporter scope are from a destination fixed effects regression controlling for the firm's local total-exports percentile (column 3 in Table 5.5). Mean log market size is average sectoral absorption over *ISIC rev. 2* industries at destination level. Standard errors in parentheses: * significance at ten, ** five, *** one percent. Clustered standard errors at destination level in columns 1 through 3.

Table 5.7: Exporter Scope Distribution by Destination

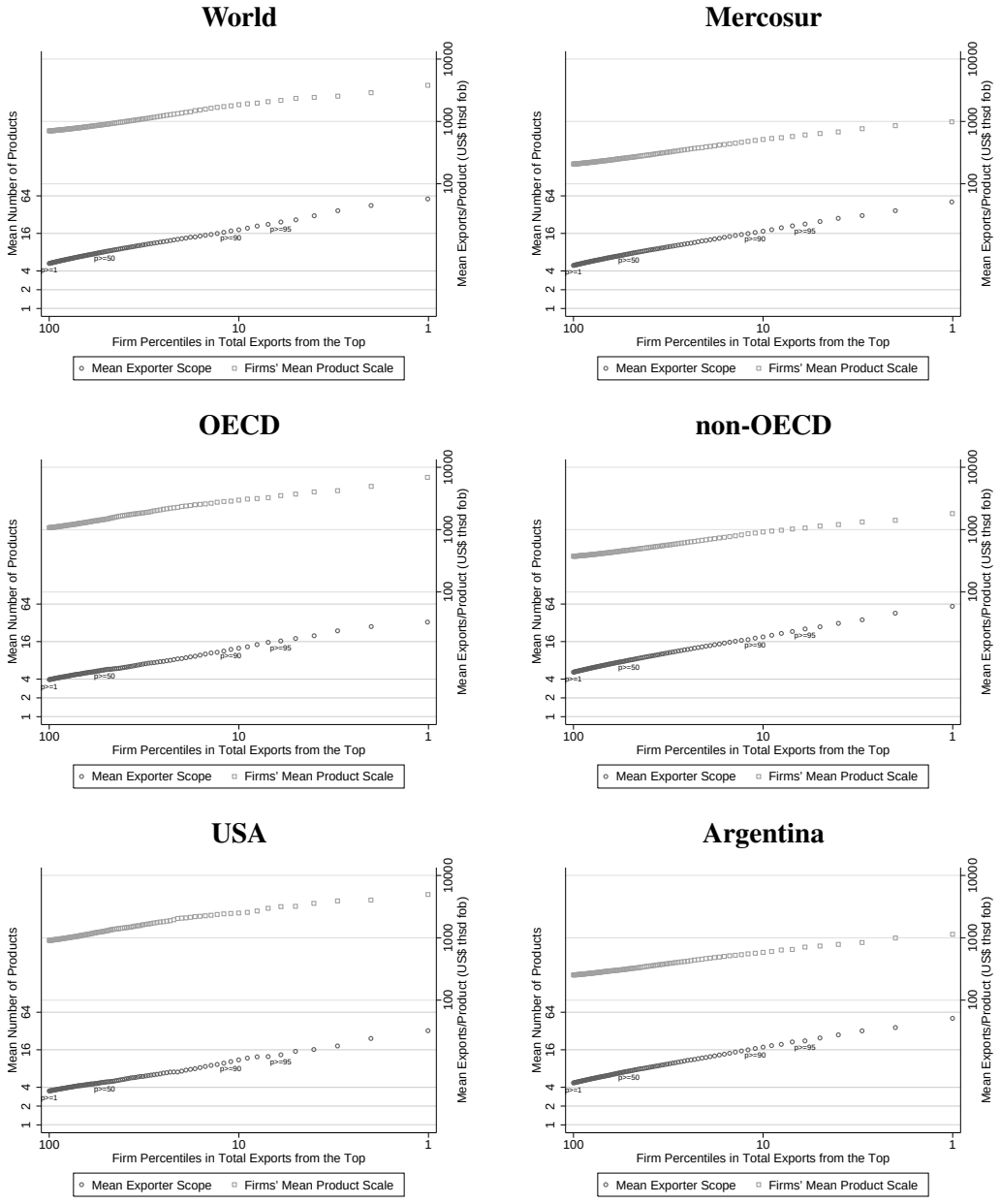
	World	Mercosur	OECD	non-OECD	USA	Argentina
Percentile	(1)	(2)	(3)	(4)	(5)	(6)
00	1	1	1	1	1	1
05	1	1	1	1	1	1
10	1	1	1	1	1	1
25	1	1	1	1	1	1
50	2	2	2	2	1	2
75	4	4	3	4	3	4
80	5	5	4	5	3	5
85	7	7	5	7	4	7
90	10	10	7	10	6	9
95	18	16	12	17	10	16
99	54	43	40	49	39	42
100	372	305	329	369	282	296

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.



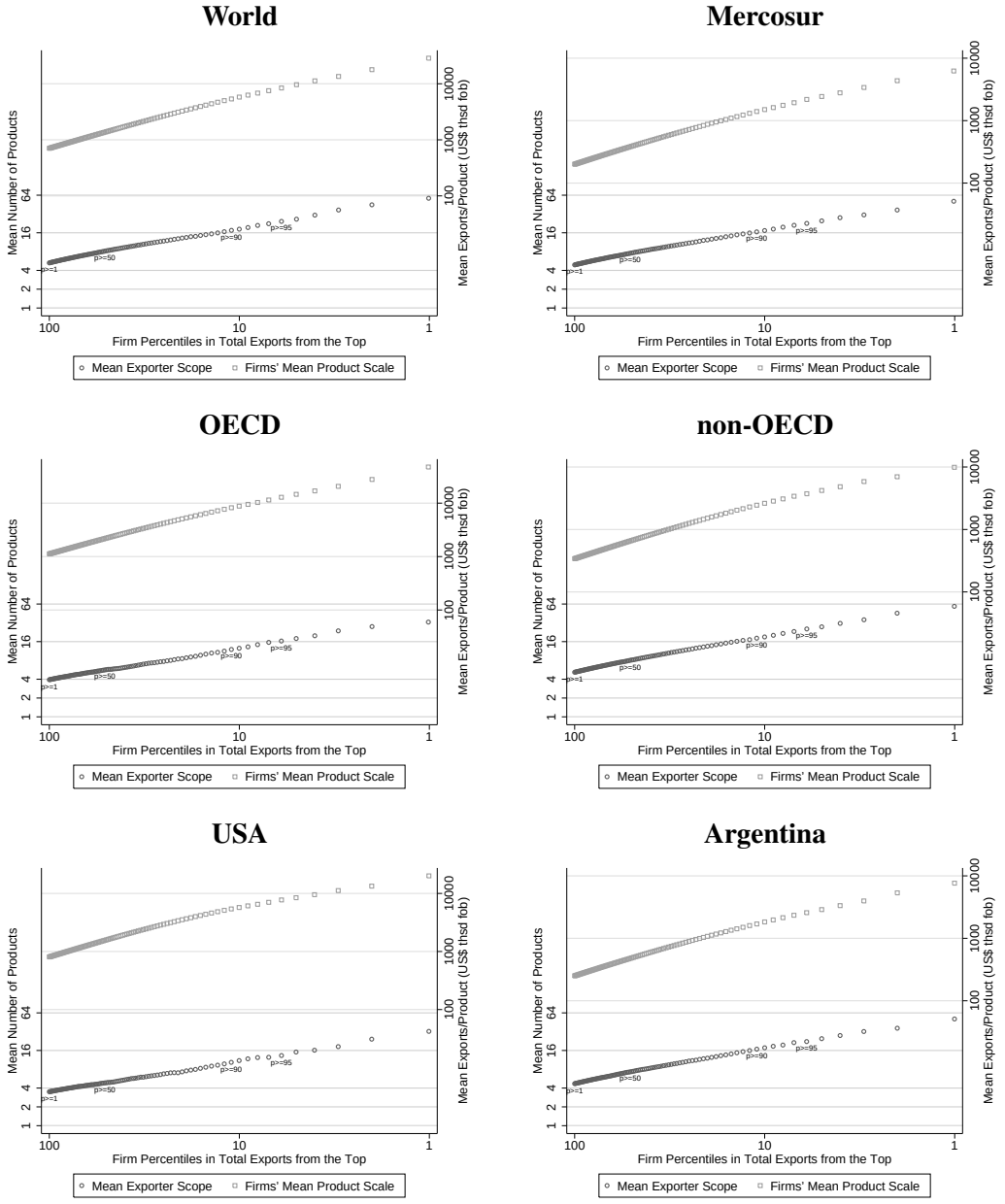
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters; at the next percentile are exporter observations with shipments in the top 99 percentiles; up to the right-most observations with exporters whose shipments are in the top percentile.

Figure 5.6: **Average Scope, Total Exports and the Total Exports Distribution**



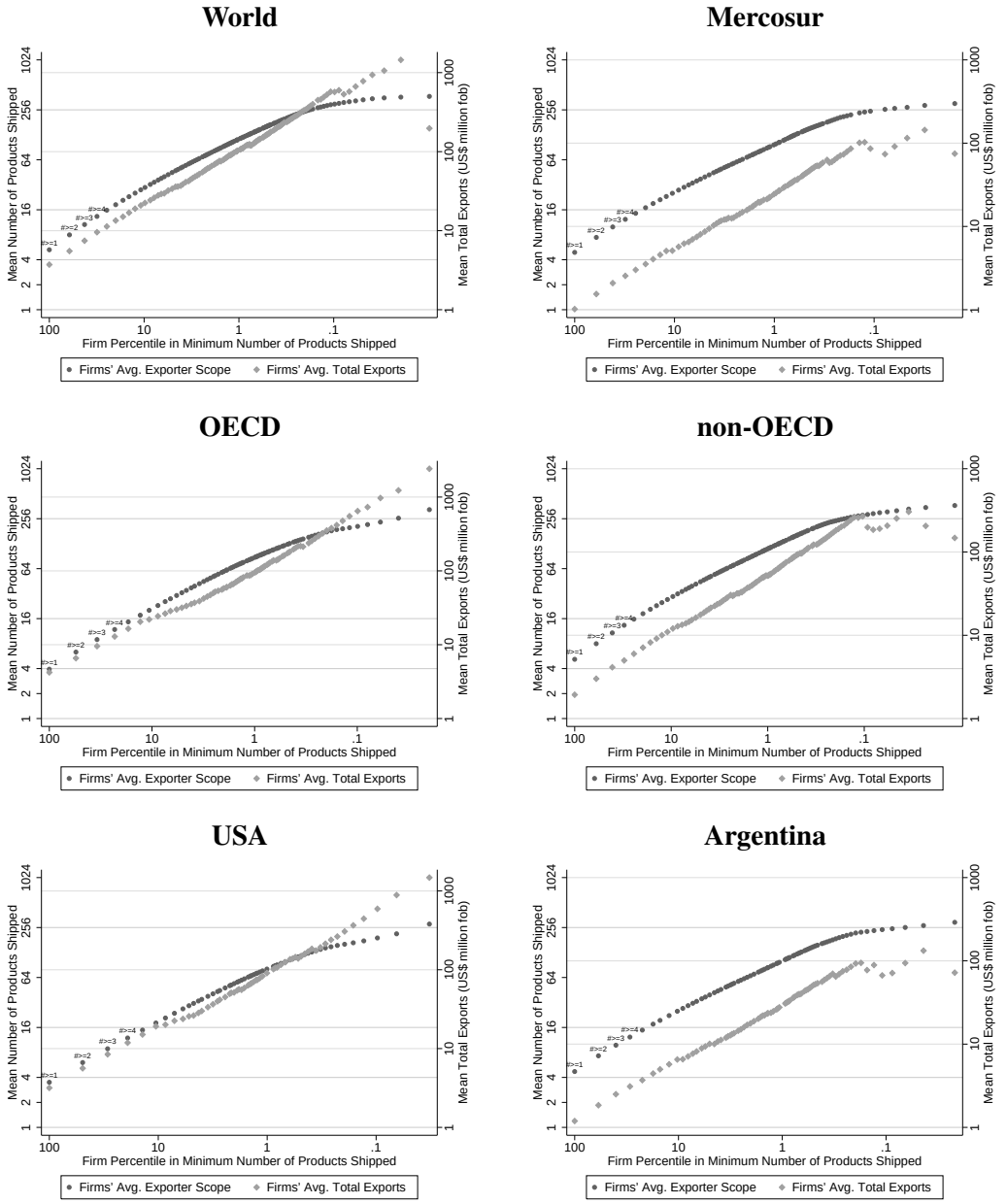
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Average scale is scope-weighted mean exporter scale. Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters; at the next percentile are exporter observations with shipments in the top 99 percentiles; up to the right-most observations with exporters whose shipments are in the top percentile.

Figure 5.7: **Average Scope, Average Scale and the Total Exports Distribution**



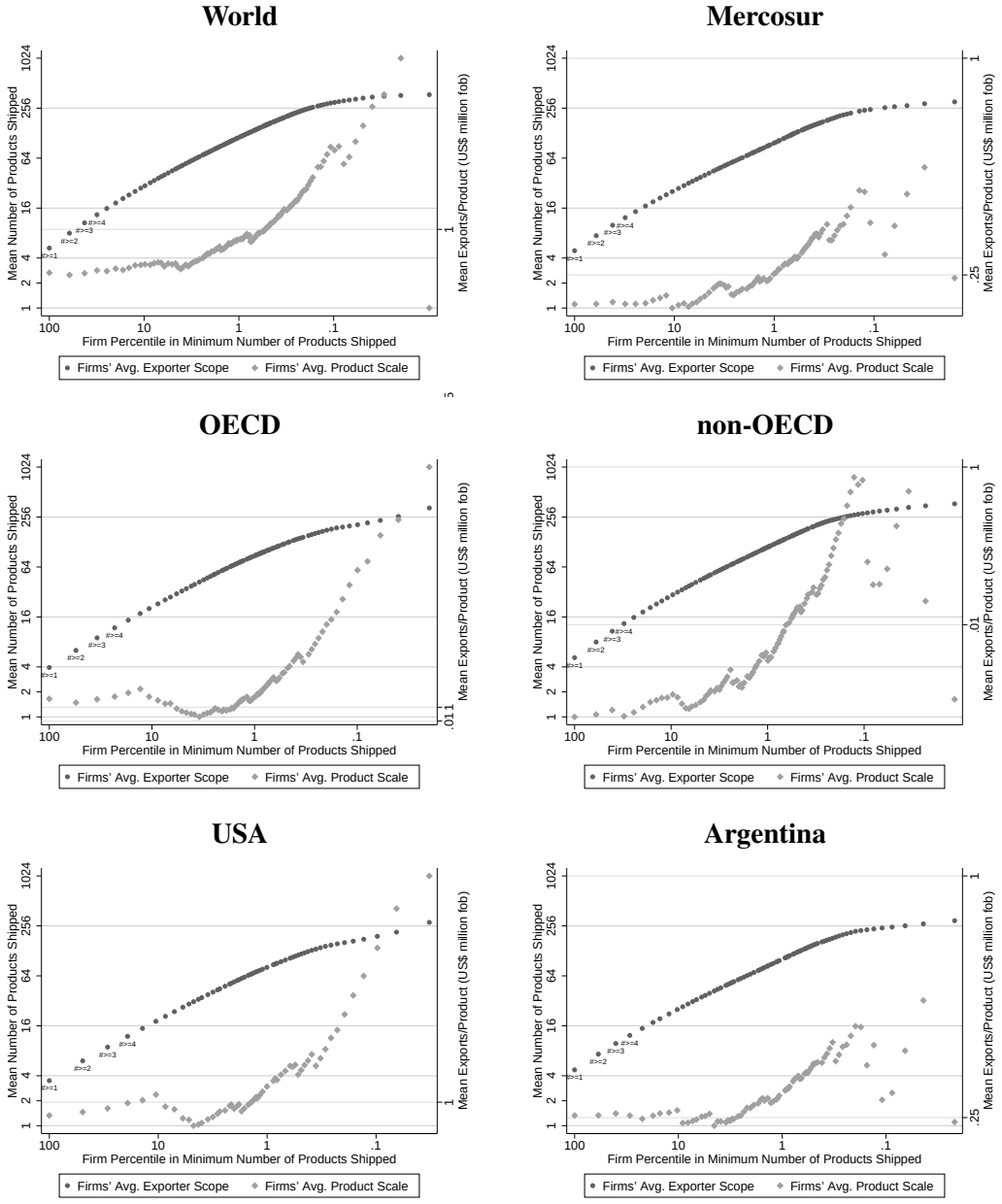
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Average scale is unweighted mean exporter scale. Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters; at the next percentile are exporter observations with shipments in the top 99 percentiles; up to the right-most observations with exporters whose shipments are in the top percentile.

Figure 5.8: **Average Scope, Unweighted Average Scale and the Total Exports Distribution**



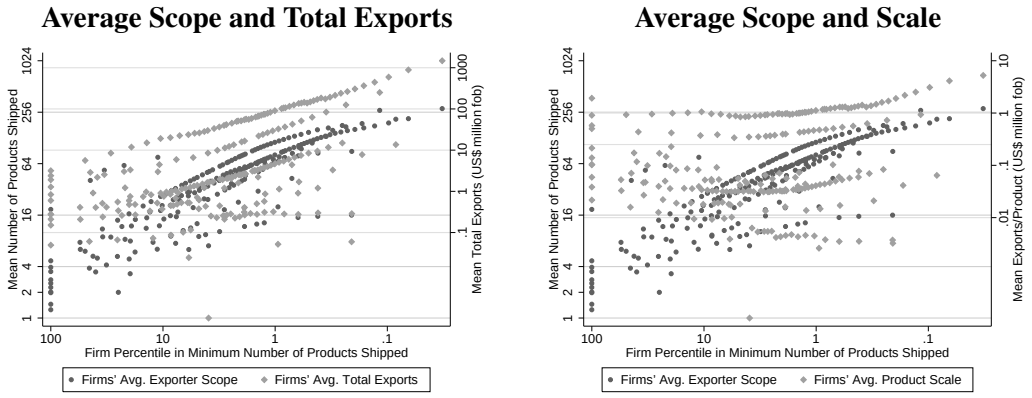
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Mean total exports are the average over firms' total exports at a percentile in a destination. Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 5.9: **Average Scope, Total Exports and the Exporter Scope Distribution**



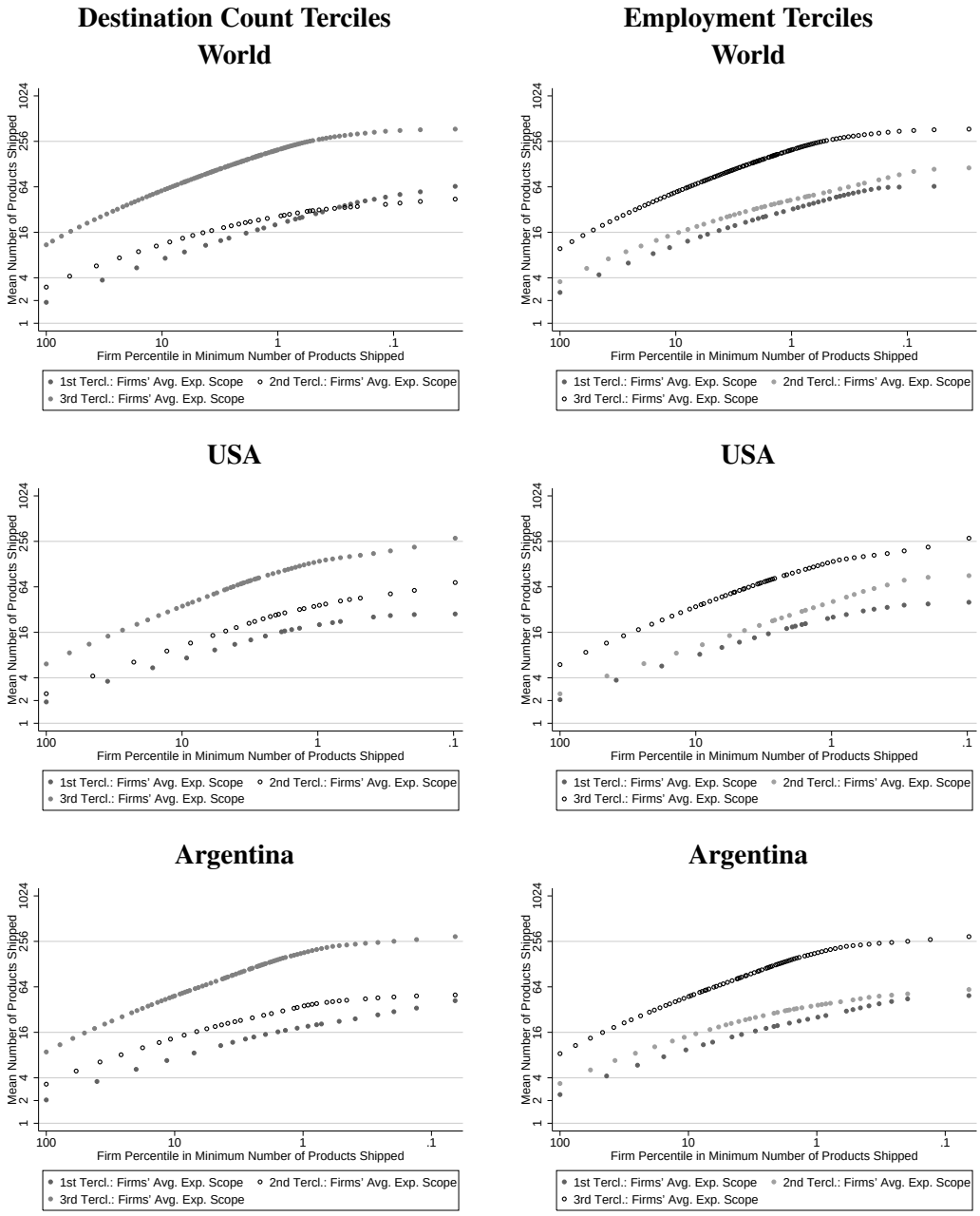
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Average scale is scope-weighted mean exporter scale. Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 5.10: **Average Scope, Average Scale and the Exporter Scope Distribution**



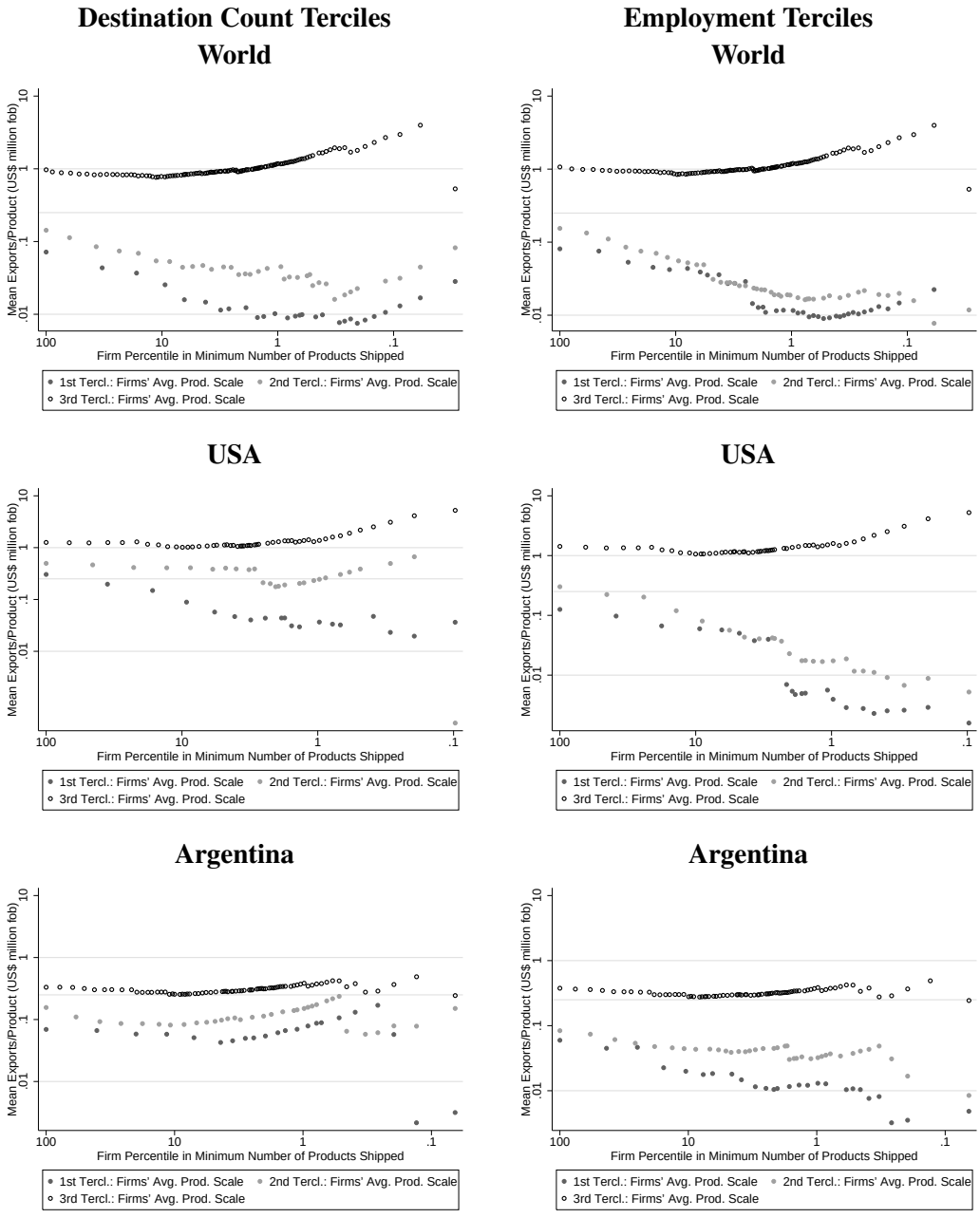
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Selection of the eleven countries at the first and every tenth percentile among Brazil's top 100 export destinations (Other African countries, Somalia, Iraq, Finland, Romania, Panama, US outlying territories, Singapore, Peru, France/Monaco, USA). Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 5.11: **Average Scope, Scale and Exporter Distributions Across Countries**



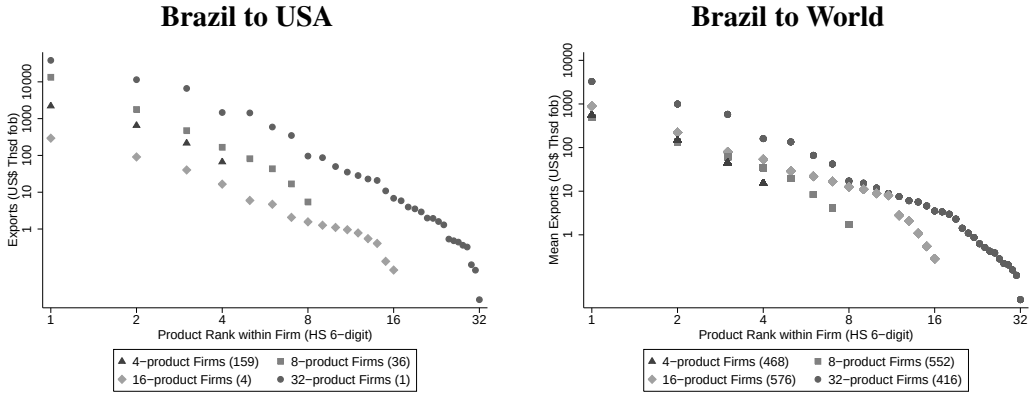
Sources: *RAIS* and *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level. Left panel: firms by tercile of worldwide number of destinations; right panel: firms by tercile of domestic employment. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 5.12: **Average Scope and the Exporter Distribution by Firm Type**



Sources: *RAIS* and *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Average scale is scope-weighted mean exporter scale. Products at the Harmonized-System 6-digit level. Left panel: firms by tercile of worldwide number of destinations; right panel: firms by tercile of domestic employment. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 5.13: **Average Scale and the Exporter Distribution by Firm Type**



Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level. World average from pooling destinations to which firms in a given exporter-scope group ship.

Figure 5.14: **Within-firm Sales Distribution**

Table 5.8: Sales of Lowest-ranked Product and Exporter Scope

	Firm-prod. data		Firm-destination-prod. data			
	USA	Argentina	All dest.	All dest.	All dest.	All dest.
estimator	OLS	OLS	OLS	Dest. FE	Firm FE	Firm, Dest. FE
	(1)	(2)	(3)	(4)	(5)	(6)
Log # Products	-2.408	-2.107	-2.397	-2.318	-1.957	-2.065
	(.054)***	(.032)***	(.012)***	(.012)***	(.014)***	(.015)***
Const.	10.956	10.141	10.263	10.121	9.984	9.836
	(.057)***	(.041)***	(.012)***	(.087)***	(.012)***	(.075)***
Obs.	3,083	4,590	46,208	46,208	46,208	46,208
Firm panels					10,215	10,215
R^2	.394	.488	.477	.508	.358	.391

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level. Standard errors in parentheses.
Underlying regression equation

$$\ln p_{d\phi G}\, x_{d\phi G} = \beta \ln G_{d\phi} + c_d + \ln \epsilon_{d\phi G}$$

for firm ϕ exporting $G_{d\phi}$ products to destination d. By convention, a firm's G-th product is the one with the smallest sales at a destination.

Table 5.9: Product Rank Correlations between Reference Countries and Rest of World

Reference country	USA		Argentina	
Elsewhere	World	OECD	World	non-OECD
	(1)	(2)	(3)	(4)
Corr. coeff.	.747	.800	.785	.794
Spearman's rank corr. coeff.	.837	.785	.860	.872
Obs.	54,182	12,958	82,560	66,159
# Firm-goods	155,215	31,539	148,775	113,219
Share Ref. country & elsewhere	.349	.411	.555	.584
Share Ref. country only	.022	.189	.053	.076
Share Elsewhere only	.629	.400	.392	.339
# Firms	10,215	5,041	10,215	8,664
Share Active in Ref. country	.234	.352	.322	.358

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level, ranked by decreasing export value within firms and destinations.

Table 5.10: Overlaps between Reference Countries and Rest of World by Product Rank

Prod. rank in Ref. country	Rest of World				OECD, non-OECD			
	Overlap (1)	Overlap top prd. (2)	#Dest./ firm (3)	#Firms (4)	Overlap (5)	Overlap top prd. (6)	#Dest./ firm (7)	#Firms (8)
Reference country: USA (overlap with Rest of World or OECD)								
1	.83	.83	8.9	2,280	.85	.85	3.7	1,629
2	.54	.77	13.0	1,033	.58	.80	4.9	722
4	.36	.73	18.9	368	.37	.76	7.0	218
8	.34	.69	24.1	137	.36	.73	8.1	75
16	.26	.59	24.3	63	.27	.65	8.3	28
32	.24	.53	30.2	22	.21	.54	7.7	17
64	.15	.49	38.9	10	.15	.48	8.9	7
128	.13	.69	42.4	5	.17	.64	11.8	4
Reference country: Argentina (overlap with Rest of World or non-OECD)								
1	.77	.77	7.8	3,071	.79	.79	6.0	2,873
2	.54	.76	10.7	1,672	.58	.79	8.1	1,595
4	.38	.67	14.2	797	.42	.70	10.8	763
8	.30	.63	18.5	307	.34	.66	14.3	285
16	.24	.54	22.5	138	.27	.57	17.5	125
32	.23	.50	29.7	48	.25	.54	22.3	47
64	.28	.40	35.4	20	.31	.42	28.6	19
128	.13	.35	40.9	11	.13	.39	31.4	11

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Destination counts in columns 3 and 7 are mean numbers of destinations to which firms with at least as many products as reported for a rank ship. Overlap in columns 1 and 5 is the proportion of destinations that a product of reported rank reaches relative to the overall destination counts (in columns 3 and 7). Overlap in columns 2 and 6 is the proportion of destinations that the top-selling product of firms with at least as many products as reported for a rank reaches relative to the overall destination counts (in columns 3 and 7). Products at the Harmonized-System 6-digit level, ranked by decreasing export value within firm in reference country. Sample restricted to firm-products that ship to reference country and at least one other destination.

Table 5.11: Share of Top-selling Products in Total Exports

Scope		USA			Argentina			World	
in Ref.	Top 1	Top 2	Top 3	Top 1	Top 2	Top 3	Top 1	Top 2	Top 3
country	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	1.000			1.000			1.000		
2	.812	1.000		.812	1.000		.820	1.000	
3	.737	.942	1.000	.737	.938	1.000	.740	.937	1.000
4	.712	.904	.975	.675	.883	.972	.693	.898	.975
8	.700	.880	.940	.617	.803	.892	.627	.825	.911
16	.654	.824	.910	.440	.645	.769	.517	.729	.815
32	.633	.821	.930	.605	.782	.868	.522	.678	.765
64	.207	.380	.464				.635	.909	.980
128	.387	.583	.727						
Mean	.713	.840	.888	.608	.765	.836	.618	.777	.847

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level. Share of top-two (top-three) products for firms with exporter scope of at least two (three) products.

Table 5.12: Worldwide Exports by Exporter Scope and Product Rank

	Product rank									
Exporter scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single product	.862 (.228)									
2 products	.999 (.139)	.157 (.034)								
3 products	1.220 (.200)	.206 (.024)	.056 (.011)							
4 products	2.389 (.420)	.509 (.094)	.170 (.042)	.040 (.010)						
5 products	1.836 (.361)	.429 (.079)	.151 (.027)	.047 (.010)	.019 (.006)					
6 products	3.639 (1.982)	1.318 (.880)	.150 (.026)	.073 (.015)	.021 (.004)	.004 (.0009)				
7 products	2.302 (.379)	.637 (.136)	.199 (.034)	.078 (.015)	.038 (.009)	.019 (.008)	.003 (.0006)			
8 products	2.421 (.568)	.619 (.154)	.255 (.083)	.100 (.042)	.061 (.032)	.043 (.027)	.008 (.002)	.003 (.0007)		
9 products	3.827 (.942)	1.426 (.337)	.530 (.121)	.207 (.053)	.123 (.036)	.062 (.020)	.034 (.012)	.019 (.008)	.002 (.0005)	
10 products	3.938 (1.510)	1.088 (.460)	.669 (.310)	.259 (.123)	.163 (.077)	.098 (.046)	.063 (.033)	.036 (.019)	.014 (.008)	.004 (.002)
Avg. varieties[a]	922	585	418	316	255	207	177	158	136	108

[a] Average number of exporter products across rows.

Source: *SECEX* 2000, manufacturing firms and their manufactured products, except exporters with scope exceeding ten products.
Note: Exporter-good mean values in US$ million fob. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 5.13: Exports to Mercosur by Exporter Scope and Product Rank

	Product rank									
Exporter scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single product	.203 (.035)									
2 products	.327 (.048)	.035 (.004)								
3 products	.576 (.157)	.121 (.035)	.023 (.005)							
4 products	.626 (.127)	.146 (.023)	.047 (.009)	.013 (.005)						
5 products	.757 (.249)	.151 (.030)	.042 (.008)	.019 (.004)	.003 (.0005)					
6 products	.560 (.120)	.164 (.032)	.081 (.023)	.033 (.010)	.011 (.002)	.004 (.0008)				
7 products	.737 (.113)	.202 (.034)	.094 (.020)	.046 (.013)	.019 (.004)	.006 (.001)	.002 (.0005)			
8 products	.713 (.148)	.205 (.052)	.117 (.038)	.076 (.033)	.040 (.018)	.026 (.013)	.009 (.005)	.004 (.003)		
9 products	3.824 (2.625)	.537 (.193)	.219 (.078)	.123 (.046)	.052 (.018)	.035 (.012)	.014 (.004)	.007 (.003)	.004 (.002)	
10 products	.750 (.184)	.270 (.068)	.137 (.049)	.089 (.034)	.040 (.014)	.025 (.010)	.015 (.007)	.009 (.006)	.006 (.003)	.003 (.002)
Avg. varieties[a]	584	369	261	202	165	134	117	103	96	90

[a] Average number of exporter products across rows.

Source: *SECEX* 2000, manufacturing firms and their manufactured products, except exporters with scope exceeding ten products.
Note: Exporter-good mean values in US$ million fob. Mercosur includes Argentina, Paraguay, Uruguay. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 5.14: Exports to OECD by Exporter Scope and Product Rank

	Product rank									
Exporter scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single product	1.332 (.372)									
2 products	1.436 (.223)	.210 (.036)								
3 products	2.134 (.401)	.395 (.060)	.100 (.030)							
4 products	2.226 (.270)	.516 (.074)	.143 (.027)	.045 (.013)						
5 products	2.340 (.452)	.828 (.309)	.244 (.055)	.072 (.014)	.023 (.008)					
6 products	9.460 (4.298)	3.414 (2.348)	.449 (.128)	.199 (.058)	.054 (.014)	.012 (.003)				
7 products	7.452 (1.982)	2.207 (.676)	1.009 (.431)	.283 (.104)	.108 (.045)	.034 (.015)	.017 (.011)			
8 products	9.067 (3.440)	1.931 (.530)	.923 (.302)	.407 (.133)	.209 (.089)	.074 (.031)	.031 (.010)	.009 (.003)		
9 products	6.100 (1.821)	1.674 (.446)	.731 (.264)	.182 (.063)	.113 (.034)	.044 (.015)	.019 (.005)	.008 (.003)	.002 (.0009)	
10 products	16.749 (10.267)	1.644 (.750)	.432 (.152)	.159 (.058)	.087 (.033)	.035 (.013)	.017 (.007)	.008 (.003)	.003 (.001)	.001 (.0004)
Avg. varieties[a]	475	276	180	125	95	73	62	50	43	41

[a] Average number of exporter products across rows.

Source: *SECEX* 2000, manufacturing firms and their manufactured products, except exporters with scope exceeding ten products.
Note: Exporter-good mean values in US$ million fob. OECD includes all OECD members in 1990. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 5.15: Exports to U.S. by Exporter Scope and Product Rank

	Product rank									
Exporter scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single product	.773 (.146)									
2 products	1.295 (.182)	.239 (.052)								
3 products	1.608 (.252)	.301 (.046)	.092 (.026)							
4 products	2.212 (.358)	.653 (.204)	.216 (.088)	.067 (.026)						
5 products	2.098 (.391)	.425 (.103)	.118 (.025)	.041 (.010)	.014 (.004)					
6 products	9.494 (4.802)	3.913 (2.426)	.710 (.248)	.443 (.169)	.097 (.043)	.006 (.002)				
7 products	5.856 (1.826)	1.667 (.848)	1.058 (.621)	.181 (.067)	.092 (.041)	.041 (.024)	.012 (.008)			
8 products	13.289 (5.118)	1.772 (.602)	.471 (.116)	.166 (.052)	.081 (.029)	.043 (.014)	.017 (.005)	.005 (.002)		
9 products	7.073 (2.353)	1.762 (.531)	.855 (.383)	.134 (.039)	.067 (.026)	.036 (.019)	.015 (.005)	.007 (.003)	.001 (.0007)	
10 products	10.610 (4.376)	5.955 (3.333)	2.256 (1.396)	.548 (.272)	.415 (.250)	.214 (.153)	.164 (.135)	.037 (.026)	.008 (.005)	.002 (.001)
Avg. varieties[a]	294	153	94	63	47	36	30	24	19	15

[a] Average number of exporter products across rows.

Source: *SECEX* 2000, manufacturing firms and their manufactured products, except exporters with scope exceeding ten products.
Note: Exporter-good mean values in US$ million fob. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 5.16: Exports to Argentina by Exporter Scope and Product Rank

	Product rank									
Exporter scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single product	.251 (.047)									
2 products	.410 (.063)	.041 (.005)								
3 products	.686 (.195)	.157 (.045)	.028 (.006)							
4 products	.997 (.264)	.162 (.027)	.055 (.011)	.018 (.006)						
5 products	.653 (.104)	.199 (.037)	.062 (.012)	.030 (.009)	.007 (.002)					
6 products	.695 (.184)	.244 (.051)	.116 (.040)	.043 (.016)	.016 (.004)	.006 (.001)				
7 products	1.010 (.228)	.376 (.142)	.151 (.041)	.074 (.025)	.038 (.013)	.020 (.009)	.005 (.002)			
8 products	.864 (.207)	.360 (.103)	.181 (.063)	.125 (.053)	.056 (.019)	.029 (.011)	.015 (.007)	.007 (.004)		
9 products	5.831 (4.936)	.178 (.040)	.081 (.020)	.041 (.012)	.026 (.007)	.018 (.006)	.009 (.003)	.004 (.002)	.001 (.0005)	
10 products	1.318 (.396)	.463 (.140)	.212 (.091)	.129 (.061)	.059 (.026)	.036 (.019)	.025 (.014)	.015 (.011)	.009 (.007)	.005 (.004)
Avg. exp. varieties[a]	422	260	184	140	109	87	80	65	50	46

[a] Average number of exporter products across rows.

Source: *SECEX* 2000, manufacturing firms and their manufactured products, except exporters with scope exceeding ten products.
Note: Exporter-good mean values in US$ million fob. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 5.17: Concentration of Exports in HS 2-digit Product Groups

	Firms with # Products, or more						
	2	4	8	16	32	64	128
# of Firms	7,477	5,006	3,114	1,733	891	392	167
Share Firms with Single Prod. Grp.	.489	.365	.257	.153	.077	.043	.000
Mean # Product Groups	5.974	6.862	8.033	9.623	11.605	14.505	17.786
Median # Product Groups	4	5	6	8	10	13	16
Share Top ranked Prod. Group	.912	.893	.876	.858	.839	.827	.829
Share 2nd ranked Prod. Group	.137	.128	.122	.116	.121	.118	.113
Share 3rd ranked Prod. Group	.042	.041	.038	.037	.034	.036	.032
Share 4th ranked Prod. Group	.018	.018	.017	.016	.015	.016	.013
Share 5th ranked Prod. Group	.009	.009	.009	.008	.007	.007	.006

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level, product groups at the Harmonized-System 2-digit level. Product-group shares in worldwide sales.

Table 5.18: Worldwide 2-digit Product-group Count and Scope Association

Log # Product Groups vs. log # Products	OLS coeff.	Std. Err.	Obs.	R^2
	(1)	(2)	(3)	(4)
All sectors	.377	.003	10,215	.540
15 Food and Beverage	.365	.013	716	.538
16 Tobacco Products	.693	.073	17	.858
17 Textile Products	.338	.016	489	.483
18 Apparel	.288	.017	463	.375
19 Leather Processing and Leather Products, Luggage and Footwear	.168	.011	763	.237
20 Wood Products	.084	.009	885	.093
21 Pulp, Paper and Paper Products	.301	.025	181	.453
22 Publishing, Printing and Reproduction	.315	.029	173	.413
23 Coal Products , Petroleum Refining	.163	.081	24	.156
24 Chemical Products	.451	.012	847	.617
25 Rubber and Plastics Products	.432	.012	722	.633
26 Nonmetallic Mineral Products	.303	.017	440	.411
27 Metals Production and Basic Processing	.307	.017	328	.507
28 Metal Products	.428	.011	679	.692
29 Machinery and Equipment	.459	.008	1,231	.747
30 Office Machinery and Data Processing Equipment	.423	.038	54	.703
31 Electrical Machinery, Equipment and Supplies	.430	.016	364	.658
32 Electronic and Communication Equipment	.405	.022	179	.653
33 Medical, Therapeutic and Optical Equipment	.403	.023	214	.583
34 Motor Vehicles	.459	.012	436	.772
35 Other Transportation Equipment	.481	.031	66	.789
36 Furniture and Miscellaneous	.323	.013	944	.397

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level, product groups at the Harmonized-System 2-digit level. Sectors at CNAE 2-digit level.

Table 5.19: Concentration of Exports in HS 4-digit Product Groups

	Firms with # Products, or more						
	2	4	8	16	32	64	128
# of Firms	7,477	5,006	3,114	1,733	891	392	167
Share Firms w/ Single Prd. Grp.	.292	.176	.095	.044	.012	.008	.000
Mean # Product Groups	21.786	24.257	27.873	33.433	41.169	53.645	69.584
Median # Product Groups	9	11	14	19	26	38	56
Share Top ranked Prod. Group	.827	.791	.759	.727	.685	.656	.653
Share 2nd ranked Prod. Group	.173	.167	.163	.161	.172	.172	.162
Share 3rd ranked Prod. Group	.065	.064	.063	.064	.067	.070	.071
Share 4th ranked Prod. Group	.032	.032	.031	.032	.032	.037	.037
Share 5th ranked Prod. Group	.019	.019	.019	.019	.019	.021	.021

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level, product groups at the Harmonized-System 4-digit level. Product-group shares in worldwide sales.

Table 5.20: Worldwide 4-digit Product-group Count and Scope Association

Log # Product Groups vs. log # Products	OLS coeff.	Std. Err.	Obs.	R^2
	(1)	(2)	(3)	(4)
All sectors	.555	.004	10,215	.684
15 Food and Beverage	.483	.014	716	.626
16 Tobacco Products	.916	.084	17	.887
17 Textile Products	.502	.016	489	.665
18 Apparel	.644	.014	463	.815
19 Leather Processing and Leather Products, Luggage and Footwear	.351	.012	763	.510
20 Wood Products	.320	.013	885	.421
21 Pulp, Paper and Paper Products	.489	.027	181	.647
22 Publishing, Printing and Reproduction	.446	.031	173	.546
23 Coal Products , Petroleum Refining	.189	.084	24	.187
24 Chemical Products	.604	.014	847	.700
25 Rubber and Plastics Products	.580	.013	722	.744
26 Nonmetallic Mineral Products	.404	.020	440	.495
27 Metals Production and Basic Processing	.501	.019	328	.687
28 Metal Products	.570	.011	679	.785
29 Machinery and Equipment	.667	.009	1,231	.828
30 Office Machinery and Data Processing Equipment	.689	.041	54	.847
31 Electrical Machinery, Equipment and Supplies	.630	.017	364	.782
32 Electronic and Communication Equipment	.671	.024	179	.811
33 Medical, Therapeutic and Optical Equipment	.566	.026	214	.684
34 Motor Vehicles	.626	.014	436	.817
35 Other Transportation Equipment	.660	.035	66	.849
36 Furniture and Miscellaneous	.444	.014	944	.529

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level, product groups at the Harmonized-System 4-digit level. Sectors at CNAE 2-digit level.

Table 5.21: Total Exports Decompositions at the Firm Level

	Log #	Log Exports/product					
OLS	Products	#≥ 1	#≥ 2	#≥ 3	#≥ 10	#≥ 25	#≥ 100
				World			
Log Total exports	.199	.801	.849	.867	.887	.880	.875
	(.003)***	(.003)***	(.004)***	(.005)***	(.008)***	(.012)***	(.026)***
Const.	1.368	-1.368	-1.718	-1.996	-2.964	-3.653	-4.678
	(.011)***	(.011)***	(.011)***	(.012)***	(.019)***	(.035)***	(.111)***
Obs.	10,215	10,215	6,262	4,340	1,108	331	38
R^2	.267	.855	.877	.889	.925	.938	.970
				Mercosur			
Log Total exports	.237	.763	.817	.842	.872	.875	.902
	(.005)***	(.005)***	(.006)***	(.006)***	(.011)***	(.018)***	(.050)***
Const.	1.572	-1.572	-1.869	-2.113	-2.990	-3.687	-4.795
	(.016)***	(.016)***	(.016)***	(.017)***	(.023)***	(.040)***	(.173)***
Obs.	6,428	6,428	3,902	2,672	675	185	21
R^2	.294	.811	.849	.866	.908	.929	.945
				OECD			
Log Total exports	.140	.860	.903	.921	.924	.916	.879
	(.004)***	(.004)***	(.005)***	(.007)***	(.013)***	(.021)***	(.034)***
Const.	1.009	-1.009	-1.438	-1.775	-2.958	-3.798	-4.565
	(.014)***	(.014)***	(.015)***	(.018)***	(.037)***	(.063)***	(.148)***
Obs.	5,041	5,041	2,776	1,728	333	95	13
R^2	.187	.897	.908	.914	.937	.955	.984
				non-OECD			
Log Total exports	.224	.776	.820	.842	.879	.861	.880
	(.004)***	(.004)***	(.005)***	(.005)***	(.009)***	(.014)***	(.032)***
Const.	1.476	-1.476	-1.827	-2.094	-2.977	-3.673	-4.758
	(.013)***	(.013)***	(.013)***	(.014)***	(.020)***	(.035)***	(.132)***
Obs.	8,590	8,590	5,132	3,505	944	273	30
R^2	.289	.831	.857	.874	.912	.931	.964

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Firm ω's total exports $t_d(\omega)$ to destination market d can be decomposed into: $G_d(\omega)\, a_d(\omega)$, where $G_d(\omega)$ is the exporters' average number of products shipped to destination d (the average scope of the exporter at the destination), and $a_d(\omega)$ are the exporter's average sales per product in destination country d (the scale of the exporter's average product). Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 5.22: Exporter Scale and Exporter Scope Correlations

Log Exp./prod.	Firm data[a]	Firm-destination data[b]			Firm-destination-good data[c]		
	Ind. FE	Ind. FE	Ind. & dest. FE	Firm & dest. FE	Firm & dest. FE	Ind., prd. & dest. FE	Firm, prd. & dest. FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
				World			
Log # Products	.473	.067	.072	.260	1.180	.651	.977
	(.020)***	(.011)***	(.011)***	(.013)***	(.014)***	(.014)***	(.014)***
Obs.	10,215	46,208	46,208	46,208	76,964	76,964	76,964
R^2	.051	.0008	.074	.131	.133	.181	.229
Corr. Firm FE, $X'\beta$				-.155	-.202		-.187
				Mercosur			
Log # Products	.270	.133	.116	.171	1.384	.758	1.241
	(.024)***	(.019)***	(.018)***	(.032)***	(.026)***	(.025)***	(.027)***
Obs.	6,428	10,160	10,160	10,160	19,863	19,863	19,863
R^2	.021	.005	.090	.316	.208	.193	.288
Corr. Firm FE, $X'\beta$				-.099	-.244		-.222
				OECD			
Log # Products	.506	.349	.272	.523	1.297	.692	1.074
	(.037)***	(.026)***	(.026)***	(.031)***	(.034)***	(.032)***	(.033)***
Obs.	5,041	13,982	13,982	13,982	19,836	19,836	19,836
R^2	.037	.013	.054	.149	.114	.158	.240
Corr. Firm FE, $X'\beta$				-.202	-.261		-.230
				non-OECD			
Log # Products	.388	.014	.010	.175	1.196	.649	.993
	(.021)***	(.012)***	(.012)***	(.015)***	(.015)***	(.015)***	(.015)***
Obs.	8,589	31,560	31,560	31,560	56,278	56,278	56,278
R^2	.040	.00004	.065	.135	.148	.188	.243
Corr. Firm FE, $X'\beta$				-.204	-.249		-.218

[a]Aggregation: worldwide exports by firm.
[b]Aggregation: exports by firm and destination.
[c]Aggregation: exports by firm, destination, product group (Harmonized System 2-digit level).

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level; product-group fixed effects at the Harmonized-System 2-digit level. Industry fixed effects at the *CNAE* two-digit level. Constant not reported. R^2 is within fit for firm FE regressions. Correlation coefficient between firm fixed effects and all other predictors (including destination and product fixed effects). Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 5.23: Correlates of Firm Effects on Exporter Scale and Exporter Scope

	Firm Eff. on Exporter Scale from Log Exports/prod. regressions			Firm Eff. on Exporter Scope from Log # Products regressions		
	Firm FE only	Firm FE & scope	Firm & dest. FE, & scope	Firm FE only	Firm FE & scale	Firm & dest. FE, & scale
	(1)	(2)	(3)	(4)	(5)	(6)
Log ww. # Products	.187 (.008)***	-.072 (.009)***	-.010 (.010)	.658 (.004)***	.646 (.004)***	.647 (.005)***
Log ww. Exp./prod.	.887 (.005)***	.880 (.005)***	.835 (.006)***	.018 (.002)***	-.040 (.003)***	-.012 (.003)***
Log ww. # Dest.	-.970 (.009)***	-.867 (.010)***	-.600 (.012)***	-.263 (.005)***	-.200 (.005)***	-.111 (.006)***
No OECD exp.	.023 (.019)	-.018 (.021)	.504 (.025)***	.106 (.010)***	.105 (.011)***	-.0004 (.012)
Log OECD Exp.[a]	.0006 (.004)	.003 (.004)	.002 (.005)	-.006 (.002)***	-.006 (.002)***	-.008 (.002)***
No Mercosur exp.	-.071 (.020)***	-.085 (.022)***	.093 (.026)***	.036 (.011)***	.040 (.011)***	.375 (.012)***
Log Mercosur Exp.[a]	.022 (.004)***	.022 (.005)***	.028 (.005)***	-.0001 (.002)	-.002 (.002)	-.010 (.003)***
Log # dom. Plants	-.013 (.009)	-.015 (.010)	-.001 (.012)	.004 (.005)	.005 (.005)	.009 (.005)*
Log # dom. Loc.	.028 (.009)***	.039 (.010)***	.029 (.012)**	-.026 (.005)***	-.028 (.005)***	-.026 (.006)***
Log Employment	-.007 (.004)*	-.004 (.004)	.009 (.005)*	-.008 (.002)***	-.008 (.002)***	-.010 (.002)***
High sch. educ. wf.	-.115 (.024)***	-.104 (.026)***	-.144 (.031)***	-.027 (.013)**	-.019 (.014)	-.020 (.014)
College educ. wf.	-.037 (.041)	.032 (.045)	-.068 (.053)	-.177 (.022)***	-.174 (.023)***	-.179 (.025)***
Obs.	10,215	10,215	10,215	10,215	10,215	10,215
R^2	.913	.903	.860	.793	.794	.772

[a]Log of nonzero exports, times indicator of nonzero exports (one less *no*-exports indicator).

Sources: *RAIS* and *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Aggregation to exports by firm and destination. Regressions of firm fixed effects on firm-level predictors, where firm fixed effects on exporter scale in column 1 are from a firm fixed effects regression with no additional controls, in column 2 from a firm fixed effects regression controlling for scope (log # products) and in column 3 from a firm fixed effects regression controlling for scope and destination fixed effects (see column 3 in Table 5.22). Firm fixed effects on exporter scope in column 4 are from a firm fixed effects regression with no additional controls, in column 5 from a firm fixed effects regression controlling for scale (log exports/product) and in column 6 from a firm fixed effects regression controlling for scale and destination fixed effects. Worldwide number of products at the Harmonized-System 6-digit level. Domestic Brazilian locations counted at the municipality level. Workforce characteristics in shares of total employment. White-collar, blue-collar employment (insignificant at ten-percent level) and constant not reported. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 5.24: Correlates of Destination Effects on Exporter Scale and Exporter Scope

	Destination Eff. on Exporter Scale from Log Exports/prod. regressions			Destination Eff. on Exp. Scope from Log # Products regressions		
	Dest. FE only	Dest. FE & scope	Firm & dest. FE, & scope	Dest. FE only	Dest. FE & scale	Firm & dest. FE, & scale
	(1)	(2)	(3)	(4)	(5)	(6)
Mean Log Market size	-.002	-.002	-.042	-.007	-.005	-.002
	(.041)	(.041)	(.031)	(.012)	(.012)	(.010)
Log Population	.243	.243	.348	.0002	.002	.032
	(.063)***	(.062)***	(.048)***	(.016)	(.016)	(.014)**
Log GDP per cap.	.154	.153	.287	-.024	-.023	.028
	(.058)***	(.058)***	(.044)***	(.017)	(.017)	(.014)**
Log Distance	.067	.055	-.331	-.199	-.198	-.236
	(.181)	(.180)	(.138)**	(.053)***	(.052)***	(.044)***
Common borders	-.531	-.525	-.171	.051	.045	.227
	(.362)	(.359)	(.276)	(.096)	(.095)	(.081)***
Common language	-.561	-.558	-.078	.026	.019	.048
	(.393)	(.390)	(.300)	(.110)	(.107)	(.092)
Const.	-9.245	-9.088	-8.354	2.622	2.515	1.907
	(1.706)***	(1.695)***	(1.302)***	(.517)***	(.508)***	(.434)***
Obs.	106	106	106	102	102	102
R^2	.359	.358	.560	.346	.341	.574

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Aggregation to exports by firm and destination. Regressions of destination fixed effects on destination-level predictors, where destination fixed effects on exporter scale in column 1 are from a destination fixed effects regression with no additional controls, in column 2 from a destination fixed effects regression controlling for scope (log # products, see column 2 in Table 5.22) and in column 3 from a destination fixed effects regression controlling for scope and firm fixed effects (see column 3 in Table 5.22). Destination fixed effects on exporter scope in column 4 are from a destination fixed effects regression with no additional controls, in column 5 from a destination fixed effects regression controlling for scale (log exports/product) and in column 6 from a destination fixed effects regression controlling for scale and firm fixed effects. Mean log market size is average sectoral absorption over *ISIC rev. 2* industries at destination level. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 5.25: Correlates of Product Effects on Exporter Scale and Exporter Scope

	Product Eff. on Exporter Scale from Log Exports/prod. regressions			Product Eff. on Exporter Scope from Log # Products regressions		
	Prod. FE only	Prod. FE & scope	Firm, dst. & prd. FE, & scope	Prod. FE only	Prod. FE & scale	Firm, dst. & prd. FE, & scale
	(1)	(2)	(3)	(4)	(5)	(6)
Comparative adv.	.451	.461	.186	-.021	-.034	.010
	(.143)***	(.142)***	(.119)	(.017)	(.017)**	(.020)
Reference priced	-1.348	-1.306	-2.964	-.089	-.051	.062
	(1.058)	(1.052)	(.881)***	(.124)	(.124)	(.151)
Differentiated	-1.750	-1.753	-2.031	.006	.056	.125
	(.977)*	(.972)*	(.813)**	(.114)	(.114)	(.139)
Log ww. # Dest.	-1.218	-1.254	-1.765	.076	.110	.253
	(1.029)	(1.023)	(.856)**	(.120)	(.120)	(.147)*
No OECD imp.	-7.049	-9.547	21.525	5.327	5.526	3.034
	(56.702)	(56.396)	(47.204)	(6.639)	(6.631)	(8.093)
Log OECD Imp.[a]	.312	.281	.544	.065	.057	.012
	(.306)	(.304)	(.254)**	(.036)*	(.036)	(.044)
No Mercosur imp.	-1.650	-1.658	-1.661	.016	.063	-.109
	(2.510)	(2.497)	(2.090)	(.294)	(.294)	(.358)
Log Mercos. Imp.[a]	-.001	-.003	.083	.004	.004	.013
	(.256)	(.255)	(.213)	(.030)	(.030)	(.037)
Const.	1.824	1.854	5.304	-.064	-.116	-.644
	(5.460)	(5.431)	(4.546)	(.639)	(.639)	(.779)
Obs.	91	91	91	91	91	91
R^2	.256	.273	.202	.298	.360	.250

[a]Log of nonzero imports, times indicator of nonzero imports (one less *no*-imports indicator).

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Aggregation to exports by firm, destination, product group (Harmonized System 2-digit level). Regressions of product fixed effects at the Harmonized-System 2-digit level on product-level predictors, where product fixed effects on exporter scale in column 1 are from a product fixed effects regression with no additional controls, in column 2 from a product fixed effects regression controlling for scope (log # products) and in column 3 from a product fixed effects regression controlling for scope as well as destination and firm fixed effects (see column 6 in Table 5.22). Product fixed effects on exporter scope in column 4 are from a product fixed effects regression with no additional controls, in column 5 from a product effects regression controlling for scale (log exports/product) and in column 6 from a product fixed effects regression controlling for scale as well as destination and firm fixed effects. Balassa (1965) comparative-advantage for Brazil from UN Comtrade trade data for 2000 at the *ISIC Rev. 2* level: product h's comparative advantage is $BADV_h \equiv [T_h^{\text{Brazil}} / \sum_k T_k^{\text{Brazil}}] / [T_h^{\text{World}} / \sum_k T_k^{\text{World}}]$, where T_h are worldwide exports. Products classification by degree of differentiation from Rauch (1999), conservative definition, revision 2 (2007): share of Harmonized-System 6-digit products at the Harmonized-System 2-digit level; omitted benchmark category is homogeneous products (traded on an organized exchange). Worldwide product-group imports exclude Brazil as importer and exporter. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 5.26: Conditional Exporter Scale and Exporter Scope Correlations

Log Exp./prod.	World			Mercosur	OECD	non-OECD
	(1)	(2)	(3)	(4)	(5)	(6)
Log # Products	.433 (.124)***	.444 (.073)***	.120 (.085)	-.470 (.199)**	.352 (.192)*	-.195 (.097)**
Squared Log # Products	.099 (.225)	.076 (.090)	.050 (.090)	.132 (.188)	.217 (.212)	.144 (.098)
Cubic Log # Products	-.126 (.138)	-.111 (.034)***	-.108 (.034)***	-.093 (.069)	-.193 (.083)**	-.097 (.037)***
Quartic Log # Products	.022 (.034)	.018 (.004)***	.018 (.004)***	.013 (.008)*	.026 (.010)***	.014 (.004)***
Pentic Log # Products	-.0003 (.003)					
Log # Prd.×Log ww. # Dst.			.060 (.021)***	.227 (.053)***	-.031 (.053)	.094 (.023)***
Log # Prd.×Log Empl.			.036 (.010)***	.006 (.026)	.094 (.023)***	.011 (.011)
Log # Prd.×Coll. ed. wf.			-.115 (.085)	.854 (.209)***	-.700 (.209)***	.161 (.095)*
Obs.	46,208	46,208	46,208	10,160	13,982	32,226
R^2	.135	.135	.137	.326	.159	.138
Corr. Firm FE, $X'\beta$	-.151	-.151	-.097	-.059	-.154	-.142
F statistic: Zero Firm FE	3.993***	3.993***	3.619***	2.742***	2.931***	3.513***

Sources: *RAIS* and *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Aggregation to exports by firm and destination. Regressions controlling for firm and destination fixed effects (expanding regression (4) in Table 5.22). Worldwide number of products at the Harmonized-System 6-digit level. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 5.27: Individual Product Sales Regressions

Log Sales	OLS	Dest. FE	Dest. & Ind. FE	Dest. & Firm FE
	(1)	(2)	(3)	(4)
Log # Products	1.168 (.007)***	1.204 (.007)***	1.319 (.007)***	1.557 (.008)***
Log Product Rank	-2.508 (.007)***	-2.525 (.007)***	-2.574 (.007)***	-2.624 (.008)***
Obs.	162,570	162,570	162,570	162,570
Panels			259	10,215
R^2 (R^2 within)[a]	.493	.538	.510	.582

[a] R^2 is within fit for industry and firm FE regressions in columns 3 and 4.

Sources: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Individual export sales by product, firm and destination. Products at the Harmonized-System 6-digit level. Industry fixed effects at the *CNAE* two-digit level. Constant and destination fixed effects not reported. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

6 Manufacturing Products

Table 6.1: Sample Characteristics by Destination

	World	Mercosur	OECD	non-OECD	USA	Argentina
	(1)	(2)	(3)	(4)	(5)	(6)
# of Observations (MNH)	215,346	64,570	48,762	166,584	15,600	26,052
# of Destinations (N)	172	3	23	149	1	1
Regional share in Tot. exports	1.000	.165	.577	.423	.273	.133
			Firms			
# of Firms (M)	14,678	8,293	7,257	11,746	4,232	5,629
Median Total exports (T_{md})	.067	.044	.089	.054	.084	.056
Median Exporter scope (G_{md})	2	2	2	2	1	2
Median Avg. prod scale (a_{md})	.026	.018	.045	.022	.046	.026
Mean Total exports ($\bar{t}_d$)	3.051	.891	3.560	1.613	2.887	1.061
Mean Exporter scope ($\bar{G}_d$)	6.168	5.960	3.970	6.323	3.686	4.628
Mean Avg. Exp. scale (a_d)	.495	.149	.897	.255	.783	.229
Shares in Total exports						
Single-prod. firms	.092	.078	.150	.069	.140	.087
Multi-prod. firms' top product	.604	.550	.627	.571	.652	.555
Multi-prod. firms' other prod.	.304	.372	.222	.360	.207	.358
			Varieties			
# of Varieties (MH)	90,541	49,424	28,809	74,275	15,600	26,052
Median Variety sales	.004	.003	.006	.003	.006	.005
Mean Variety sales	.495	.149	.897	.255	.783	.229

Source: *SECEX* 2000, manufacturing products, all firms.
Note: Aggregate regions (world, Mercosur, OECD, non-OECD) treated as single destinations, collapsing product shipments to different countries into single product shipment. The worldwide average number of products across destination countries is 3.786, for instance, but 6.168 for the world as single destination. Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Exports in US$ million fob. Mean average exporter scale (a_d) is the scope-weighted arithmetic mean of exporters' average exporter scales.

Table 6.2: Top 25 Export Products

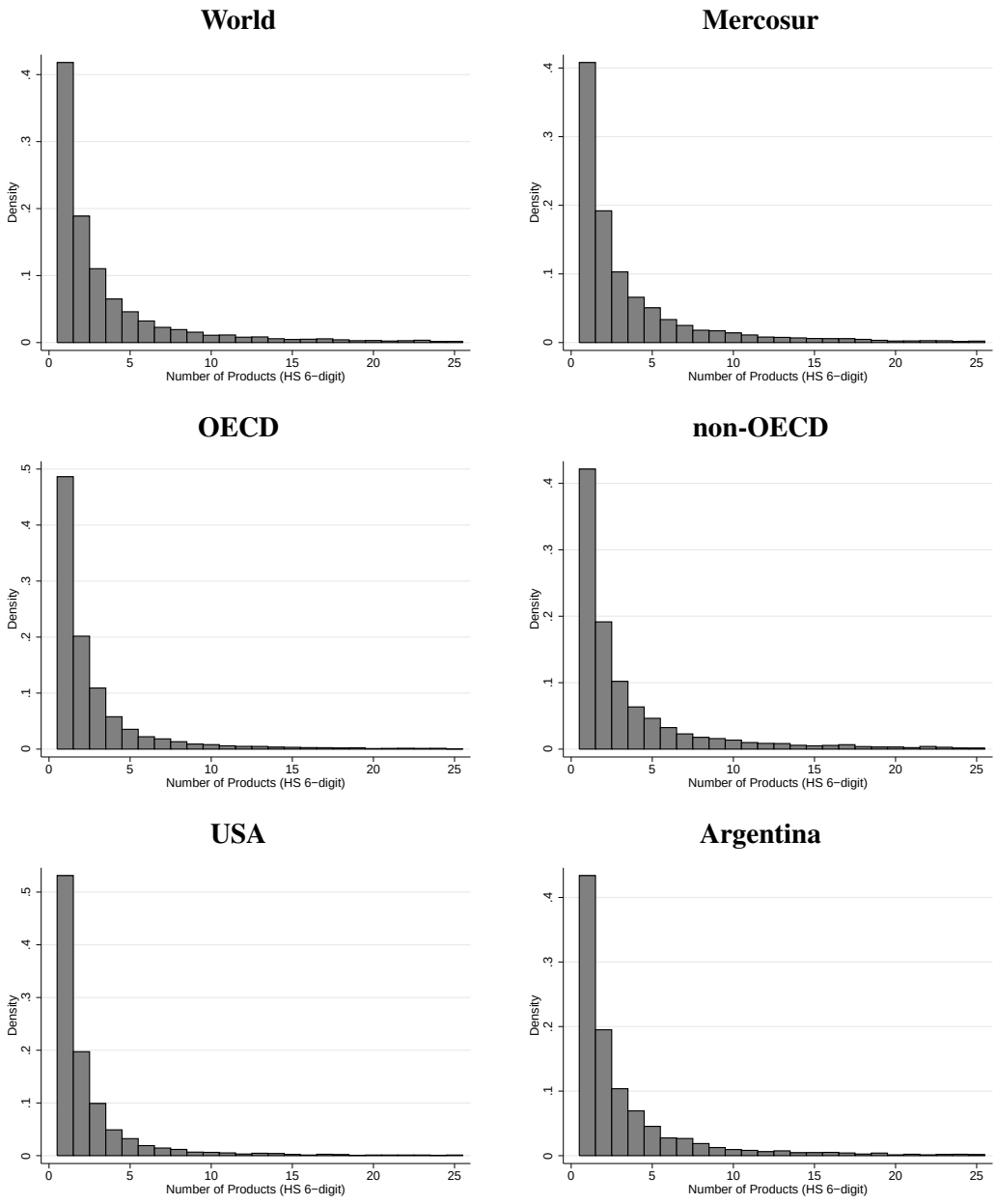
Rank	Product	Exports (US$ mill.)	Share in tot. exports (%)	# of Dest.
1.	Airplane & a/c unladen wght > 2t, nov 15t	2,785	6.2	18
2.	Soybean oilcake & oth solid residue, wh/not ground	1,651	3.7	39
3.	Chem woodpulp, soda etc, n dis s bl & bl nonconif	1,526	3.4	29
4.	Pass veh spk-ig int com rcpr p eng >1500 nov 3m cc	1,198	2.7	34
5.	Footwear, outer sole rub etc & leather upper nesoi	1,020	2.3	94
6.	Orange juice, frozen, sweetened or not	1,019	2.3	47
7.	Unwrought aluminum, not alloyed	946	2.1	15
8.	Transmission appr incorporating reception apparats	940	2.1	32
9.	Smfd irn/nal stl lt .25 pct crb rect cs wid 2x thk	808	1.8	18
10.	Cane sugar, raw, solid form, w/o added flav/color	761	1.7	33
11.	Oil (not crude) from petrol & bitum mineral etc.	702	1.6	52
12.	Airplane & ot a/c, unladen weight > 15t	636	1.4	3
13.	Nonalloy pig iron 0.5 prcnt or less phosphorus	446	1.0	18
14.	Chicken cuts and edible offal (inc livers), frozen	445	1.0	62
15.	Parts and accessories of motor vehicles, nesoi	445	1.0	108
16.	Cane/beet sug chem pure sucrose refind nesoi	438	1.0	57
17.	Compressors used in refrigerating equipment	416	0.9	64
18.	Spark-ignition int combustion piston eng pts nesoi	396	0.9	102
19.	Gold, nonmonetary, semimanufactured forms nesoi	375	0.8	4
20.	Spark-ignition reciprocating int com pistn eng pts	361	0.8	95
21.	Meat & offal of chickens, not cut in pieces, frozen	359	0.8	63
22.	Meat of bovine animals, boneless, frozen	333	0.7	52
23.	Trucks, nesoi, diesel eng, gvw 5 metric tons & und	332	0.7	31
24.	Semifinished products of alloy steel not stainless	316	0.7	20
25.	Food preparations nesoi	312	0.7	53

Source: *SECEX* 2000, manufacturing products, all firms.
Note: Export values in US$ million fob. Products at the Harmonized-System 6-digit level.

Table 6.3: Top 25 Export Destinations

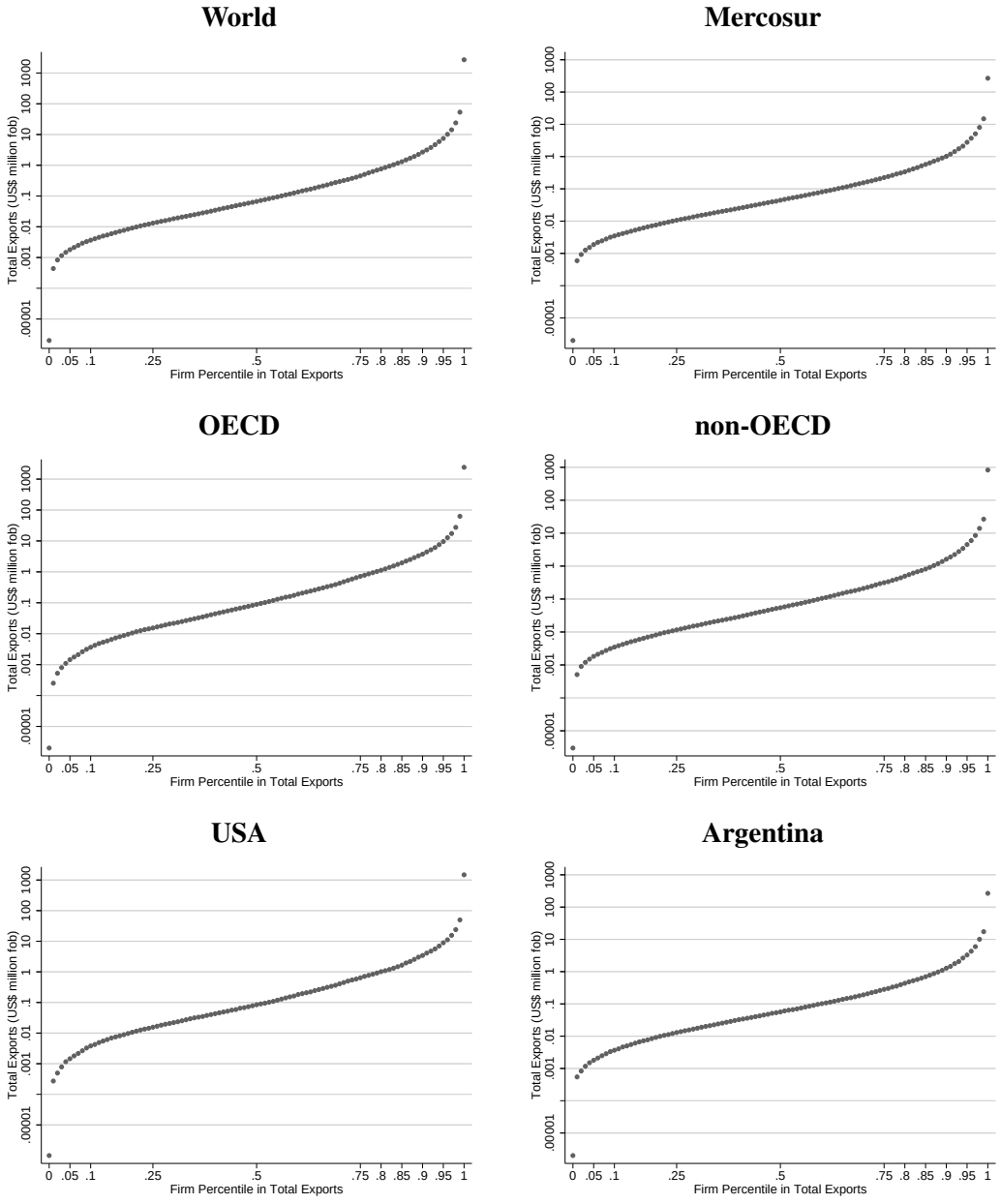
Rank	Destination	Exports (US$ mill.)	Share in tot. exports (%)	# of Products
1.	USA	12,220	27.3	2,484
2.	Argentina	5,973	13.3	2,971
3.	Netherlands	1,882	4.2	724
4.	Mexico	1,607	3.6	1,522
5.	Japan	1,602	3.6	934
6.	Italy	1,581	3.5	1,071
7.	Germany	1,458	3.3	1,326
8.	Belgium-Luxembourg	1,444	3.2	640
9.	France, Monaco	1,413	3.2	1,007
10.	UK	1,281	2.9	947
11.	Chile	1,221	2.7	2,257
12.	Paraguay	800	1.8	2,513
13.	Venezuela	714	1.6	1,711
14.	Uruguay	616	1.4	2,535
15.	Spain	536	1.2	905
16.	Colombia	499	1.1	1,427
17.	Switzerland, Liechtenstein	481	1.1	484
18.	Canada	471	1.1	809
19.	China Hong Kong SAR	466	1.0	459
20.	Russian Federation	399	0.9	238
21.	Korea Rep.	376	0.8	312
22.	China	373	0.8	650
23.	Peru	350	0.8	1,707
24.	Bolivia	330	0.7	2,259
25.	Australia	318	0.7	711

Source: *SECEX* 2000, manufacturing products, all firms.
Note: Export values in US$ million fob. Products at the Harmonized-System 6-digit level.



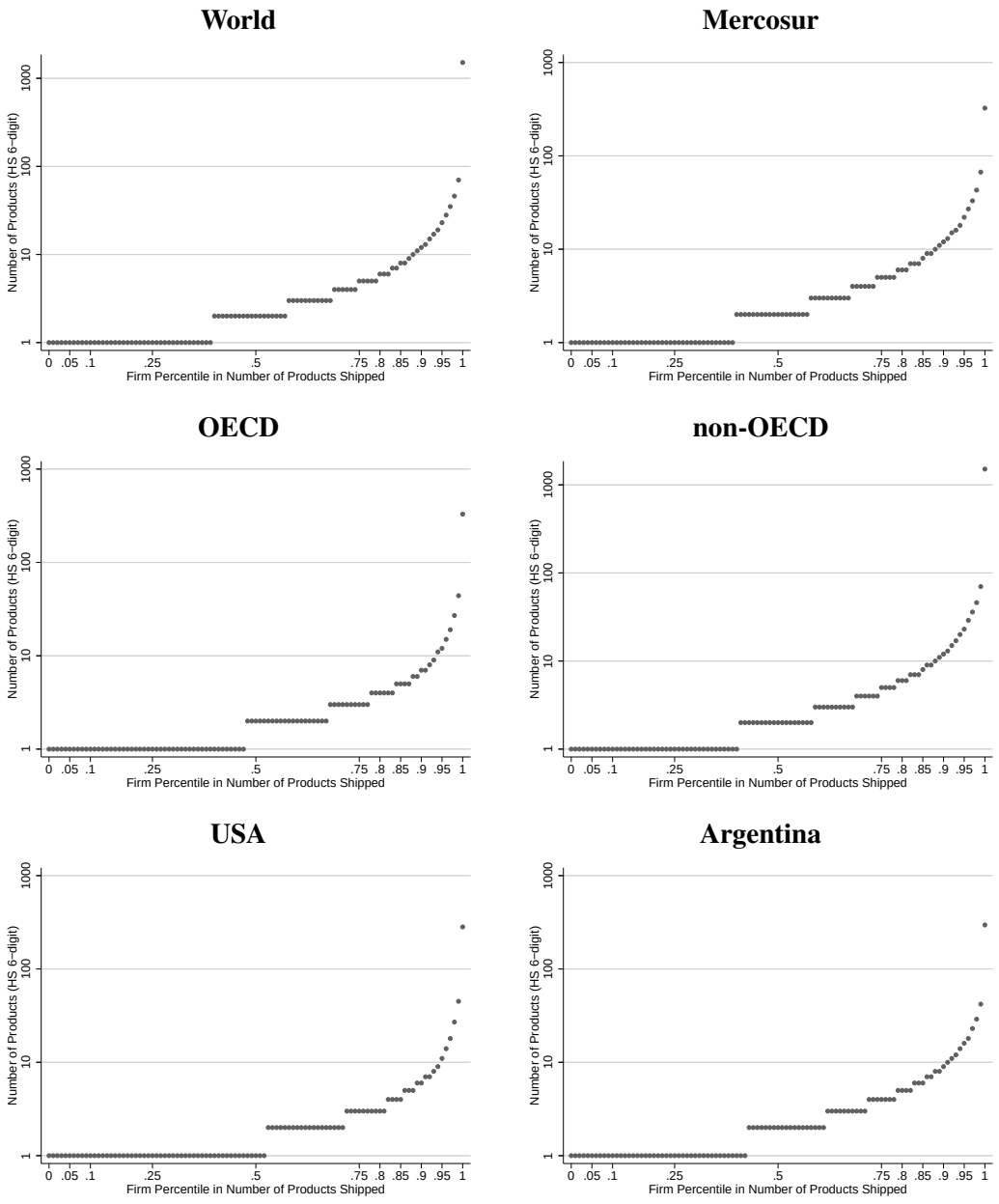
Source: *SECEX* 2000, manufacturing products, all firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members of the OECD in 1990. Products at the Harmonized-System 6-digit level.

Figure 6.1: **Exporter Scope Distribution for Up to 25 Products**



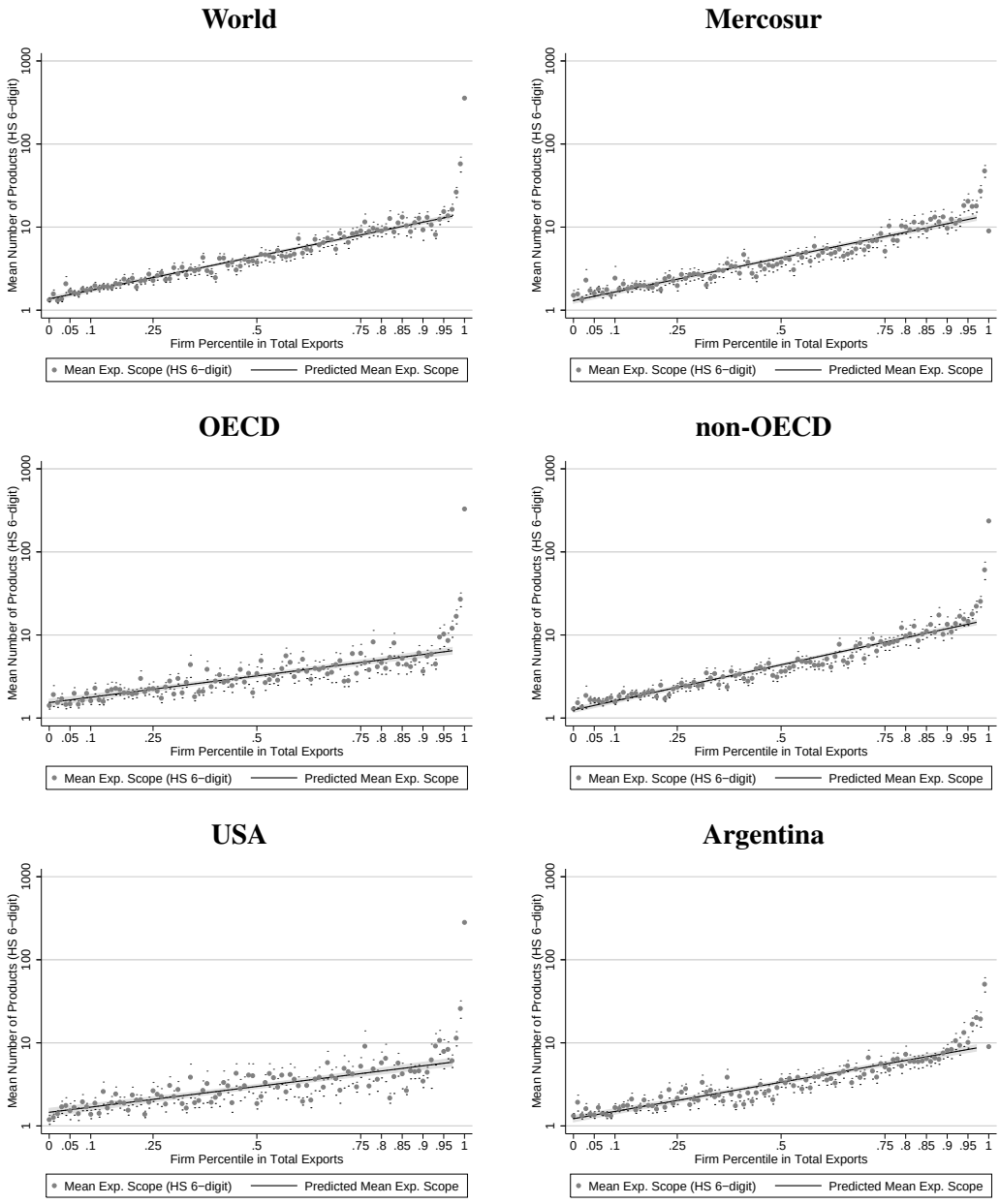
Source: *SECEX* 2000, manufacturing products, all firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.

Figure 6.2: **Total Sales Distribution**



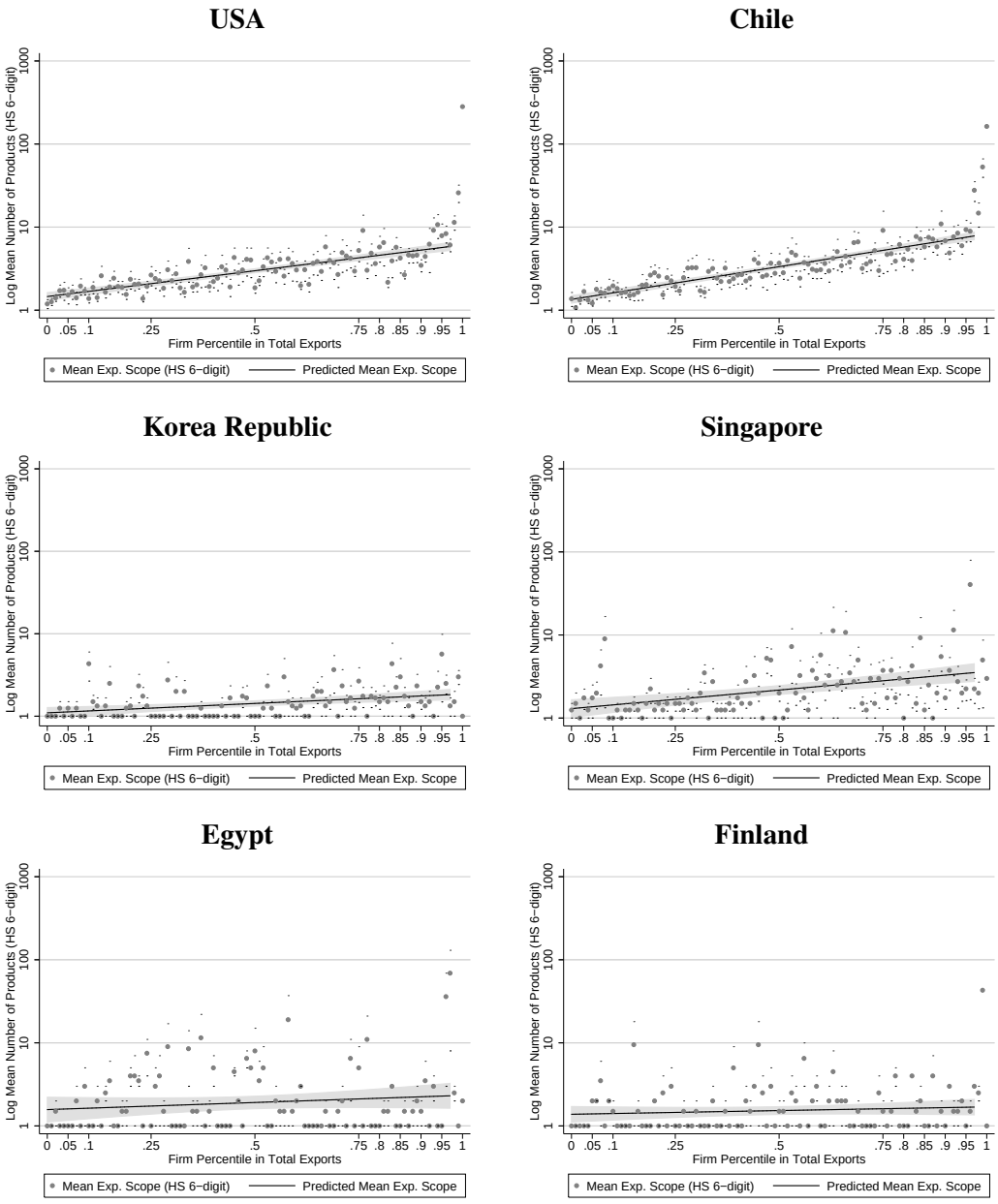
Source: *SECEX* 2000, manufacturing products, all firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.

Figure 6.3: **Exporter Scope Distribution**



Source: *SECEX* 2000, manufacturing products, all firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Large circles depict the mean number of products by percentile, small dots above and below indicate a one-standard-error deviation. Fitted line from an ordinary least squares regression of the mean number of products on the percentile, up to the 98th percentile, with a 95-percent confidence band around.

Figure 6.4: **Exporter Scope and Total Exports Distribution**



Source: *SECEX* 2000, manufacturing products, all firms.
Note: Selection of the six countries at the fiftieth through hundredth percentiles among Brazil's top 100 export destinations (Finland, Egypt, Singapore, Korea Republic, Chile, USA). Products at the Harmonized-System 6-digit level. Large circles depict the mean number of products by percentile, small dots above and below indicate a one-standard-error deviation. Fitted line from an ordinary least squares regression of the mean number of products on the percentile, up to the 98th percentile, with a 95-percent confidence band around.

Figure 6.5: **Exporter Scope and Total Exports Distribution by Country**

Table 6.4: Correlations between Local and Worldwide Total Exports Percentiles

Local and World pctl.	Corr. coeff.	Spearman's rank corr. coeff.	Local on world regression coeff.		Local, firm FE corr. coeff.
			OLS	Dest. FE	Dest. & firm FE
	(1)	(2)	(3)	(4)	(5)
Coefficient	.563	.567	.679	.787	.688
p value	0	0	0	0	0
Obs.	91,570	91,570	91,570	91,570	91,570
# Dest.				172	172
Panels					14,678

Source: *SECEX* 2000, manufacturing products, all firms.
Note: Aggregation to exports by firm and destination. Percentiles in discrete numbers. Unconditional and Spearman's rank correlation coefficients in columns 1 and 2. Regression coefficients of local total-exports percentiles on a firm's worldwide total-exports percentile in columns 3 (OLS with constant) and 4 (destination FE regression). In column 5, correlation coefficient between local total-exports percentiles and the firm-fixed effect from a local total-exports percentile regression on firm and destination fixed effects.

Table 6.5: Exporter Scope and Local Total-Exports Percentile Correlations

Log # Products	OLS	Firm FE	Dest. FE	Dest. & Firm FE
	(1)	(2)	(3)	(4)
Log Local total-exp. percentile	.524	.477	.488	.397
	(.005)***	(.003)***	(.005)***	(.003)***
Constant	1.719	1.679	1.657	1.733
	(.006)***	(.004)***	(.015)***	(.009)***
Observations	87,266	87,266	87,266	87,266
Panels		14,643		14,643
R^2 (R^2 within)[a]	.122	.217	.207	.308

[a] R^2 is within fit for firm FE regressions in columns 2 and 4.

Source: *SECEX* 2000, manufacturing products, all firms.
Note: Aggregation to exports by firm and destination. Products at the Harmonized-System 6-digit level. R^2 is within fit for firm FE regressions. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 6.6: Correlates of Destination Effects on Exporter Scope

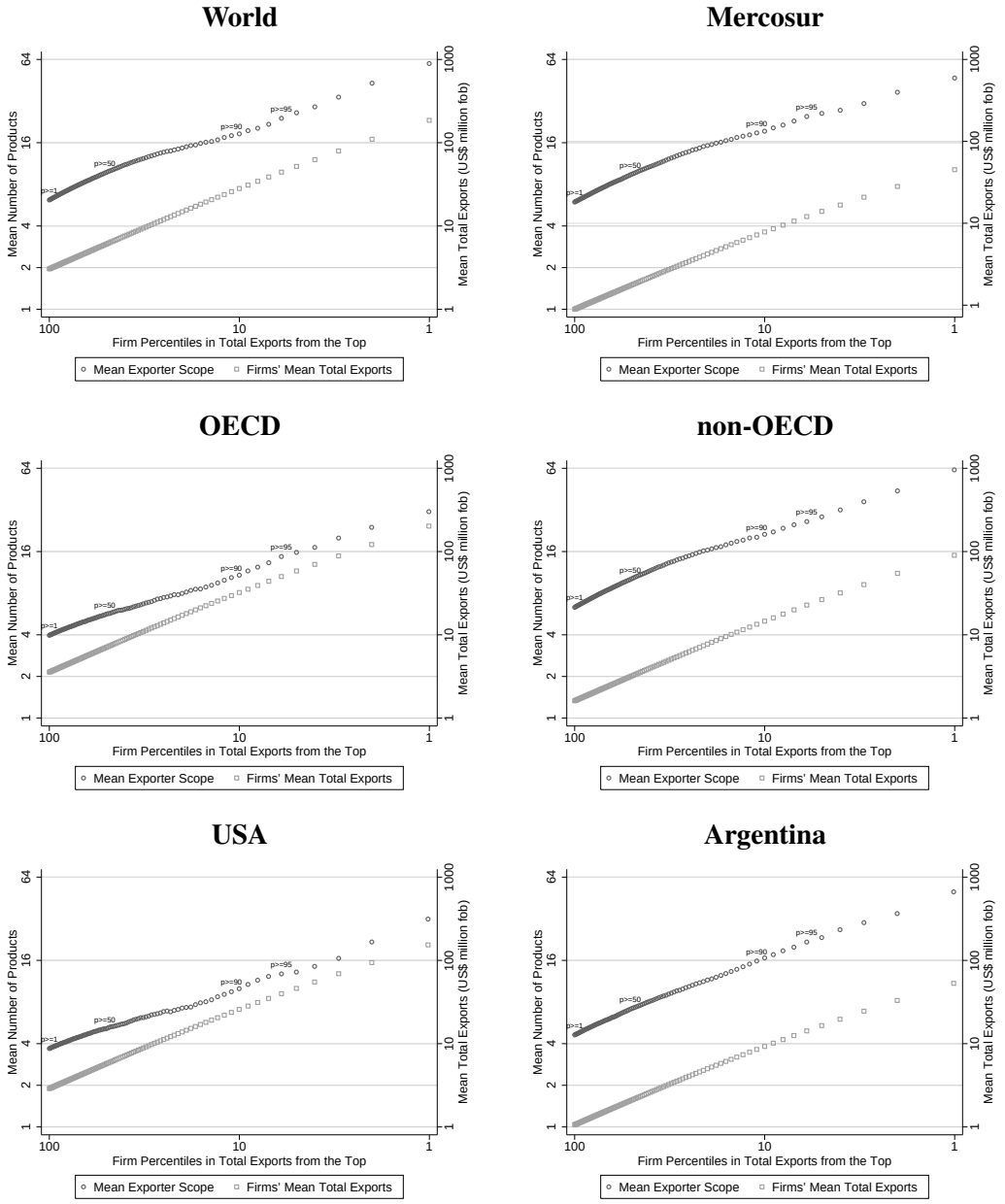
Log # Products	Unconditional Scope			Scope Dest. FE (Table 6.5, col. 3)		
	(1)	(2)	(3)	(4)	(5)	(6)
Mean Log Market size			-.039 (.014)***			-.097 (.032)***
Log Population		.027 (.024)	.050 (.027)*		.064 (.024)***	.107 (.039)***
Log GDP per cap.		-.080 (.026)***	-.055 (.028)**		.013 (.026)	.035 (.045)
Log GDP	-.016 (.024)			.042 (.020)**		
Log Distance	-.379 (.057)***	-.395 (.055)***	-.356 (.056)***	-.513 (.109)***	-.517 (.109)***	-.569 (.120)***
Common borders	-.004 (.089)	-.045 (.082)	-.075 (.074)	.008 (.220)	.009 (.219)	-.187 (.227)
Common language	.127 (.226)	.136 (.181)	.078 (.160)	.208 (.251)	.216 (.250)	.078 (.228)
Observations	85,117	85,117	77,938	151	151	104
R^2	.065	.069	.070	.207	.222	.378

Source: *SECEX* 2000, manufacturing products, all firms.
Note: Aggregation to exports and exporter scope by firm and destination. Regressions of exporter scope (columns 1 through 3) and of destination fixed effects (columns 4 through 6) on destination-level predictors, where latter destination fixed effects in exporter scope are from a destination fixed effects regression controlling for the firm's local total-exports percentile (column 3 in Table 6.5). Mean log market size is average sectoral absorption over *ISIC rev. 2* industries at destination level. Standard errors in parentheses: * significance at ten, ** five, *** one percent. Clustered standard errors at destination level in columns 1 through 3.

Table 6.7: Exporter Scope Distribution by Destination

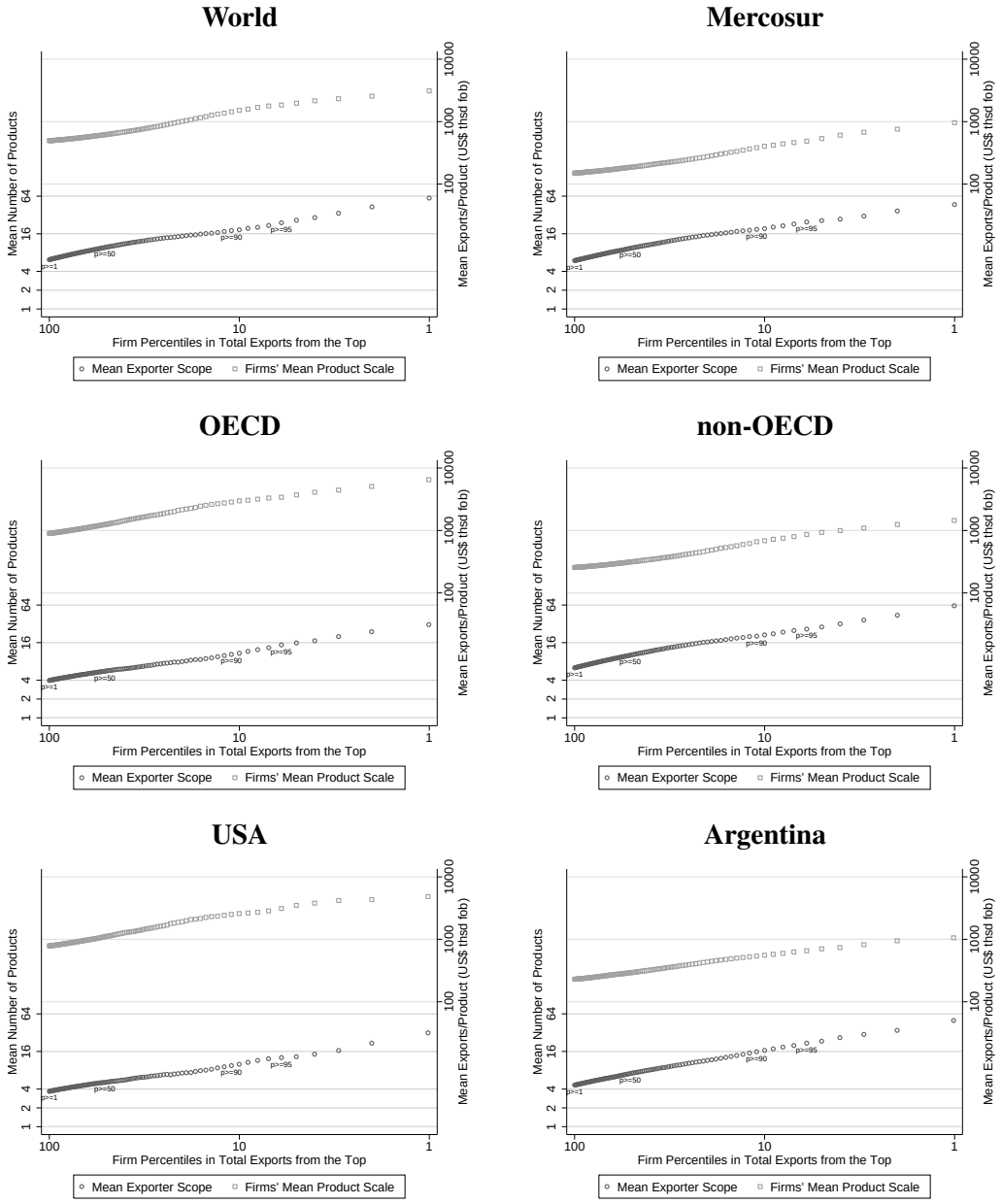
	World	Mercosur	OECD	non-OECD	USA	Argentina
Percentile	(1)	(2)	(3)	(4)	(5)	(6)
00	1	1	1	1	1	1
05	1	1	1	1	1	1
10	1	1	1	1	1	1
25	1	1	1	1	1	1
50	2	2	2	2	1	2
75	5	5	3	5	3	4
80	6	6	4	6	3	5
85	8	8	5	8	4	6
90	12	12	7	12	6	9
95	23	22	12	23	11	16
99	70	67	44	70	45	42
100	1511	325	329	1511	282	296

Source: *SECEX* 2000, manufacturing products, all firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.



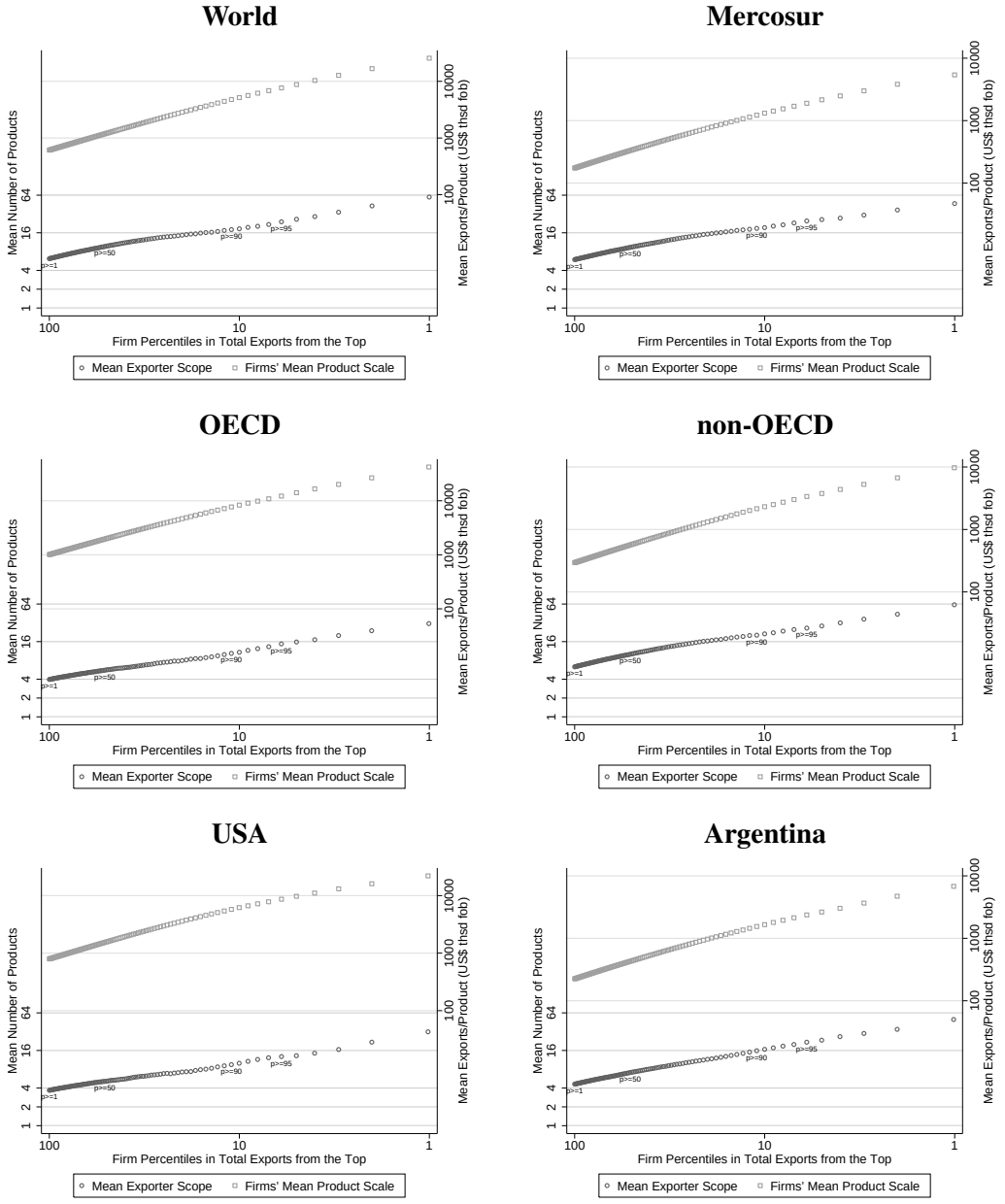
Source: *SECEX* 2000, manufacturing products, all firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters; at the next percentile are exporter observations with shipments in the top 99 percentiles; up to the right-most observations with exporters whose shipments are in the top percentile.

Figure 6.6: **Average Scope, Total Exports and the Total Exports Distribution**



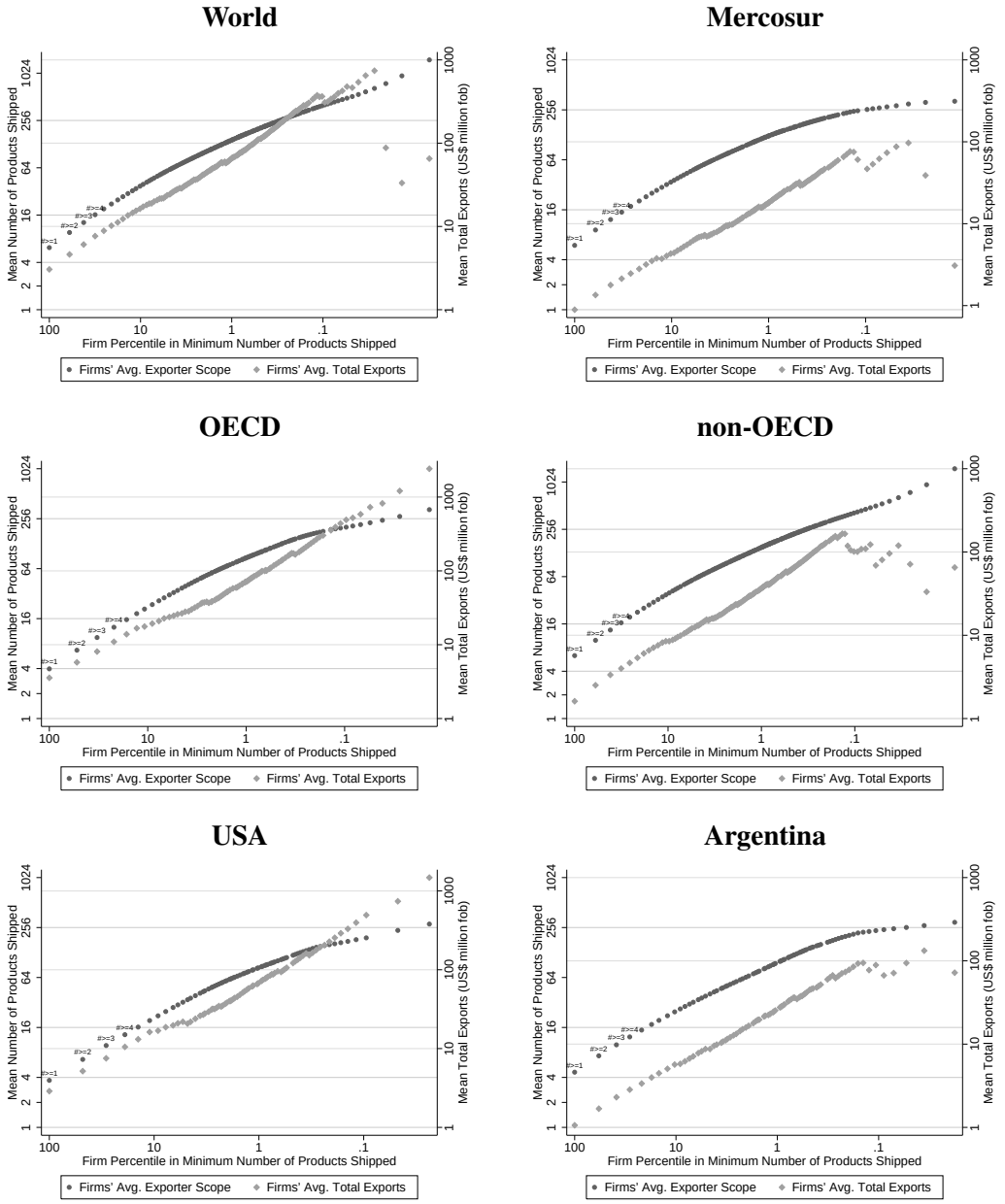
Source: *SECEX* 2000, manufacturing products, all firms.
Note: Average scale is scope-weighted mean exporter scale. Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters; at the next percentile are exporter observations with shipments in the top 99 percentiles; up to the right-most observations with exporters whose shipments are in the top percentile.

Figure 6.7: **Average Scope, Average Scale and the Total Exports Distribution**



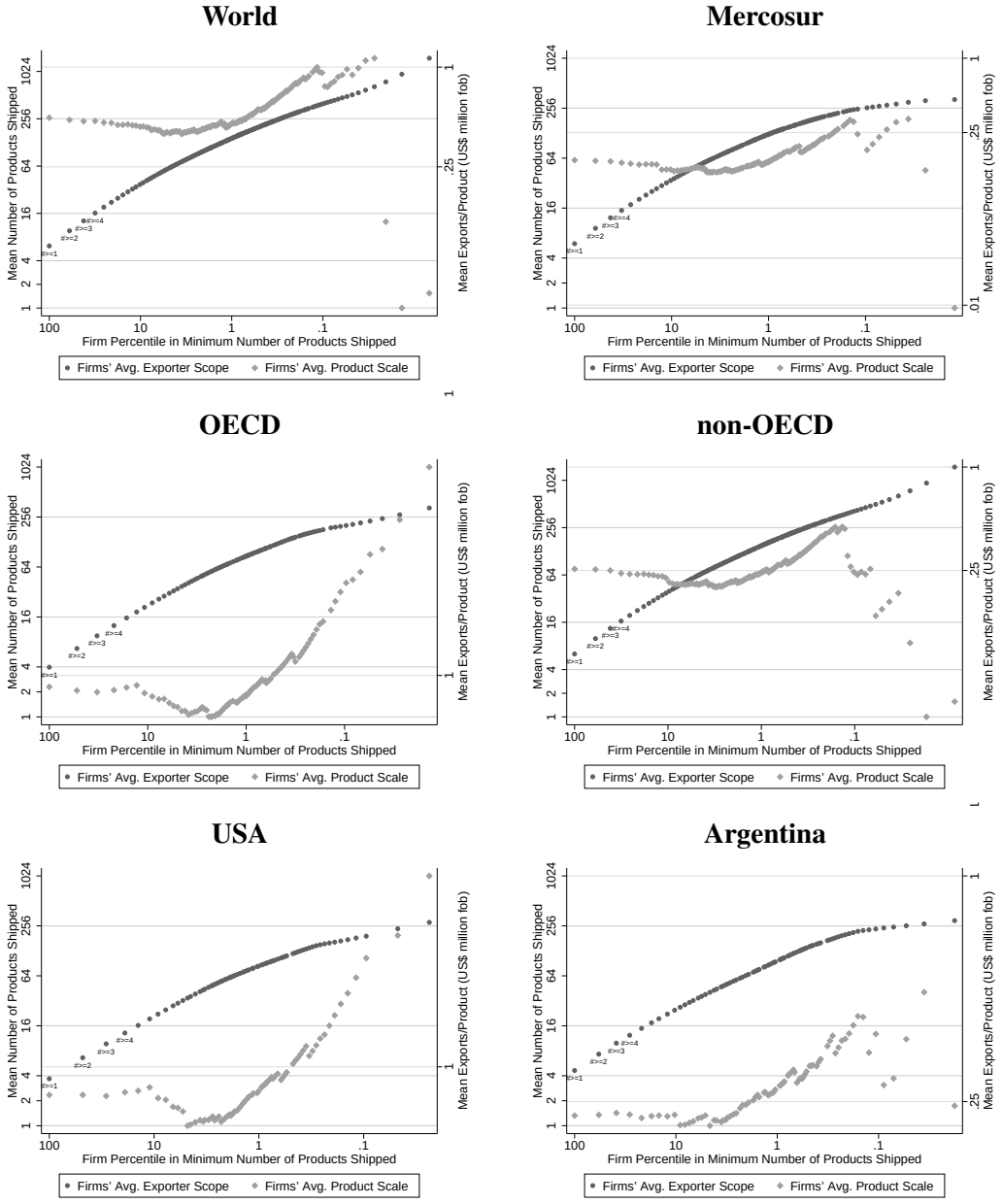
Source: *SECEX* 2000, manufacturing products, all firms.
Note: Average scale is unweighted mean exporter scale. Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters; at the next percentile are exporter observations with shipments in the top 99 percentiles; up to the right-most observations with exporters whose shipments are in the top percentile.

Figure 6.8: **Average Scope, Unweighted Average Scale and the Total Exports Distribution**



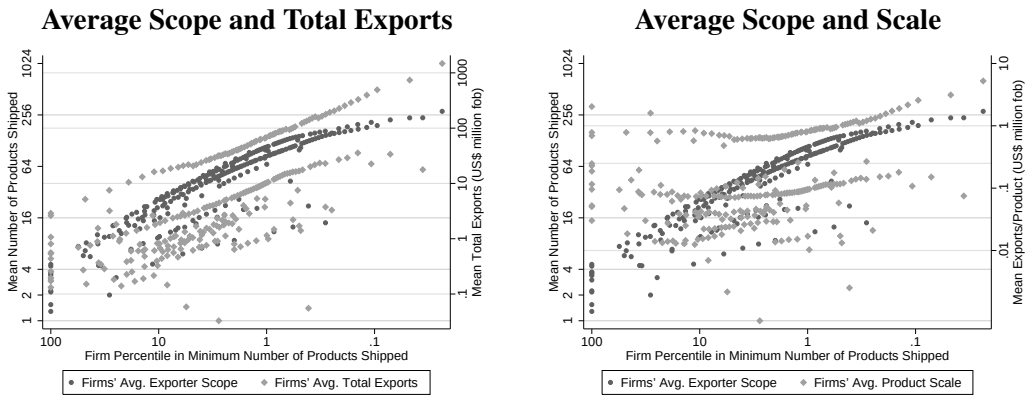
Source: *SECEX* 2000, manufacturing products, all firms.
Note: Mean total exports are the average over firms' total exports at a percentile in a destination. Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 6.9: **Average Scope, Total Exports and the Exporter Scope Distribution**



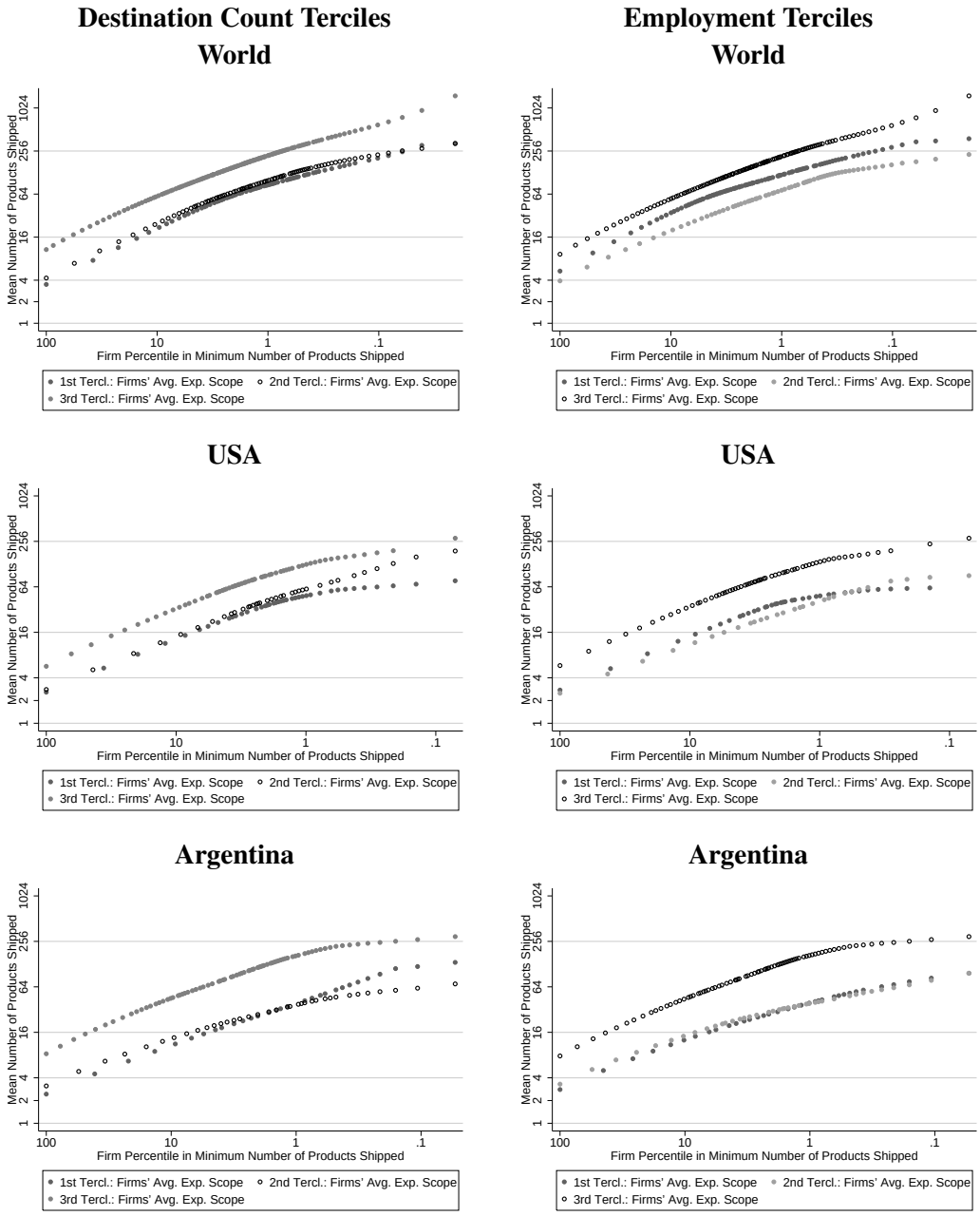
Source: *SECEX* 2000, manufacturing products, all firms.
Note: Average scale is scope-weighted mean exporter scale. Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 6.10: **Average Scope, Average Scale and the Exporter Scope Distribution**



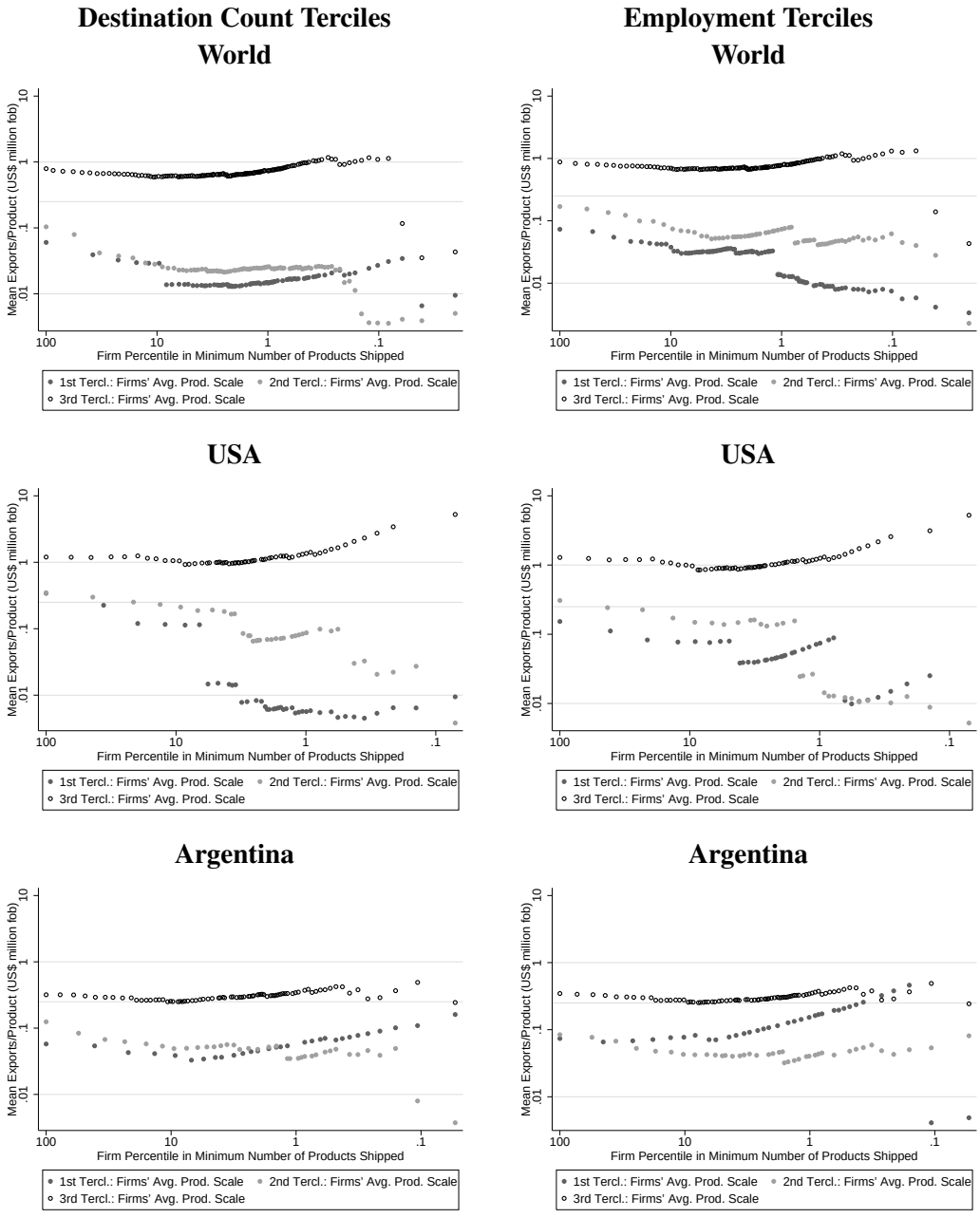
Source: *SECEX* 2000, manufacturing products, all firms.
Note: Selection of the eleven countries at the first and every tenth percentile among Brazil's top 100 export destinations (Cameroon, Jordan, Somalia, Jamaica, Greece, Finland, Egypt, Singapore, Korea Republic, Chile, USA). Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 6.11: **Average Scope, Scale and Exporter Distributions Across Countries**



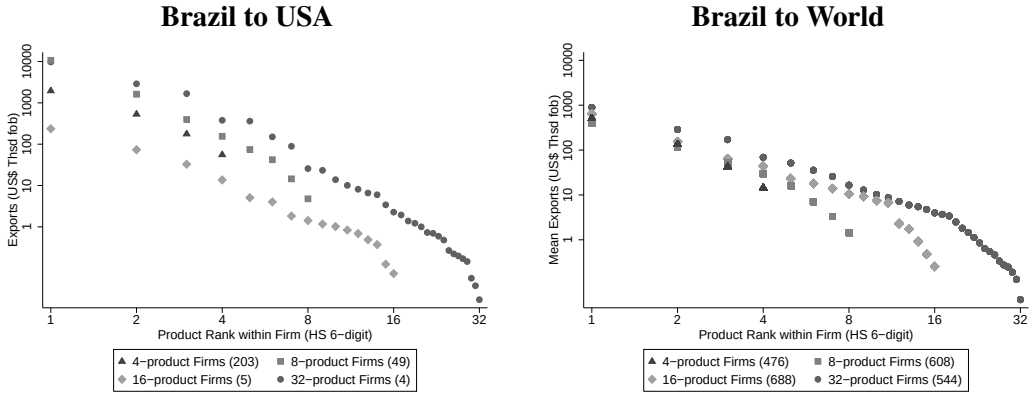
Sources: *RAIS* and *SECEX* 2000, manufacturing products, all firms.
Note: Products at the Harmonized-System 6-digit level. Left panel: firms by tercile of worldwide number of destinations; right panel: firms by tercile of domestic employment. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 6.12: **Average Scope and the Exporter Distribution by Firm Type**



Sources: *RAIS* and *SECEX* 2000, manufacturing products, all firms.
Note: Average scale is scope-weighted mean exporter scale. Products at the Harmonized-System 6-digit level. Left panel: firms by tercile of worldwide number of destinations; right panel: firms by tercile of domestic employment. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 6.13: **Average Scale and the Exporter Distribution by Firm Type**



Source: *SECEX* 2000, manufacturing products, all firms.
Note: Products at the Harmonized-System 6-digit level. World average from pooling destinations to which firms in a given exporter-scope group ship.

Figure 6.14: **Within-firm Sales Distribution**

Table 6.8: Sales of Lowest-ranked Product and Exporter Scope

	Firm-prod. data		Firm-destination-prod. data			
	USA	Argentina	All dest.	All dest.	All dest.	All dest.
estimator	OLS	OLS	OLS	Dest. FE	Firm FE	Firm, Dest. FE
	(1)	(2)	(3)	(4)	(5)	(6)
Log # Products	-2.338	-2.063	-2.336	-2.251	-1.935	-2.028
	(.044)***	(.029)***	(.010)***	(.010)***	(.013)***	(.013)***
Const.	10.709	10.000	10.180	10.046	9.921	9.756
	(.048)***	(.037)***	(.011)***	(.081)***	(.011)***	(.070)***
Obs.	4,232	5,629	56,883	56,883	56,883	56,883
Firm panels					14,678	14,678
R^2	.399	.477	.48	.507	.360	.391

SECEX 2000, manufacturing products, all firms.
Note: Products at the Harmonized-System 6-digit level. Standard errors in parentheses.
Underlying regression equation

$$\ln p_{d\phi G}\, x_{d\phi G} = \beta \ln G_{d\phi} + c_d + \ln \epsilon_{d\phi G}$$

for firm ϕ exporting $G_{d\phi}$ products to destination d. By convention, a firm's G-th product is the one with the smallest sales at a destination.

Table 6.9: Product Rank Correlations between Reference Countries and Rest of World

Reference country	USA		Argentina	
Elsewhere	World	OECD	World	non-OECD
	(1)	(2)	(3)	(4)
Corr. coeff.	.737	.770	.784	.793
Spearman's rank corr. coeff.	.829	.784	.855	.866
Obs.	60,898	15,670	89,653	71,661
# Firm-products	206,530	42,889	199,941	152,124
Share Ref. country & elsewhere	.295	.365	.448	.471
Share Ref. country only	.033	.227	.053	.076
Share Elsewhere only	.672	.408	.498	.453
# Firms	14,678	7,257	14,678	11,746
Share Active in Ref. country	.199	.299	.255	.298

Source: *SECEX* 2000, manufacturing products, all firms.
Note: Products at the Harmonized-System 6-digit level, ranked by decreasing export value within firms and destinations.

Table 6.10: Overlaps between Reference Countries and Rest of World by Product Rank

Prod. rank in Ref. country	Rest of World Overlap (1)	Rest of World Overlap top prd. (2)	Rest of World #Dest./ firm (3)	Rest of World #Firms (4)	OECD, non-OECD Overlap (5)	OECD, non-OECD Overlap top prd. (6)	OECD, non-OECD #Dest./ firm (7)	OECD, non-OECD #Firms (8)
Reference country: USA (overlap with Rest of World or OECD)								
1	.83	.83	8.4	2,760	.85	.85	3.6	1,986
2	.55	.78	12.4	1,218	.60	.81	4.9	858
4	.37	.73	18.3	430	.38	.75	6.8	263
8	.33	.69	23.0	163	.36	.73	7.9	92
16	.27	.60	22.0	79	.28	.68	7.7	39
32	.24	.57	24.4	32	.25	.60	6.6	24
64	.16	.52	34.7	12	.19	.56	7.8	9
128	.20	.74	39.3	6	.18	.63	12.0	5
Reference country: Argentina (overlap with Rest of World or non-OECD)								
1	.78	.78	7.6	3,478	.80	.80	5.9	3,233
2	.54	.77	10.3	1,888	.58	.80	7.9	1,788
4	.39	.68	13.6	896	.43	.71	10.4	851
8	.31	.64	17.8	351	.35	.67	13.7	328
16	.24	.56	21.6	157	.28	.59	16.8	141
32	.23	.52	28.3	55	.25	.57	21.2	54
64	.29	.41	34.8	20	.31	.43	28.3	19
128	.13	.35	40.9	11	.13	.39	31.4	11

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Destination counts in columns 3 and 7 are mean numbers of destinations to which firms with at least as many products as reported for a rank ship. Overlap in columns 1 and 5 is the proportion of destinations that a product of reported rank reaches relative to the overall destination counts (in columns 3 and 7). Overlap in columns 2 and 6 is the proportion of destinations that the top-selling product of firms with at least as many products as reported for a rank reaches relative to the overall destination counts (in columns 3 and 7). Products at the Harmonized-System 6-digit level, ranked by decreasing export value within firm in reference country. Sample restricted to firm-products that ship to reference country and at least one other destination.

Table 6.11: Share of Top-selling Products in Total Exports

Scope		USA			Argentina			World	
in Ref.	Top 1	Top 2	Top 3	Top 1	Top 2	Top 3	Top 1	Top 2	Top 3
country	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	1.000			1.000			1.000		
2	.813	1.000		.806	1.000		.815	1.000	
3	.735	.939	1.000	.729	.935	1.000	.731	.933	1.000
4	.711	.901	.974	.672	.882	.971	.686	.892	.973
8	.673	.862	.930	.605	.801	.892	.596	.805	.899
16	.571	.739	.836	.439	.642	.771	.501	.709	.800
32	.554	.717	.812	.584	.743	.826	.416	.582	.677
64	.207	.380	.464				.490	.746	.820
128	.387	.583	.727				.143	.264	.340
Mean	.658	.778	.826	.598	.750	.820	.531	.672	.738

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level. Share of top-two (top-three) products for firms with exporter scope of at least two (three) products.

Table 6.12: Worldwide Exports by Exporter Scope and Product Rank

	Product rank									
Exporter scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single product	.704 (.155)									
2 products	1.081 (.181)	.141 (.026)								
3 products	1.097 (.162)	.193 (.021)	.052 (.009)							
4 products	2.066 (.367)	.470 (.088)	.144 (.032)	.032 (.008)						
5 products	1.903 (.398)	.422 (.071)	.147 (.024)	.047 (.009)	.016 (.005)					
6 products	3.358 (1.499)	1.027 (.643)	.118 (.019)	.057 (.011)	.018 (.003)	.004 (.0007)				
7 products	2.068 (.323)	.633 (.137)	.204 (.039)	.098 (.024)	.037 (.009)	.018 (.006)	.003 (.0005)			
8 products	1.949 (.434)	.536 (.120)	.225 (.067)	.090 (.033)	.059 (.026)	.043 (.023)	.012 (.005)	.007 (.004)		
9 products	3.477 (.821)	1.165 (.265)	.476 (.112)	.218 (.068)	.101 (.028)	.052 (.016)	.029 (.009)	.015 (.006)	.002 (.0004)	
10 products	3.217 (1.097)	1.029 (.374)	.573 (.234)	.212 (.088)	.127 (.055)	.078 (.033)	.051 (.024)	.028 (.014)	.011 (.005)	.003 (.002)
Avg. varieties[a]	1,303	796	565	425	343	283	241	215	186	154

[a] Average number of exporter products across rows.

Source: *SECEX* 2000, manufacturing products, all firms, except exporters with scope exceeding ten products.
Note: Exporter-product mean values in US$ million fob. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 6.13: Exports to Mercosur by Exporter Scope and Product Rank

	Product rank									
Exporter scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single product	.178 (.028)									
2 products	.302 (.041)	.035 (.004)								
3 products	.497 (.130)	.104 (.029)	.020 (.004)							
4 products	.565 (.104)	.127 (.019)	.042 (.008)	.012 (.004)						
5 products	.724 (.207)	.142 (.026)	.042 (.007)	.017 (.004)	.003 (.0004)					
6 products	.447 (.091)	.135 (.024)	.066 (.017)	.027 (.008)	.009 (.002)	.003 (.0006)				
7 products	.625 (.094)	.178 (.030)	.087 (.019)	.048 (.014)	.022 (.007)	.009 (.003)	.003 (.0006)			
8 products	.728 (.163)	.284 (.107)	.160 (.067)	.068 (.028)	.038 (.015)	.023 (.011)	.008 (.004)	.004 (.002)		
9 products	3.252 (2.001)	.470 (.156)	.187 (.061)	.102 (.035)	.043 (.013)	.028 (.009)	.011 (.003)	.006 (.002)	.003 (.001)	
10 products	.648 (.151)	.228 (.055)	.113 (.039)	.073 (.028)	.033 (.011)	.020 (.008)	.013 (.006)	.008 (.005)	.005 (.003)	.002 (.001)
Avg. varieties[a]	736	458	325	254	210	171	147	130	124	112

[a] Average number of exporter products across rows.

Source: *SECEX* 2000, manufacturing products, all firms, except exporters with scope exceeding ten products. *Note*: Exporter-product mean values in US$ million fob. Mercosur includes Argentina, Paraguay, Uruguay. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 6.14: Exports to OECD by Exporter Scope and Product Rank

	Product rank									
Exporter scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single product	1.125 (.248)									
2 products	1.721 (.352)	.214 (.041)								
3 products	1.714 (.295)	.334 (.045)	.082 (.022)							
4 products	1.868 (.212)	.446 (.061)	.120 (.020)	.040 (.010)						
5 products	2.133 (.375)	.752 (.250)	.230 (.046)	.067 (.012)	.022 (.007)					
6 products	9.004 (3.440)	2.687 (1.783)	.351 (.098)	.157 (.044)	.044 (.011)	.009 (.002)				
7 products	6.205 (1.576)	1.711 (.505)	.769 (.320)	.226 (.078)	.088 (.033)	.031 (.012)	.014 (.008)			
8 products	6.795 (2.459)	1.675 (.453)	.782 (.249)	.304 (.096)	.160 (.064)	.055 (.022)	.023 (.007)	.007 (.002)		
9 products	4.627 (1.290)	1.286 (.317)	.534 (.178)	.148 (.044)	.085 (.024)	.037 (.011)	.014 (.003)	.006 (.002)	.002 (.0007)	
10 products	13.071 (7.778)	1.434 (.587)	.362 (.118)	.146 (.047)	.072 (.026)	.031 (.010)	.016 (.005)	.006 (.002)	.002 (.0008)	.0008 (.0003)
Avg. varieties[a]	682	374	242	166	126	100	86	72	61	57

[a] Average number of exporter products across rows.

Source: *SECEX* 2000, manufacturing products, all firms, except exporters with scope exceeding ten products. *Note*: Exporter-product mean values in US$ million fob. OECD includes all OECD members in 1990. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 6.15: Exports to U.S. by Exporter Scope and Product Rank

	Product rank									
Exporter scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single product	.779 (.115)									
2 products	1.456 (.306)	.220 (.043)								
3 products	1.346 (.196)	.253 (.036)	.076 (.020)							
4 products	1.956 (.303)	.533 (.161)	.177 (.069)	.056 (.021)						
5 products	1.862 (.335)	.372 (.084)	.103 (.020)	.037 (.008)	.013 (.003)					
6 products	9.151 (4.068)	2.960 (1.817)	.542 (.188)	.336 (.128)	.075 (.033)	.005 (.001)				
7 products	4.537 (1.431)	1.296 (.654)	.824 (.478)	.148 (.053)	.077 (.032)	.038 (.019)	.009 (.006)			
8 products	10.692 (3.829)	1.617 (.463)	.395 (.090)	.155 (.041)	.074 (.022)	.042 (.011)	.014 (.004)	.005 (.001)		
9 products	5.970 (1.917)	1.434 (.433)	.678 (.307)	.107 (.032)	.053 (.021)	.028 (.015)	.012 (.004)	.005 (.002)	.001 (.0005)	
10 products	6.766 (2.698)	3.757 (1.984)	1.360 (.822)	.362 (.165)	.245 (.148)	.127 (.090)	.096 (.079)	.022 (.015)	.005 (.003)	.001 (.0007)
Avg. varieties[a]	401	201	124	83	63	48	41	34	27	26

[a] Average number of exporter products across rows.

Source: *SECEX* 2000, manufacturing products, all firms, except exporters with scope exceeding ten products.
Note: Exporter-product mean values in US$ million fob. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 6.16: Exports to Argentina by Exporter Scope and Product Rank

	Product rank									
Exporter scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single product	.219 (.037)									
2 products	.363 (.052)	.041 (.005)								
3 products	.614 (.169)	.141 (.039)	.025 (.005)							
4 products	.938 (.231)	.147 (.024)	.050 (.009)	.016 (.005)						
5 products	.656 (.098)	.199 (.036)	.060 (.011)	.029 (.008)	.007 (.001)					
6 products	.838 (.292)	.264 (.067)	.115 (.034)	.044 (.014)	.018 (.005)	.006 (.001)				
7 products	.991 (.223)	.426 (.155)	.181 (.061)	.068 (.022)	.035 (.012)	.018 (.008)	.004 (.002)			
8 products	.809 (.190)	.341 (.094)	.171 (.058)	.118 (.049)	.052 (.017)	.027 (.010)	.014 (.006)	.007 (.004)		
9 products	4.578 (3.866)	.142 (.032)	.065 (.016)	.033 (.010)	.021 (.006)	.014 (.005)	.007 (.003)	.003 (.001)	.001 (.0004)	
10 products	1.171 (.355)	.410 (.125)	.188 (.081)	.114 (.054)	.052 (.023)	.032 (.017)	.022 (.013)	.014 (.010)	.008 (.006)	.004 (.003)
Avg. exp. varieties[a]	517	310	215	164	128	104	93	75	61	52

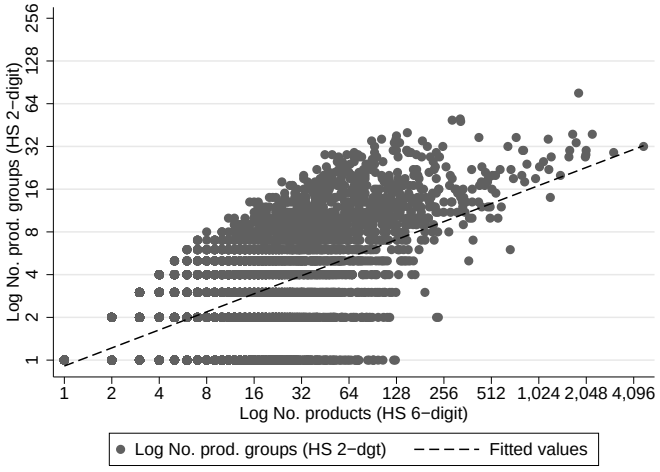
[a] Average number of exporter products across rows.

Source: *SECEX* 2000, manufacturing products, all firms, except exporters with scope exceeding ten products.
Note: Exporter-product mean values in US$ million fob. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 6.17: Concentration of Exports in HS 2-digit Product Groups

	Firms with # Goods, or more						
	2	4	8	16	32	64	128
# of Firms	10,350	6,797	4,184	2,361	1,243	544	225
Share Firms with Single Prod. Grp.	.453	.326	.220	.126	.060	.033	.000
Mean # Product Groups	8.123	9.311	10.857	12.919	15.474	18.972	22.464
Median # Product Groups	5	6	8	10	13	16	19
Share Top ranked Product Group	.886	.858	.830	.798	.765	.748	.740
Share 2nd ranked Product Group	.150	.141	.136	.132	.138	.137	.136
Share 3rd ranked Product Group	.055	.055	.053	.053	.052	.051	.048
Share 4th ranked Product Group	.029	.029	.028	.028	.027	.028	.025
Share 5th ranked Product Group	.018	.018	.017	.018	.016	.016	.014

Source: *SECEX* 2000, manufacturing products, all firms.
Note: Products at the Harmonized-System 6-digit level, product groups at the Harmonized-System 2-digit level. Product-group shares in worldwide sales.



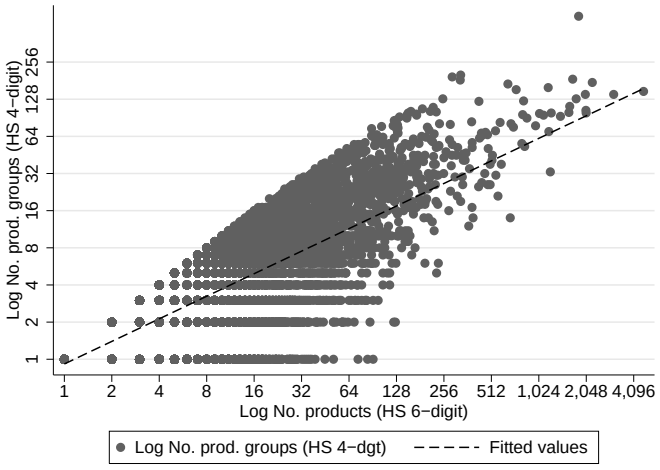
Source: *SECEX* 2000, manufacturing products, all firms.
Note: Products at the Harmonized-System 6-digit level, product groups at the Harmonized-System 2-digit level.

Figure 6.15: **Worldwide 2-digit Product-group Count and Scope Association**

Table 6.18: Concentration of Exports in HS 4-digit Product Groups

	Firms with # Goods, or more						
	2	4	8	16	32	64	128
# of Firms	10,350	6,797	4,184	2,361	1,243	544	225
Share Firms w/ Single Prd. Grp.	.269	.157	.082	.036	.010	.006	.000
Mean # Product Groups	33.396	36.835	41.779	49.173	59.950	79.737	107.336
Median # Product Groups	13	16	20	26	35	52	75
Share Top ranked Product Group	.800	.754	.711	.669	.618	.589	.578
Share 2nd ranked Product Group	.178	.171	.166	.162	.169	.166	.157
Share 3rd ranked Product Group	.073	.072	.071	.070	.073	.075	.074
Share 4th ranked Product Group	.039	.039	.039	.039	.040	.043	.042
Share 5th ranked Product Group	.025	.025	.025	.026	.026	.027	.027

Source: *SECEX* 2000, manufacturing products, all firms.
Note: Products at the Harmonized-System 6-digit level, product groups at the Harmonized-System 4-digit level. Product-group shares in worldwide sales.



Source: *SECEX* 2000, manufacturing products, all firms.
Note: Products at the Harmonized-System 6-digit level, product groups at the Harmonized-System 4-digit level.

Figure 6.16: **Worldwide 4-digit Product-group Count and Scope Association**

Table 6.19: Total Exports Decompositions at the Firm Level

	Log #	Log Exports/product					
OLS	Products	#≥ 1	#≥ 2	#≥ 3	#≥ 10	#≥ 25	#≥ 100
				World			
Log Total exports	.195	.805	.858	.878	.907	.915	.930
	(.003)***	(.003)***	(.004)***	(.004)***	(.007)***	(.009)***	(.019)***
Const.	1.435	-1.435	-1.817	-2.118	-3.149	-3.851	-4.956
	(.011)***	(.011)***	(.011)***	(.012)***	(.016)***	(.022)***	(.060)***
Obs.	14,678	14,678	8,815	6,167	1,801	678	85
R^2	.221	.829	.850	.865	.911	.937	.966
				Mercosur			
Log Total exports	.245	.755	.814	.842	.886	.913	.949
	(.004)***	(.004)***	(.005)***	(.006)***	(.010)***	(.013)***	(.025)***
Const.	1.687	-1.687	-1.996	-2.254	-3.170	-3.855	-4.931
	(.017)***	(.017)***	(.017)***	(.018)***	(.022)***	(.027)***	(.065)***
Obs.	8,293	8,293	5,056	3,533	1,047	377	44
R^2	.266	.775	.813	.834	.886	.925	.972
				OECD			
Log Total exports	.127	.873	.918	.936	.940	.922	.935
	(.004)***	(.004)***	(.005)***	(.006)***	(.010)***	(.014)***	(.025)***
Const.	1.005	-1.005	-1.477	-1.829	-3.053	-3.823	-4.814
	(.013)***	(.013)***	(.014)***	(.017)***	(.030)***	(.039)***	(.095)***
Obs.	7,257	7,257	3,806	2,375	495	164	19
R^2	.148	.891	.903	.912	.943	.963	.988
				non-OECD			
Log Total exports	.227	.773	.823	.849	.894	.897	.927
	(.004)***	(.004)***	(.005)***	(.005)***	(.008)***	(.011)***	(.023)***
Const.	1.576	-1.576	-1.945	-2.228	-3.168	-3.880	-4.993
	(.013)***	(.013)***	(.014)***	(.015)***	(.018)***	(.024)***	(.067)***
Obs.	11,648	11,648	6,949	4,830	1,496	553	70
R^2	.253	.798	.823	.840	.891	.923	.959

Source: *SECEX* 2000, manufacturing products, all firms.

Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Firm ω's total exports $t_d(\omega)$ to destination market d can be decomposed into: $G_d(\omega)\, a_d(\omega)$, where $G_d(\omega)$ is the exporters' average number of products shipped to destination d (the average scope of the exporter at the destination), and $a_d(\omega)$ are the exporter's average sales per product in destination country d (the scale of the exporter's average product). Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 6.20: Exporter Scale and Exporter Scope Correlations

Log Exp./prod.	Firm data[a]	Firm-destination data[b]			Firm-destination-product data[c]		
	Ind. FE	Ind. FE	Ind. & dest. FE	Firm & dest. FE	Firm & dest. FE	Ind., prd. & dest. FE	Firm, prd. & dest. FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
				World			
Log # Products	.293	-.004	.020	.228	1.096	.604	.920
	(.017)***	(.010)	(.010)**	(.012)***	(.011)***	(.012)***	(.012)***
Obs.	13,687	55,037	55,037	56,883	99,637	95,995	99,637
R^2	.022	3.43e-06	.066	.121	.126	.171	.212
Corr. Firm FE, $X'\beta$				-.168	-.192		-.144
				Mercosur			
Log # Products	.172	.074	.079	.175	1.230	.724	1.134
	(.020)***	(.017)***	(.016)***	(.029)***	(.020)***	(.021)***	(.021)***
Obs.	7,928	12,026	12,026	12,449	27,005	25,977	27,005
R^2	.009	.002	.073	.305	.191	.174	.261
Corr. Firm FE, $X'\beta$				-.126	-.217		-.177
				OECD			
Log # Products	.315	.209	.148	.478	1.233	.624	1.027
	(.032)***	(.023)***	(.023)***	(.028)***	(.028)***	(.028)***	(.028)***
Obs.	6,801	17,411	17,411	18,136	26,543	25,454	26,543
R^2	.015	.005	.040	.140	.112	.153	.225
Corr. Firm FE, $X'\beta$				-.232	-.268		-.214
				non-OECD			
Log # Products	.252	-.040	-.023	.153	1.107	.614	.937
	(.018)***	(.011)***	(.011)***	(.013)***	(.013)***	(.013)***	(.013)***
Obs.	10,977	36,858	36,858	37,956	72,070	69,557	72,070
R^2	.019	.0004	.061	.127	.140	.178	.226
Corr. Firm FE, $X'\beta$				-.205	-.231		-.169

[a]Aggregation: worldwide exports by firm.
[b]Aggregation: exports by firm and destination.
[c]Aggregation: exports by firm, destination, product group (Harmonized System 2-digit level).

Source: *SECEX* 2000, manufacturing products, all firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level; product-group fixed effects at the Harmonized-System 2-digit level. Industry fixed effects at the *CNAE* two-digit level. Constant not reported. R^2 is within fit for firm FE regressions. Correlation coefficient between firm fixed effects and all other predictors (including destination and product fixed effects). Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 6.21: Correlates of Firm Effects on Exporter Scale and Exporter Scope

	Firm Eff. on Exporter Scale from Log Exports/prod. regressions			Firm Eff. on Exporter Scope from Log # Products regressions		
	Firm FE only	Firm FE & scope	Firm & dest. FE, & scope	Firm FE only	Firm FE & scale	Firm & dest. FE, & scale
	(1)	(2)	(3)	(4)	(5)	(6)
Log ww. # Products	.145 (.006)***	-.115 (.006)***	-.006 (.007)	.743 (.004)***	.734 (.004)***	.737 (.004)***
Log ww. Exp./prod.	.906 (.004)***	.897 (.004)***	.873 (.005)***	.025 (.002)***	-.029 (.002)***	-.002 (.002)
Log ww. # Dest.	-.947 (.008)***	-.823 (.008)***	-.600 (.010)***	-.354 (.005)***	-.298 (.005)***	-.212 (.005)***
No OECD exp.	.036 (.017)**	.004 (.018)	.562 (.021)***	.092 (.010)***	.090 (.010)***	-.0009 (.011)
Log OECD Exp.[a]	-.004 (.003)	-.003 (.004)	-.008 (.004)*	-.004 (.002)*	-.004 (.002)*	-.007 (.002)***
No Mercosur exp.	-.037 (.017)**	-.043 (.019)**	.133 (.022)***	.017 (.010)	.019 (.011)*	.342 (.011)***
Log Mercosur Exp.[a]	.012 (.004)***	.011 (.004)***	.018 (.005)***	.003 (.002)	.002 (.002)	-.004 (.002)*
Log # dom. Plants	-.013 (.008)	-.017 (.009)*	-.002 (.011)	.010 (.005)**	.011 (.005)**	.015 (.006)***
Log # dom. Loc.	.031 (.009)***	.042 (.009)***	.032 (.011)***	-.031 (.005)***	-.032 (.005)***	-.031 (.006)***
Log Employment	-.007 (.003)**	-.003 (.003)	-.004 (.004)	-.013 (.002)***	-.013 (.002)***	-.016 (.002)***
High sch. educ. wf.	-.074 (.018)***	-.067 (.020)***	-.104 (.024)***	-.021 (.011)*	-.017 (.012)	-.023 (.012)*
College educ. wf.	.050 (.026)*	.120 (.029)***	-.023 (.034)	-.200 (.016)***	-.203 (.016)***	-.212 (.017)***
Obs.	13,687	13,687	13,687	13,687	13,687	13,687
R^2	.924	.915	.878	.840	.838	.813

[a]Log of nonzero exports, times indicator of nonzero exports (one less *no*-exports indicator).

Sources: *RAIS* and *SECEX* 2000, manufacturing products, all firms.
Note: Aggregation to exports by firm and destination. Regressions of firm fixed effects on firm-level predictors, where firm fixed effects on exporter scale in column 1 are from a firm fixed effects regression with no additional controls, in column 2 from a firm fixed effects regression controlling for scope (log # products) and in column 3 from a firm fixed effects regression controlling for scope and destination fixed effects (see column 3 in Table 6.20). Firm fixed effects on exporter scope in column 4 are from a firm fixed effects regression with no additional controls, in column 5 from a firm fixed effects regression controlling for scale (log exports/product) and in column 6 from a firm fixed effects regression controlling for scale and destination fixed effects. Worldwide number of products at the Harmonized-System 6-digit level. Domestic Brazilian locations counted at the municipality level. Workforce characteristics in shares of total employment. White-collar, blue-collar employment (insignificant at ten-percent level) and constant not reported. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 6.22: Correlates of Destination Effects on Exporter Scale and Exporter Scope

	Destination Eff. on Exporter Scale from Log Exports/prod. regressions			Destination Eff. on Exp. Scope from Log # Products regressions		
	Dest. FE only	Dest. FE & scope	Firm & dest. FE, & scope	Dest. FE only	Dest. FE & scale	Firm & dest. FE, & scale
	(1)	(2)	(3)	(4)	(5)	(6)
Mean Log Market size	.116 (.050)**	.114 (.049)**	.045 (.038)	-.003 (.012)	-.0001 (.011)	.010 (.010)
Log Population	.131 (.072)*	.132 (.072)*	.252 (.055)***	.001 (.018)	.004 (.018)	.018 (.015)
Log GDP per cap.	.053 (.074)	.052 (.073)	.215 (.056)***	-.027 (.017)	-.026 (.016)	.023 (.014)*
Log Distance	.068 (.198)	.039 (.196)	-.314 (.151)**	-.242 (.051)***	-.239 (.050)***	-.200 (.042)***
Common borders	-.336 (.392)	-.335 (.388)	-.044 (.299)	.031 (.097)	.021 (.094)	.263 (.079)***
Common language	-.416 (.372)	-.418 (.367)	.315 (.283)	.007 (.096)	-.006 (.093)	.150 (.079)*
Const.	-9.043 (1.937)***	-8.683 (1.915)***	-8.179 (1.477)***	2.952 (.488)***	2.734 (.474)***	1.592 (.399)***
Obs.	101	101	101	107	107	107
R^2	.398	.395	.539	.348	.340	.519

Source: *SECEX* 2000, manufacturing products, all firms.
Note: Aggregation to exports by firm and destination. Regressions of destination fixed effects on destination-level predictors, where destination fixed effects on exporter scale in column 1 are from a destination fixed effects regression with no additional controls, in column 2 from a destination fixed effects regression controlling for scope (log # products, see column 2 in Table 6.20) and in column 3 from a destination fixed effects regression controlling for scope and firm fixed effects (see column 3 in Table 6.20). Destination fixed effects on exporter scope in column 4 are from a destination fixed effects regression with no additional controls, in column 5 from a destination fixed effects regression controlling for scale (log exports/product) and in column 6 from a destination fixed effects regression controlling for scale and firm fixed effects. Mean log market size is average sectoral absorption over *ISIC rev. 2* industries at destination level. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 6.23: Correlates of Product Effects on Exporter Scale and Exporter Scope

	Product Eff. on Exporter Scale from Log Exports/prod. regressions			Product Eff. on Exporter Scope from Log # Products regressions		
	Prod. FE only	Prod. FE & scope	Firm, dst. & prd. FE, & scope	Prod. FE only	Prod. FE & scale	Firm, dst. & prd. FE, & scale
	(1)	(2)	(3)	(4)	(5)	(6)
Comparative adv.	.393	.396	.202	-.009	-.019	.013
	(.133)***	(.133)***	(.103)**	(.016)	(.017)	(.022)
Reference priced	-1.016	-.993	-1.737	-.062	-.037	.110
	(.987)	(.986)	(.762)**	(.122)	(.123)	(.162)
Differentiated	-1.432	-1.439	-1.158	.018	.053	.199
	(.915)	(.914)	(.706)	(.113)	(.114)	(.150)
Log ww. #Dest.	-1.803	-1.876	-1.366	.196	.240	.182
	(.942)*	(.941)**	(.727)*	(.117)*	(.118)**	(.155)
No OECD imp.	-25.978	-25.628	-5.335	-.940	-.307	-1.775
	(12.806)**	(12.786)**	(9.880)	(1.586)	(1.598)	(2.104)
Log OECD imp.[a]	.391	.374	.472	.044	.035	.033
	(.273)	(.272)	(.210)**	(.034)	(.034)	(.045)
No Mercos. imp.	-2.388	-2.375	-.990	-.036	.022	-.273
	(2.359)	(2.355)	(1.820)	(.292)	(.294)	(.388)
Log Mercs. Imp.[a]	.049	.048	-.061	.003	.002	.034
	(.241)	(.240)	(.186)	(.030)	(.030)	(.040)
Const.	4.271	4.501	1.311	-.616	-.720	.005
	(5.035)	(5.027)	(3.884)	(.623)	(.628)	(.827)
Obs.	92	92	92	92	92	92
R^2	.266	.277	.167	.348	.382	.320

[a]Log of nonzero imports, times indicator of nonzero imports (one less *no*-imports indicator).

Source: *SECEX* 2000, manufacturing products, all firms.
Note: Aggregation to exports by firm, destination, product group (Harmonized System 2-digit level). Regressions of product fixed effects at the Harmonized-System 2-digit level on product-level predictors, where product fixed effects on exporter scale in column 1 are from a product fixed effects regression with no additional controls, in column 2 from a product fixed effects regression controlling for scope (log # products) and in column 3 from a product fixed effects regression controlling for scope as well as destination and firm fixed effects (see column 6 in Table 5.22). Product fixed effects on exporter scope in column 4 are from a product fixed effects regression with no additional controls, in column 5 from a product effects regression controlling for scale (log exports/product) and in column 6 from a product fixed effects regression controlling for scale as well as destination and firm fixed effects. Balassa (1965) comparative-advantage for Brazil from UN Comtrade trade data for 2000 at the *ISIC Rev. 2* level: product h's comparative advantage is $BADV_h \equiv [T_h^{\text{Brazil}} / \sum_k T_k^{\text{Brazil}}] / [T_h^{\text{World}} / \sum_k T_k^{\text{World}}]$, where T_h are worldwide exports. Goods classification by degree of differentiation from Rauch (1999), conservative definition, revision 2 (2007): share of Harmonized-System 6-digit goods at the Harmonized-System 2-digit level; omitted benchmark category is homogeneous goods (traded on an organized exchange). Worldwide product-group imports exclude Brazil as importer and exporter. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 6.24: Conditional Exporter Scale and Exporter Scope Correlations

Log Exp./prod.	World			Mercosur	OECD	non-OECD
	(1)	(2)	(3)	(4)	(5)	(6)
Log # Products	.293 (.091)***	.633 (.059)***	.320 (.070)***	-.146 (.178)	.349 (.171)**	.024 (.079)
Squared Log # Products	.384 (.145)***	-.240 (.067)***	-.243 (.068)***	.060 (.180)	.154 (.196)	-.148 (.072)**
Cubic Log # Products	-.340 (.077)***	.018 (.024)	.014 (.024)	-.058 (.066)	-.169 (.076)**	.020 (.025)
Quartic Log # Products	.082 (.016)***	.003 (.003)	.003 (.003)	.010 (.007)	.023 (.009)***	.0009 (.003)
Pentic Log # Products	-.006 (.001)***					
Log # Prd.×Log ww. # Dst.			.072 (.017)***	.179 (.047)***	.018 (.043)	.079 (.020)***
Log # Prd.×Log Empl.			.030 (.007)***	-.017 (.018)	.067 (.016)***	.020 (.007)***
Log # Prd.×Coll. ed. wf.			-.123 (.063)*	.271 (.161)*	-.279 (.154)*	-.002 (.072)
Obs.	56,883	56,883	55,037	12,026	17,411	37,626
R^2	.125	.124	.128	.315	.151	.132
Corr. Firm FE, $X'\beta$	-.161	-.161	-.096	-.096	-.157	-.137
F statistic: Zero Firm FE	3.835***	3.833***	3.665***	2.918***	2.985***	3.609***

Sources: *RAIS* and *SECEX* 2000, manufacturing products, all firms.
Note: Aggregation to exports by firm and destination. Regressions controlling for firm and destination fixed effects (expanding regression (4) in Table 6.20). Worldwide number of products at the Harmonized-System 6-digit level. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 6.25: Individual Product Sales Regressions

Log Sales	OLS	Dest. FE	Dest. & Ind. FE	Dest. & Firm FE
	(1)	(2)	(3)	(4)
Log # Products	1.142 (.006)***	1.169 (.006)***	1.313 (.006)***	1.502 (.007)***
Log Product Rank	-2.321 (.006)***	-2.349 (.006)***	-2.428 (.006)***	-2.477 (.007)***
Obs.	215,346	215,346	207,919	215,346
Panels			465	14,678
R^2 (R^2 within)[a]	.465	.507	.493	.583

[a] R^2 is within fit for industry and firm FE regressions in columns 3 and 4.

Sources: *SECEX* 2000, manufacturing products, all firms.
Note: Individual export sales by product, firm and destination. Products at the Harmonized-System 6-digit level. Industry fixed effects at the *CNAE* two-digit level. Constant and destination fixed effects not reported. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

7 All Products and Firms

Table 7.1: Sample Characteristics by Destination

	World	Mercosur	OECD	non-OECD	USA	Argentina
	(1)	(2)	(3)	(4)	(5)	(6)
# of Observations (MNH)	224,952	66,133	54,069	170,883	16,510	26,865
# of Destinations (N)	173	3	23	150	1	1
Regional share in Tot. exports	1.000	.143	.599	.401	.243	.115
		Firms				
# of Firms (M)	15,907	8,691	8,204	12,426	4,702	5,890
Median Total exports (T_{md})	.073	.045	.098	.056	.088	.056
Median Exporter scope (G_{md})	2	2	2	2	1	2
Median Avg. prod scale (a_{md})	.029	.018	.052	.023	.049	.026
Mean Total exports ($\bar{t}_d$)	3.402	.890	3.949	1.748	2.802	1.058
Mean Exporter scope ($\bar{G}_d$)	5.936	5.850	3.774	6.161	3.511	4.561
Mean Avg. Exp. scale (a_d)	.573	.152	1.046	.284	.798	.232
Shares in Total exports						
Single-prod. firms	.112	.093	.163	.082	.157	.107
Multi-prod. firms' top product	.586	.542	.605	.566	.635	.543
Multi-prod. firms' other prod.	.302	.365	.232	.352	.208	.351
		Varieties				
# of Varieties (MH)	94,419	50,842	30,965	76,551	16,510	26,865
Median Variety sales	.004	.003	.007	.003	.007	.006
Mean Variety sales	.573	.152	1.046	.284	.798	.232

Source: *SECEX* 2000, all products and firms.
Note: Aggregate regions (world, Mercosur, OECD, non-OECD) treated as single destinations, collapsing product shipments to different countries into single product shipment. The worldwide average number of products across destination countries is 3.580, for instance, but 5.936 for the world as single destination. Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Exports in US$ million fob. Mean average exporter scale (a_d) is the scope-weighted arithmetic mean of exporters' average exporter scales.

Table 7.2: Top 25 Export Products

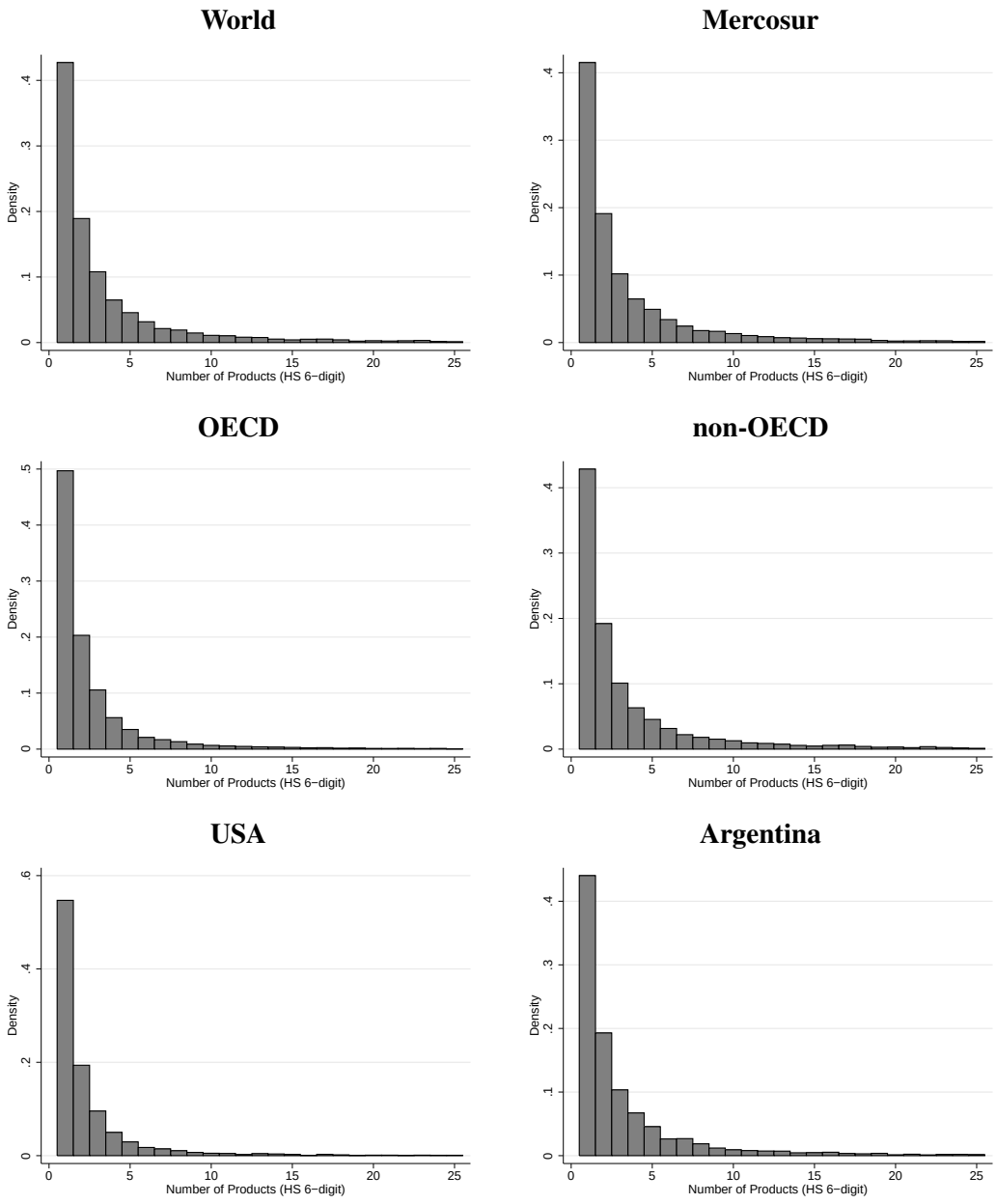
Rank	Product	Exports (US$ mill.)	Share in tot. exports (%)	# of Dest.
1.	Airplane & a/c unladen wght > 2t, nov 15t	2,785	5.1	18
2.	Soybeans, whether or not broken	2,187	4.0	36
3.	Iron ore concen nesoi & non-agglomerated iron ores	1,853	3.4	38
4.	Soybean oilcake & oth solid residue, wh/not ground	1,651	3.0	39
5.	Coffee, not roasted, not decaffeinated	1,558	2.9	63
6.	Chem woodpulp, soda etc, n dis s bl & bl nonconif	1,526	2.8	29
7.	Pass veh spk-ig int com rcpr p eng >1500 nov 3m cc	1,198	2.2	34
8.	Agglomerated iron ores	1,195	2.2	23
9.	Footwear, outer sole rub etc & leather upper nesoi	1,020	1.9	94
10.	Orange juice, frozen, sweetened or not	1,019	1.9	47
11.	Unwrought aluminum, not alloyed	946	1.7	15
12.	Transmission appr incorporating reception apparats	940	1.7	32
13.	Smfd irn/nal stl lt .25 pct crb rect cs wid 2x thk	808	1.5	18
14.	Cane sugar, raw, solid form, w/o added flav/color	761	1.4	33
15.	Tobacco, partly or wholly stemmed/stripped	725	1.3	88
16.	Oil (not crude) from petrol & bitum mineral etc.	702	1.3	52
17.	Airplane & ot a/c, unladen weight > 15t	636	1.2	3
18.	Nonalloy pig iron 0.5 prcnt or less phosphorus	446	0.8	18
19.	Chicken cuts and edible offal (inc livers), frozen	445	0.8	62
20.	Parts and accessories of motor vehicles, nesoi	445	0.8	108
21.	Cane/beet sug chem pure sucrose refind nesoi	438	0.8	57
22.	Compressors used in refrigerating equipment	416	0.8	64
23.	Spark-ignition int combustion piston eng pts nesoi	396	0.7	102
24.	Gold, nonmonetary, semimanufactured forms nesoi	375	0.7	4
25.	Spark-ignition reciprocating int com pistn eng pts	361	0.7	95

Source: *SECEX* 2000, all products and firms.
Note: Export values in US$ million fob. Products at the Harmonized-System 6-digit level.

Table 7.3: Top 25 Export Destinations

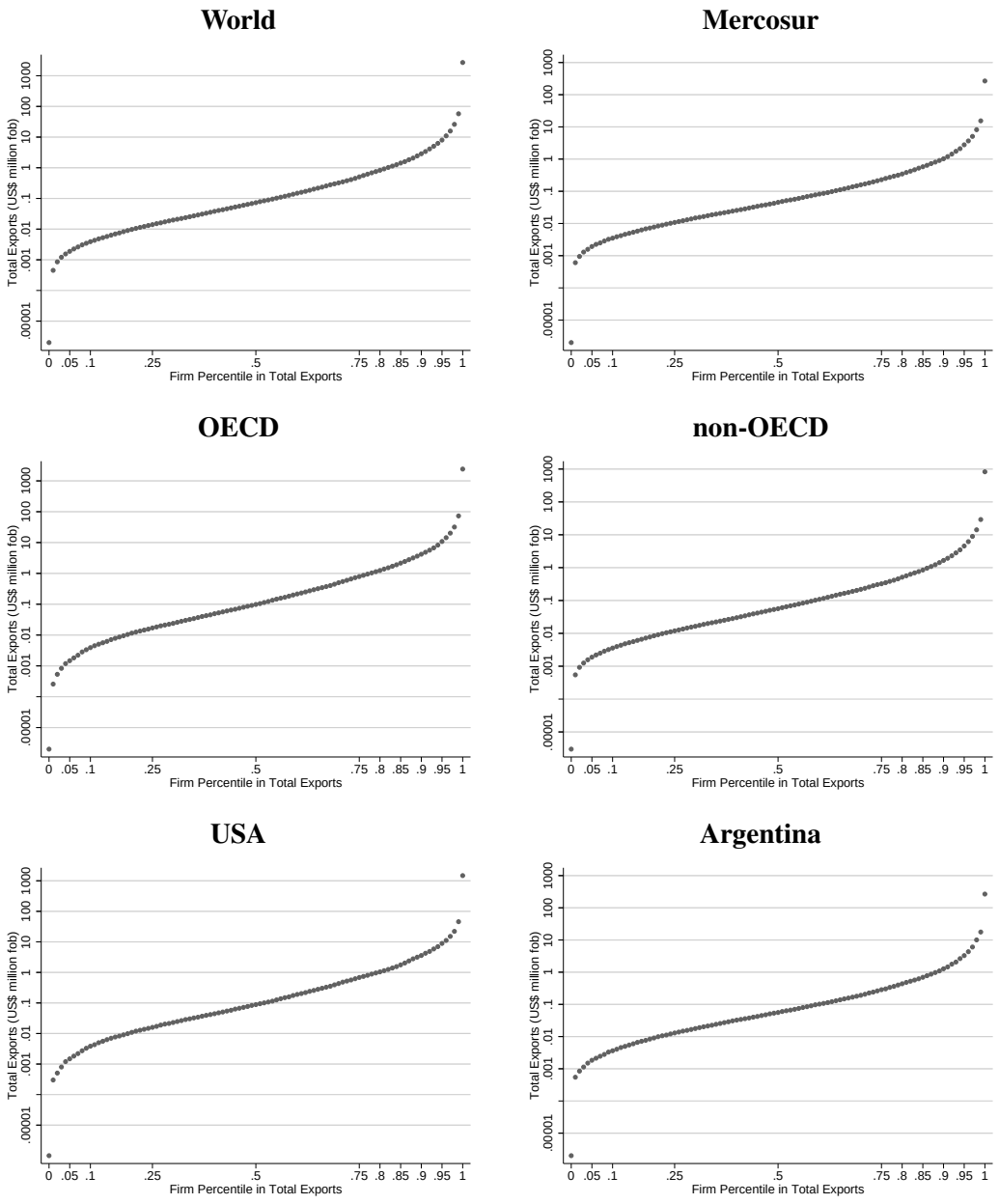
Rank	Destination	Exports (US$ mill.)	Share in tot. exports (%)	# of Products
1.	USA	13,173	24.3	2,661
2.	Argentina	6,232	11.5	3,121
3.	Netherlands	2,792	5.2	798
4.	Germany	2,523	4.7	1,441
5.	Japan	2,472	4.6	1,027
6.	Italy	2,145	4.0	1,152
7.	Belgium-Luxembourg	1,867	3.4	696
8.	France, Monaco	1,731	3.2	1,088
9.	Mexico	1,711	3.2	1,563
10.	UK	1,498	2.8	1,020
11.	Chile	1,246	2.3	2,325
12.	China	1,085	2.0	683
13.	Spain	1,008	1.9	1,001
14.	Paraguay	832	1.5	2,616
15.	Venezuela	749	1.4	1,756
16.	Uruguay	668	1.2	2,669
17.	Korea Rep.	581	1.1	340
18.	Canada	565	1.0	854
19.	Colombia	514	1.0	1,466
20.	Switzerland, Liechtenstein	510	0.9	525
21.	China Hong Kong SAR	475	0.9	487
22.	Russian Federation	423	0.8	251
23.	Saudi Arabia	413	0.8	425
24.	Portugal	379	0.7	1,104
25.	Bolivia	364	0.7	2,336

Source: *SECEX* 2000, all products and firms.
Note: Export values in US$ million fob. Products at the Harmonized-System 6-digit level.



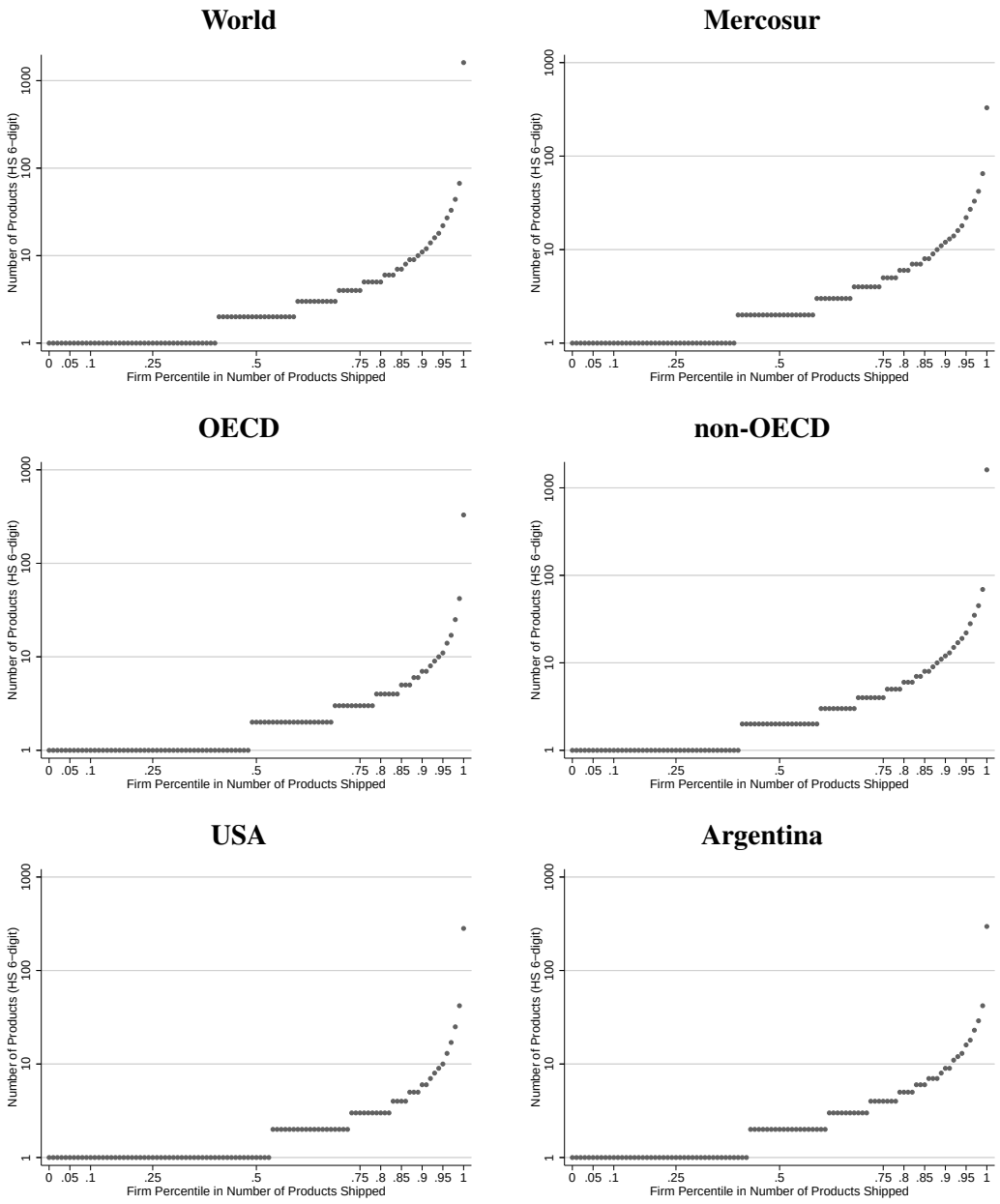
Source: *SECEX* 2000, all products and firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.

Figure 7.1: **Exporter Scope Distribution for Up to 25 Products**



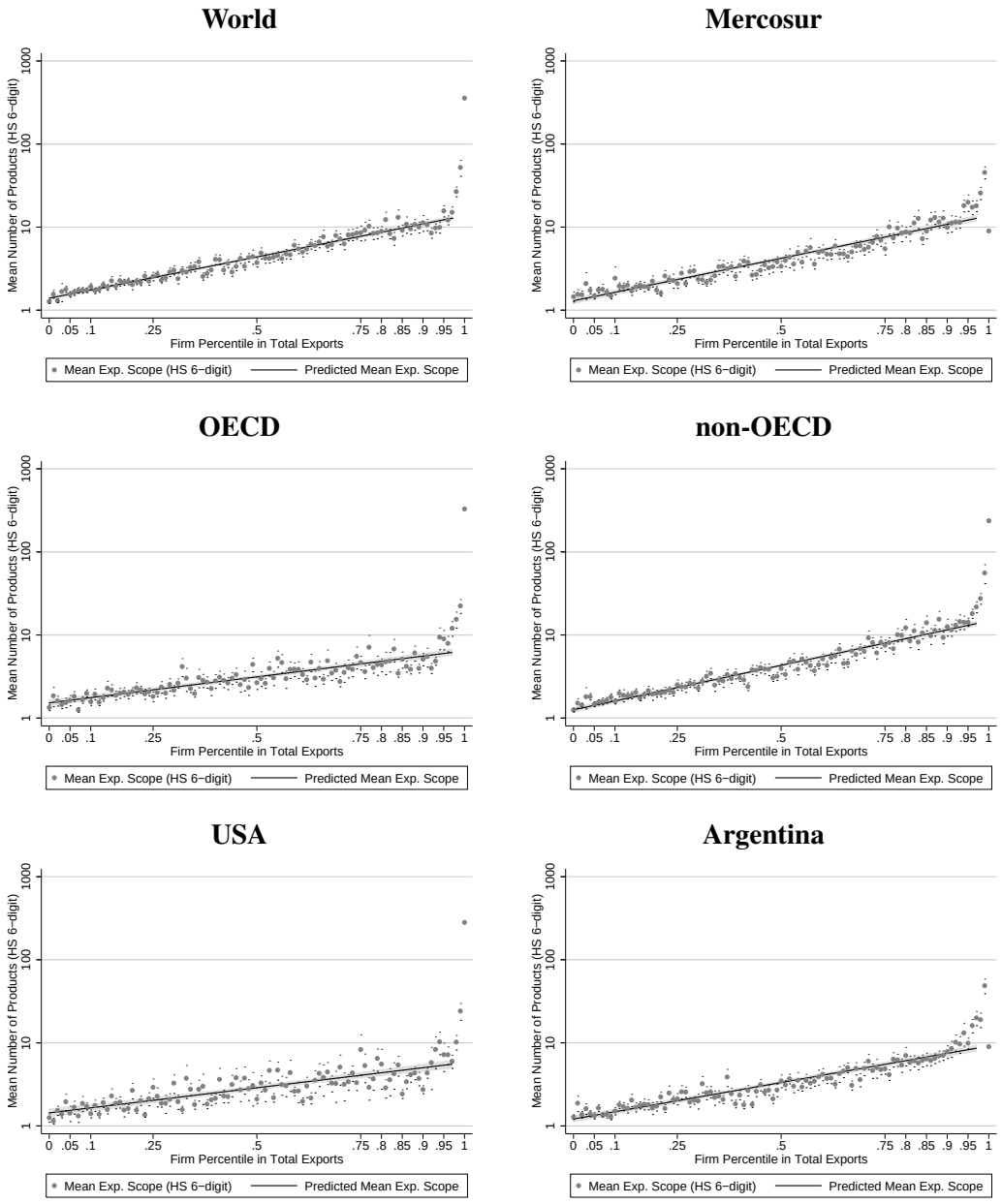
Source: *SECEX* 2000, all products and firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.

Figure 7.2: **Total Sales Distribution**



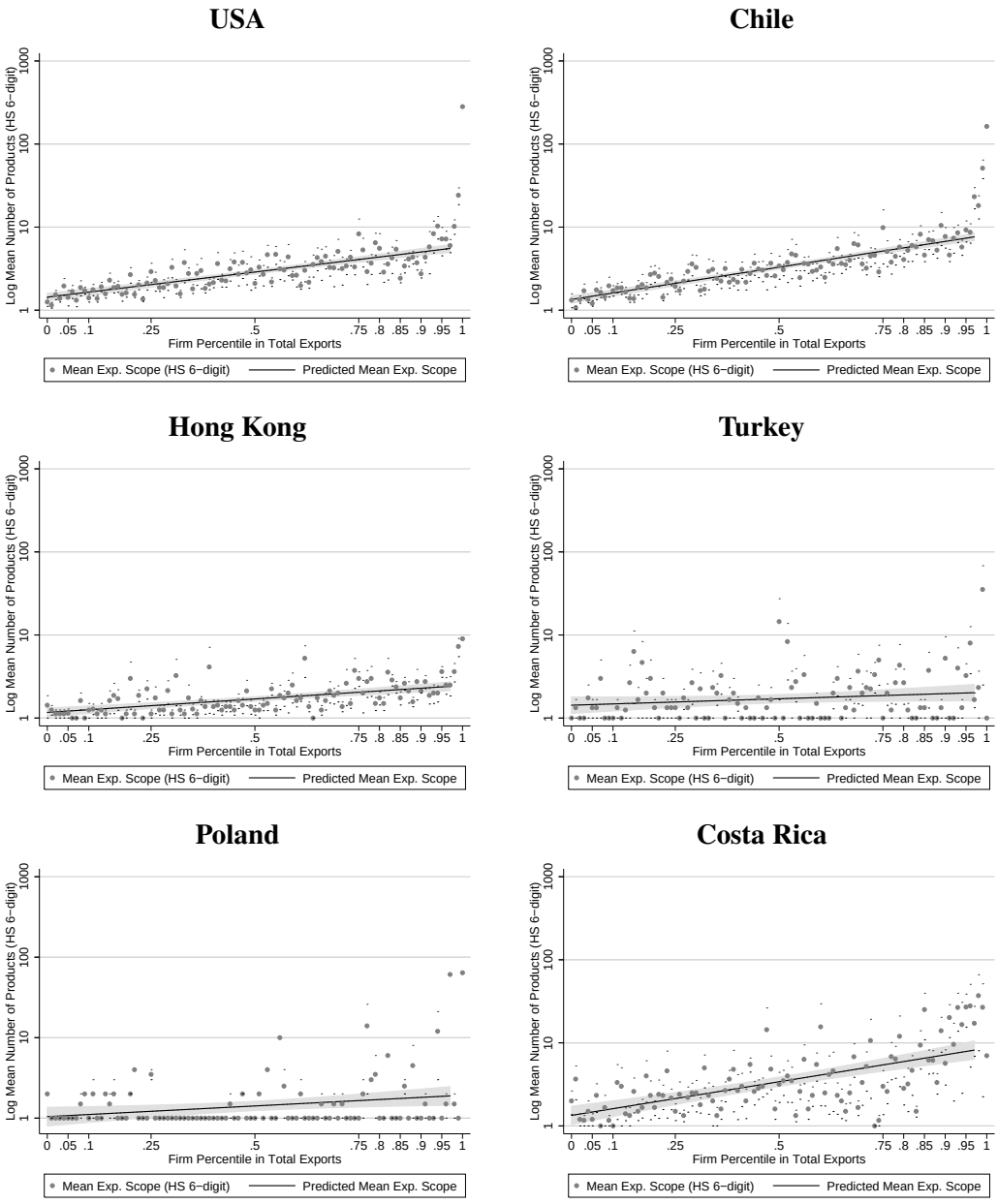
Source: *SECEX* 2000, all products and firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.

Figure 7.3: **Exporter Scope Distribution**



Source: *SECEX* 2000, all products and firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Large circles depict the mean number of products by percentile, small dots above and below indicate a one-standard-error deviation. Fitted line from an ordinary least squares regression of the mean number of products on the percentile, up to the 98th percentile, with a 95-percent confidence band around.

Figure 7.4: **Exporter Scope and Total Exports Distribution**



Source: *SECEX* 2000, all products and firms.
Note: Selection of the six countries at the fiftieth through hundredth percentiles among Brazil's top 100 export destinations (Costa Rica, Poland, Turkey, Hong Kong, Chile, USA). Products at the Harmonized-System 6-digit level. Large circles depict the mean number of products by percentile, small dots above and below indicate a one-standard-error deviation. Fitted line from an ordinary least squares regression of the mean number of products on the percentile, up to the 98th percentile, with a 95-percent confidence band around.

Figure 7.5: **Exporter Scope and Total Exports Distribution by Country**

Table 7.4: Correlations between Local and Worldwide Total Exports Percentiles

Local and World pctl.	Corr. coeff.	Spearman's rank corr. coeff.	Local on world regression coeff.		Local, firm FE corr. coeff. Dest. & firm FE
			OLS	Dest. FE	
	(1)	(2)	(3)	(4)	(5)
Coefficient	.568	.573	.679	.786	.695
p value	0	0	0	0	0
Obs.	98,538	98,538	98,538	98,538	98,538
# Dest.				173	173
Panels					15,907

Source: *SECEX* 2000, all products and firms.
Note: Aggregation to exports by firm and destination. Percentiles in discrete numbers. Unconditional and Spearman's rank correlation coefficients in columns 1 and 2. Regression coefficients of local total-exports percentiles on a firm's worldwide total-exports percentile in columns 3 (OLS with constant) and 4 (destination FE regression). In column 5, correlation coefficient between local total-exports percentiles and the firm-fixed effect from a local total-exports percentile regression on firm and destination fixed effects.

Table 7.5: Exporter Scope and Local Total-Exports Percentile Correlations

Log # Products	OLS	Firm FE	Dest. FE	Dest. & Firm FE
	(1)	(2)	(3)	(4)
Log Local total-exp. percentile	.511 (.005)***	.472 (.003)***	.472 (.004)***	.396 (.003)***
Constant	1.650 (.006)***	1.617 (.003)***	1.589 (.014)***	1.677 (.009)***
Obs.	94,093	94,093	94,093	94,093
Panels		15,869		15,869
R^2 (R^2 within)[a]	.117	.212	.212	.303

[a] R^2 is within fit for firm FE regressions in columns 2 and 4.

Source: *SECEX* 2000, all products and firms.
Note: Aggregation to exports by firm and destination. Products at the Harmonized-System 6-digit level. R^2 is within fit for firm FE regressions. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 7.6: Correlates of Destination Effects on Exporter Scope

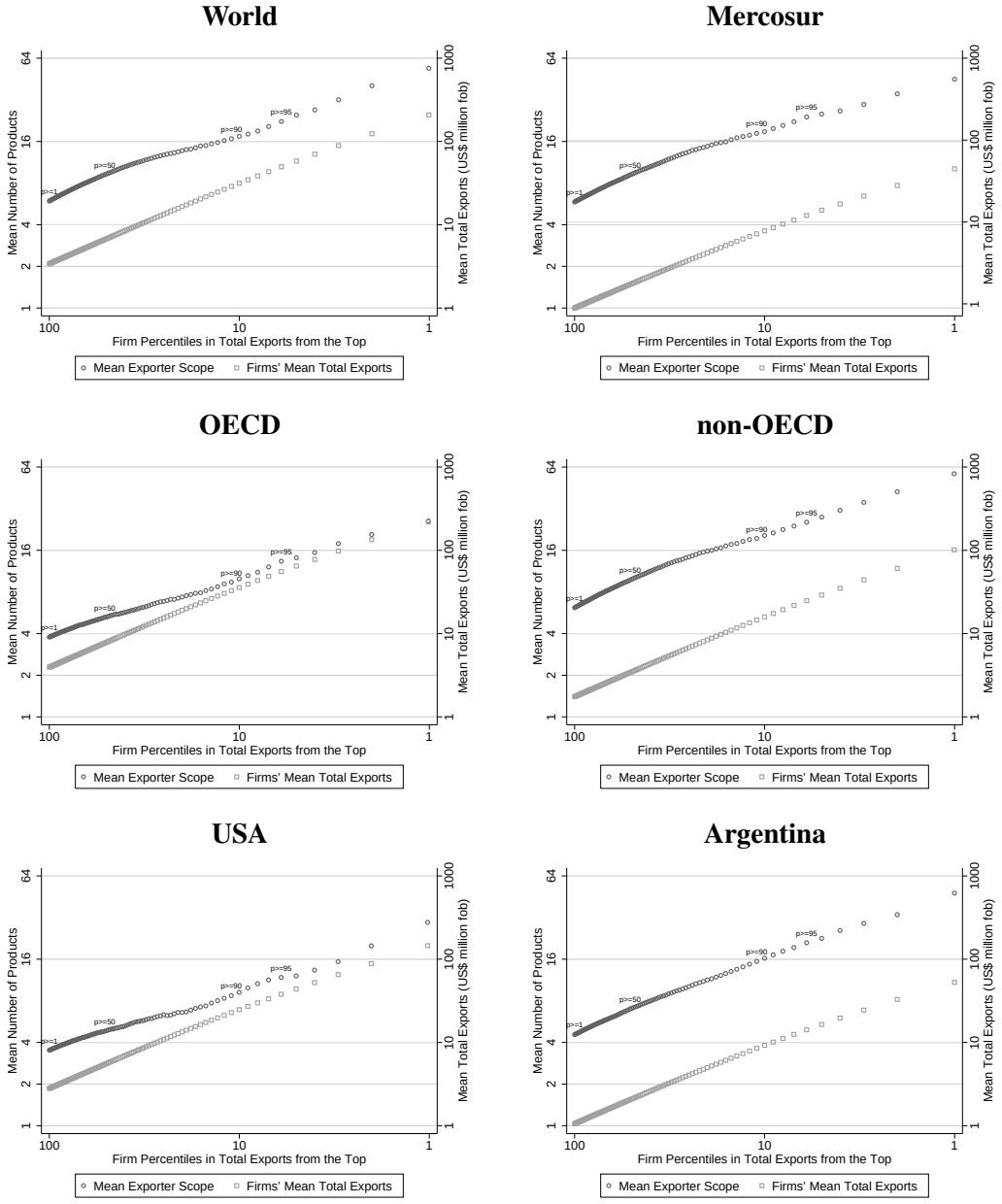
Log # Products	Unconditional Scope			Scope Dest. FE (Table 7.5, col. 3)		
	(1)	(2)	(3)	(4)	(5)	(6)
Mean Log Market size			-.038 (.014)***			-.116 (.033)***
Log Population		.033 (.023)	.053 (.026)**		.072 (.023)***	.162 (.048)***
Log GDP per cap.		-.084 (.025)***	-.056 (.027)**		-.004 (.025)	.078 (.044)*
Log GDP	-.014 (.023)			.039 (.020)**		
Log Distance	-.399 (.057)***	-.415 (.054)***	-.349 (.056)***	-.447 (.108)***	-.453 (.106)***	-.568 (.118)***
Common borders	.015 (.092)	-.032 (.082)	-.065 (.074)	.131 (.217)	.132 (.213)	-.205 (.220)
Common language	.132 (.221)	.140 (.172)	.079 (.162)	.231 (.248)	.244 (.243)	.021 (.217)
Observations	91,775	91,775	78,020	151	151	93
R^2	.075	.081	.068	.196	.233	.400

Source: *SECEX* 2000, all products and firms.
Note: Aggregation to exports and exporter scope by firm and destination. Regressions of exporter scope (columns 1 through 3) and of destination fixed effects (columns 4 through 6) on destination-level predictors, where latter destination fixed effects in exporter scope are from a destination fixed effects regression controlling for the firm's local total-exports percentile (column 3 in Table 7.5). Mean log market size is average sectoral absorption over *ISIC rev. 2* industries at destination level. Standard errors in parentheses: * significance at ten, ** five, *** one percent. Clustered standard errors at destination level in columns 1 through 3.

Table 7.7: Exporter Scope Distribution by Destination

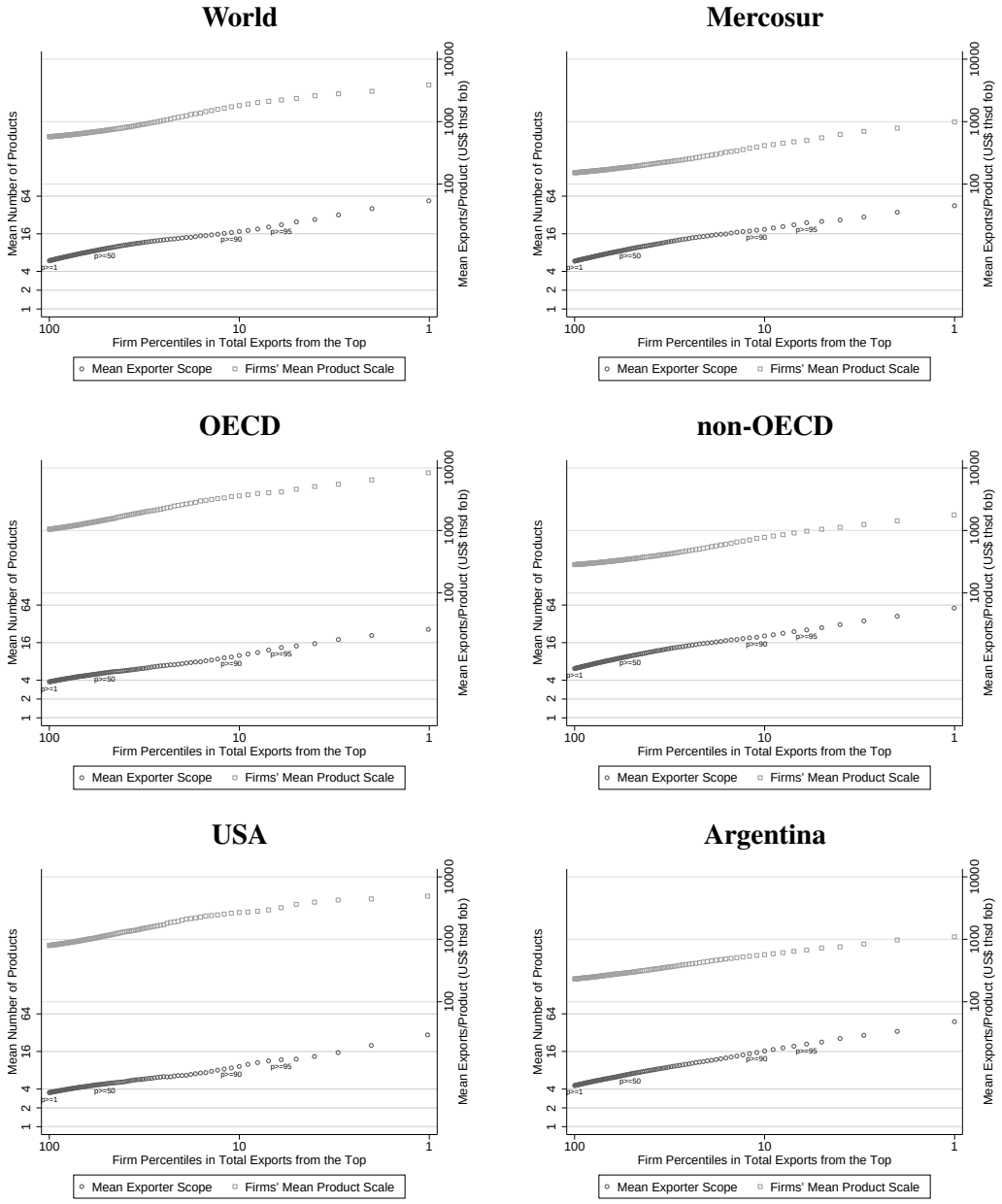
	World	Mercosur	OECD	non-OECD	USA	Argentina
Percentile	(1)	(2)	(3)	(4)	(5)	(6)
00	1	1	1	1	1	1
05	1	1	1	1	1	1
10	1	1	1	1	1	1
25	1	1	1	1	1	1
50	2	2	2	2	1	2
75	4	5	3	4	3	4
80	5	6	4	6	3	5
85	7	8	5	8	4	6
90	11	12	7	12	6	9
95	22	22	11	22	10	16
99	67	65	42	69	42	42
100	1608	329	329	1608	282	296

Source: *SECEX* 2000, all products and firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.



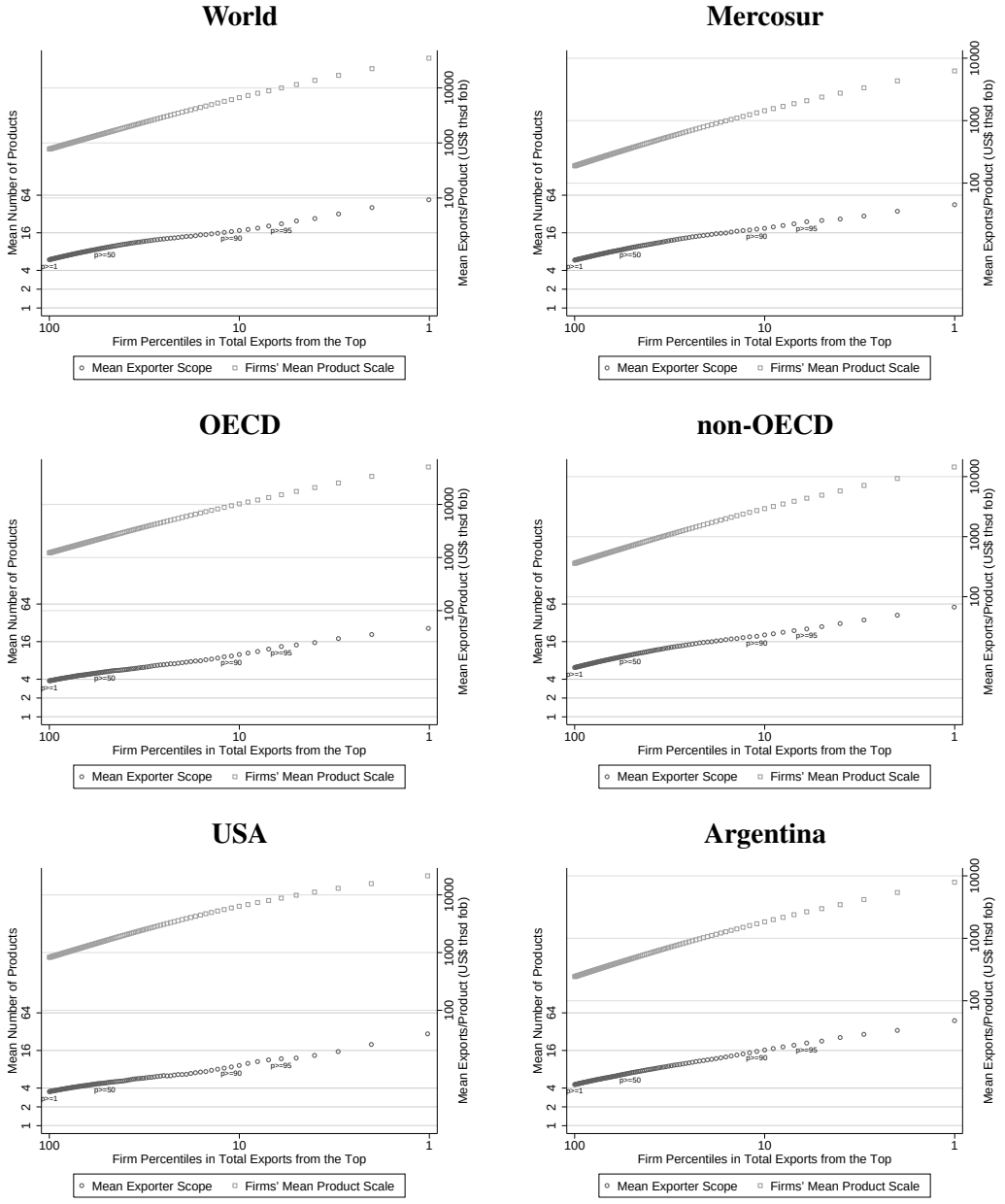
Source: *SECEX* 2000, all products and firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 7.6: **Average Scope, Total Exports and the Total Exports Distribution**



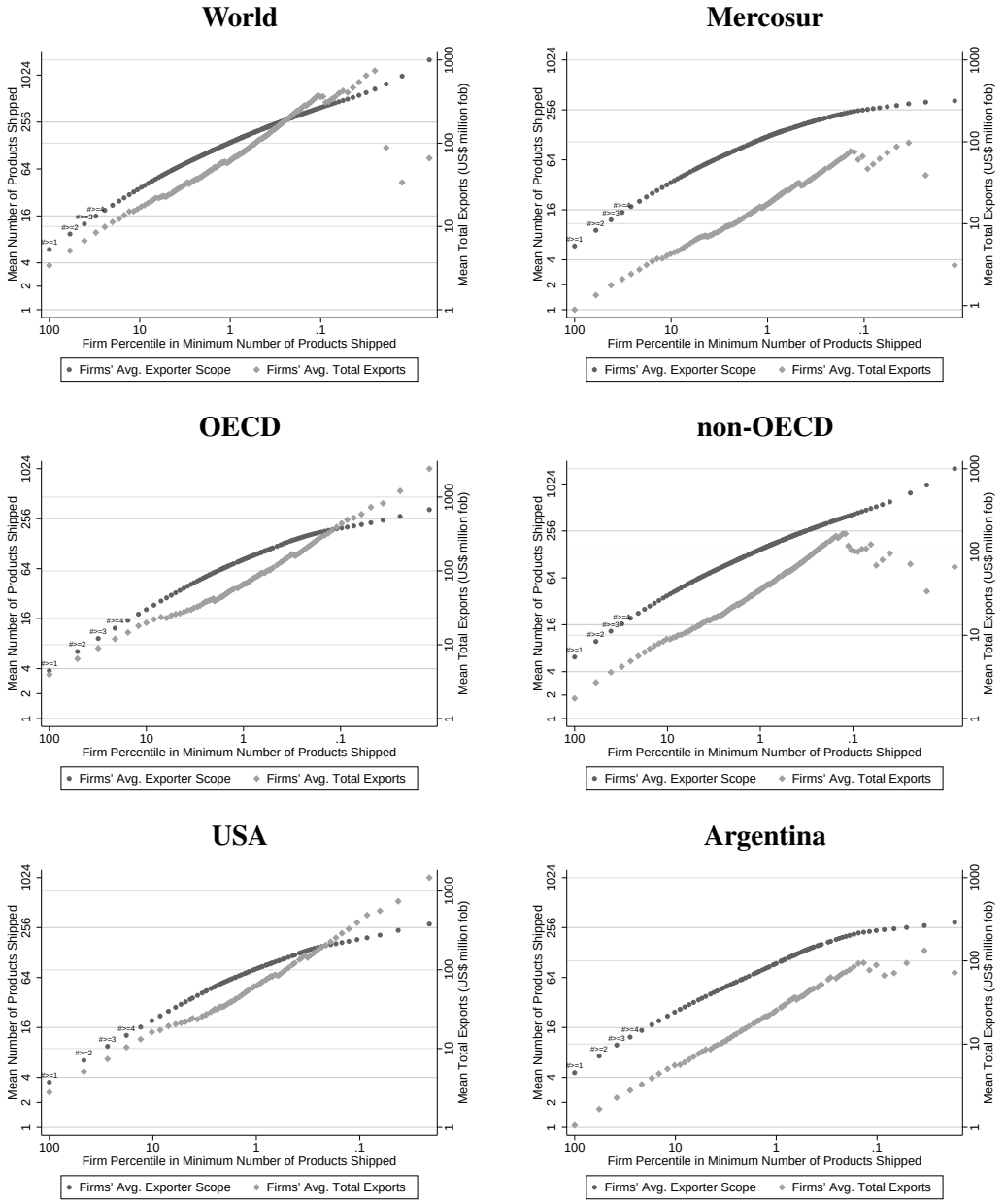
Source: *SECEX* 2000, all products and firms.
Note: Average scale is scope-weighted mean exporter scale. Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 7.7: **Average Scope, Average Scale and the Total Exports Distribution**



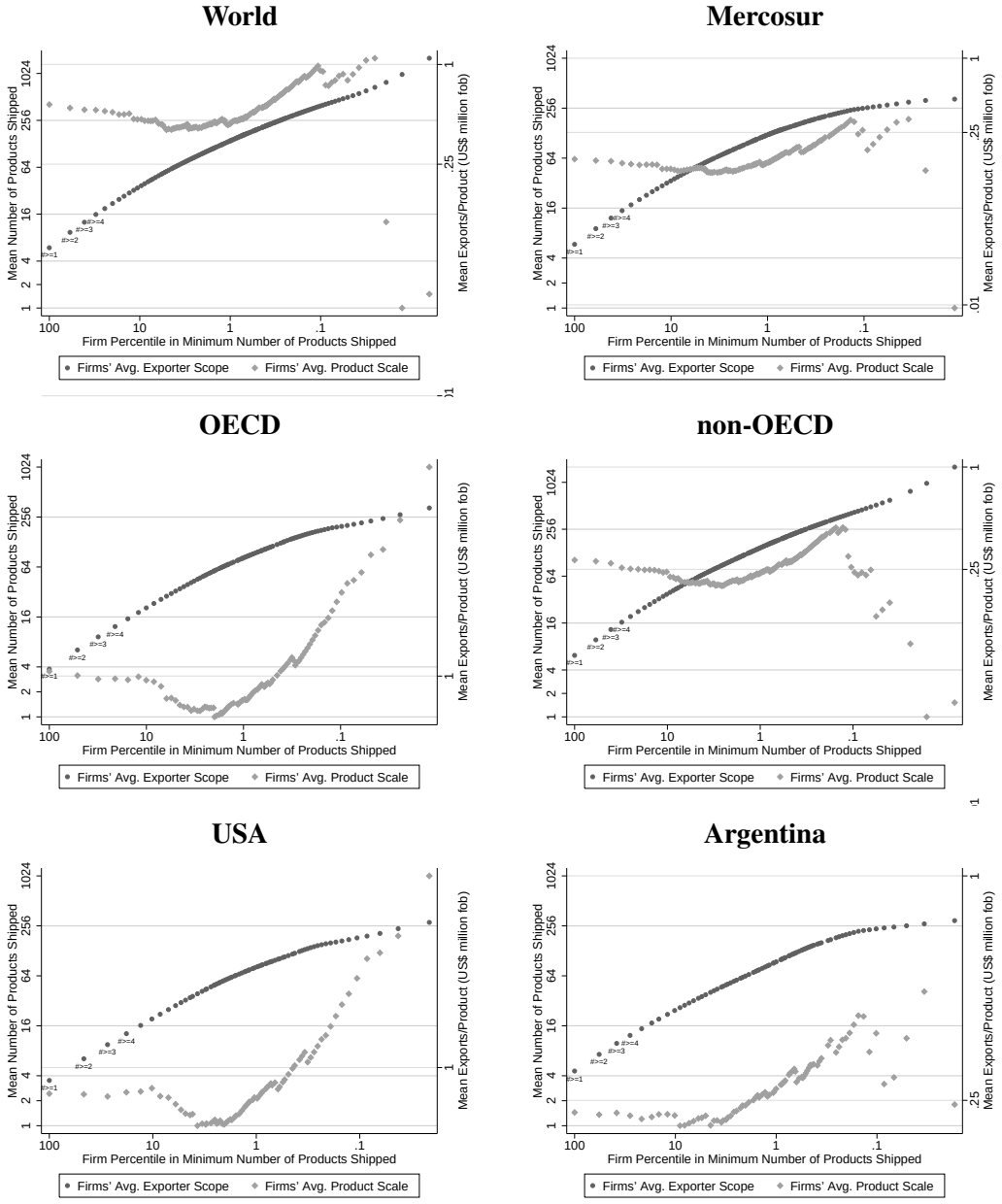
Source: *SECEX* 2000, all products and firms.
Note: Average scale is unweighted mean exporter scale. Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 7.8: **Average Scope, Unweighted Average Scale and the Total Exports Distribution**



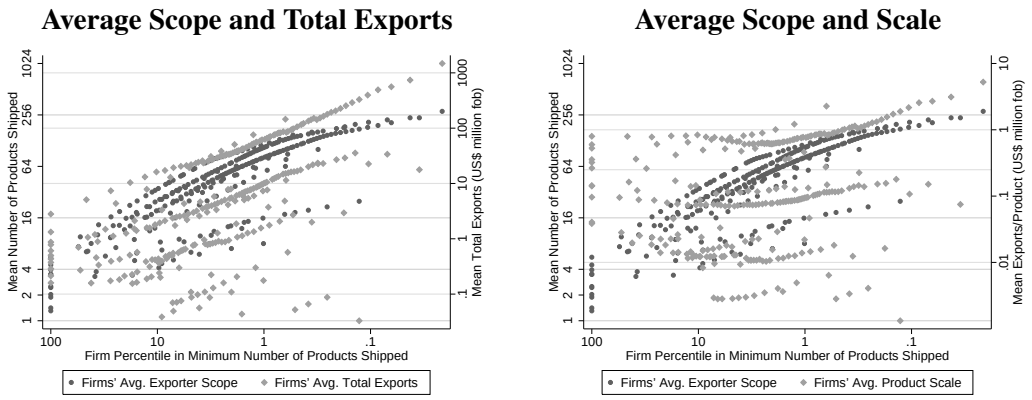
Source: *SECEX* 2000, all products and firms.
Note: Mean total exports are the average over firms' total exports at a percentile in a destination. Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 7.9: **Average Scope, Total Exports and the Exporter Scope Distribution**



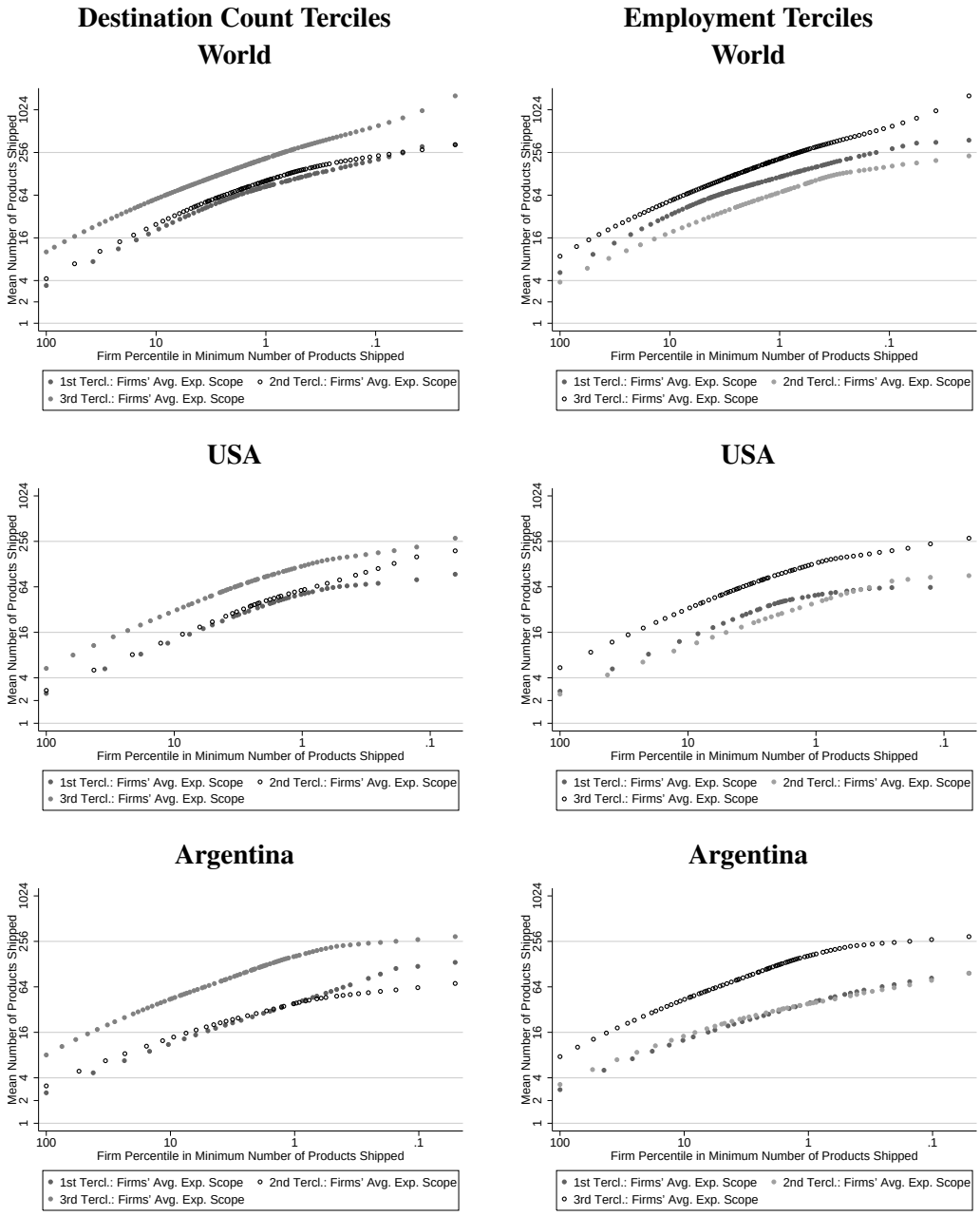
Source: *SECEX* 2000, all products and firms.
Note: Average scale is scope-weighted mean exporter scale. Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 7.10: **Average Scope, Average Scale and the Exporter Scope Distribution**



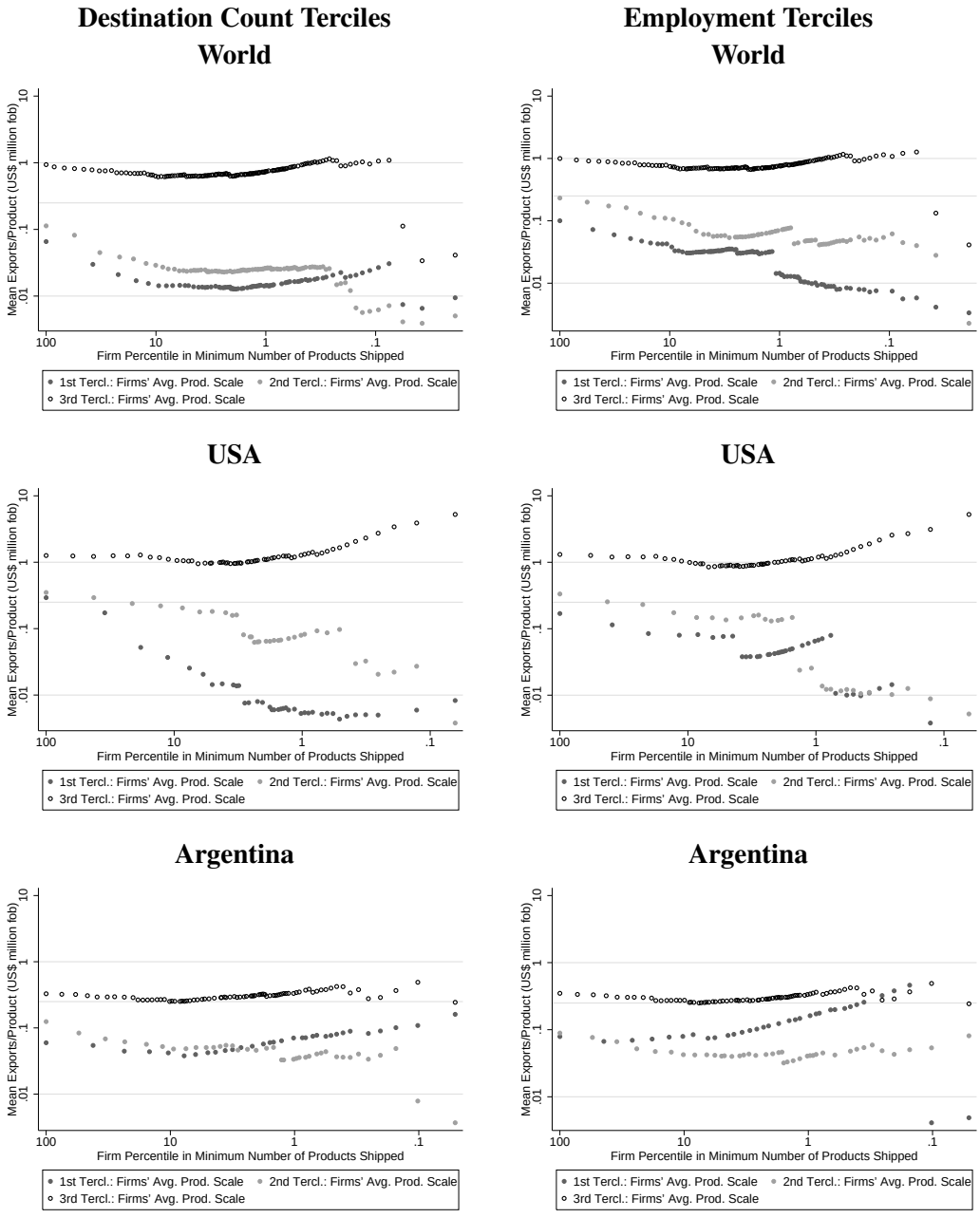
Source: *SECEX* 2000, all products and firms.
Note: Selection of the eleven countries at the first and every tenth percentile among Brazil's top 100 export destinations (Lithuania, Jordan, Bulgaria, Bangladesh, Netherlands Antilles, Costa Rica, Poland, Turkey, Hong Kong, Chile, USA). Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 7.11: **Average Scope, Scale and Exporter Distributions Across Countries**



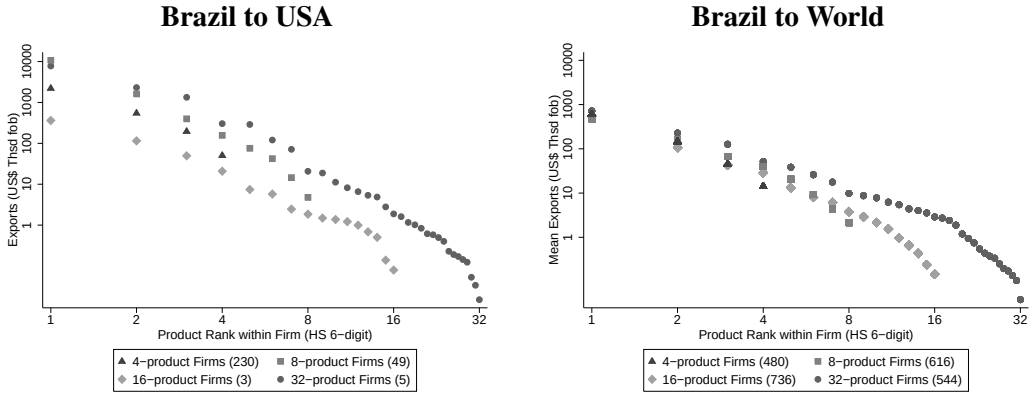
Sources: *RAIS* and *SECEX* 2000, all products and firms.
Note: Products at the Harmonized-System 6-digit level. Left panel: firms by tercile of worldwide number of destinations; right panel: firms by tercile of domestic employment. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 7.12: **Average Scope and the Exporter Distribution by Firm Type**



Sources: *RAIS* and *SECEX* 2000, all products and firms.
Note: Average scale is scope-weighted mean exporter scale. Products at the Harmonized-System 6-digit level. Left panel: firms by tercile of worldwide number of destinations; right panel: firms by tercile of domestic employment. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 7.13: **Average Scale and the Exporter Distribution by Firm Type**



Source: *SECEX* 2000, all products and firms.
Note: Products at the Harmonized-System 6-digit level. World average from pooling destinations to which firms in a given exporter-scope group ship.

Figure 7.14: **Within-firm Sales Distribution**

Table 7.8: Sales of Lowest-ranked Product and Exporter Scope

	Firm-prod. data		Firm-destination-prod. data			
	USA	Argentina	All dest.	All dest.	All dest.	All dest.
estimator	OLS	OLS	OLS	Dest. FE	Firm FE	Firm, Dest. FE
	(1)	(2)	(3)	(4)	(5)	(6)
Log # Products	-2.365	-2.065	-2.366	-2.262	-1.929	-2.024
	(.043)***	(.028)***	(.010)***	(.010)***	(.012)***	(.013)***
Const.	10.797	10.029	10.284	10.113	10.019	9.820
	(.045)***	(.036)***	(.011)***	(.080)***	(.010)***	(.067)***
Obs.	4,702	5,890	62,842	62,842	62,842	62,842
Firm panels					15,907	15,907
R^2	.392	.475	.462	.492	.346	.378

SECEX 2000, all products and firms.
Note: Products at the Harmonized-System 6-digit level. Standard errors in parentheses.
Underlying regression equation

$$\ln p_{d\phi G}\, x_{d\phi G} = \beta \ln G_{d\phi} + c_d + \ln \epsilon_{d\phi G}$$

for firm ϕ exporting $G_{d\phi}$ products to destination d. By convention, a firm's G-th product is the one with the smallest sales at a destination.

Table 7.9: Product Rank Correlations between Reference Countries and Rest of World

Reference country	USA		Argentina	
Elsewhere	World	OECD	World	non-OECD
	(1)	(2)	(3)	(4)
Corr. coeff.	.739	.771	.785	.794
Spearman's rank corr. coeff.	.829	.777	.856	.867
Obs.	64,576	17,817	91,792	72,827
# Firm-goods	215,611	47,728	209,290	156,207
Share Ref. country & elsewhere	.300	.373	.439	.466
Share Ref. country only	.033	.213	.054	.078
Share Elsewhere only	.667	.414	.508	.456
# Firms	15,907	8,204	15,907	12,426
Share Active in Ref. country	.206	.304	.246	.293

Source: *SECEX* 2000, all products and firms.
Note: Products at the Harmonized-System 6-digit level, ranked by decreasing export value within firms and destinations.

Table 7.10: Overlaps between Reference Countries and Rest of World by Product Rank

Prod. rank in Ref. country	Rest of World Overlap (1)	Rest of World Overlap top prd. (2)	Rest of World #Dest./ firm (3)	Rest of World #Firms (4)	OECD, non-OECD Overlap (5)	OECD, non-OECD Overlap top prd. (6)	OECD, non-OECD #Dest./ firm (7)	OECD, non-OECD #Firms (8)
Reference country: USA (overlap with Rest of World or OECD)								
1	.84	.84	8.5	3,107	.87	.87	3.9	2,296
2	.54	.79	12.5	1,307	.58	.81	5.1	941
4	.36	.74	18.0	451	.37	.76	6.9	279
8	.32	.70	23.5	166	.34	.74	8.0	94
16	.25	.63	22.9	80	.28	.66	7.8	39
32	.22	.57	25.0	31	.23	.61	6.8	22
64	.18	.52	34.7	12	.18	.55	8.3	8
128	.21	.74	39.3	6	.27	.56	11.3	4
Reference country: Argentina (overlap with Rest of World or non-OECD)								
1	.78	.78	7.7	3,643	.80	.80	6.0	3,368
2	.54	.76	10.5	1,916	.57	.79	8.0	1,810
4	.38	.67	13.7	900	.42	.70	10.5	854
8	.30	.64	17.9	354	.35	.67	13.7	329
16	.24	.56	21.9	159	.28	.59	16.9	143
32	.21	.48	29.7	57	.24	.52	22.3	55
64	.29	.41	34.8	20	.31	.43	28.3	19
128	.10	.35	40.9	11	.10	.39	31.4	11

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Destination counts in columns 3 and 7 are mean numbers of destinations to which firms with at least as many products as reported for a rank ship. Overlap in columns 1 and 5 is the proportion of destinations that a product of reported rank reaches relative to the overall destination counts (in columns 3 and 7). Overlap in columns 2 and 6 is the proportion of destinations that the top-selling product of firms with at least as many products as reported for a rank reaches relative to the overall destination counts (in columns 3 and 7). Products at the Harmonized-System 6-digit level, ranked by decreasing export value within firm in reference country. Sample restricted to firm-products that ship to reference country and at least one other destination.

Table 7.11: Share of Top-selling Products in Total Exports

Scope		USA			Argentina			World	
in Ref.	Top 1	Top 2	Top 3	Top 1	Top 2	Top 3	Top 1	Top 2	Top 3
country	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	1.000			1.000			1.000		
2	.814	1.000		.805	1.000		.815	1.000	
3	.734	.938	1.000	.731	.935	1.000	.732	.934	1.000
4	.710	.904	.976	.669	.881	.971	.690	.894	.973
8	.677	.861	.929	.608	.797	.888	.598	.803	.896
16	.644	.823	.907	.426	.631	.758	.488	.699	.789
32	.474	.624	.718	.601	.769	.825	.426	.596	.685
64	.207	.380	.464				.495	.698	.788
128	.387	.583	.727				.185	.327	.426
Mean	.664	.779	.826	.598	.750	.820	.537	.676	.741

Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level. Share of top-two (top-three) products for firms with exporter scope of at least two (three) products.

Table 7.12: Worldwide Exports by Exporter Scope and Product Rank

	Product rank									
Exporter scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single product	.934 (.136)									
2 products	1.284 (.224)	.192 (.054)								
3 products	1.409 (.368)	.219 (.034)	.062 (.015)							
4 products	2.143 (.344)	.422 (.072)	.147 (.031)	.034 (.007)						
5 products	2.398 (.399)	.636 (.122)	.247 (.054)	.072 (.016)	.027 (.008)					
6 products	3.610 (1.510)	1.410 (.713)	.195 (.053)	.073 (.014)	.026 (.007)	.005 (.0009)				
7 products	2.213 (.350)	.657 (.117)	.232 (.048)	.102 (.026)	.040 (.011)	.022 (.008)	.008 (.005)			
8 products	2.062 (.388)	.567 (.117)	.190 (.037)	.069 (.014)	.042 (.012)	.026 (.010)	.013 (.005)	.007 (.004)		
9 products	9.116 (4.729)	3.173 (1.739)	1.234 (.708)	.439 (.205)	.131 (.038)	.071 (.025)	.037 (.013)	.017 (.007)	.002 (.0004)	
10 products	3.484 (1.058)	1.134 (.396)	.599 (.237)	.181 (.058)	.111 (.038)	.073 (.027)	.034 (.013)	.018 (.008)	.010 (.005)	.003 (.002)
Avg. varieties[a]	1,422	856	603	454	365	299	253	228	196	168

[a] Average number of exporter products across rows.

Source: *SECEX* 2000, all products and firms, except exporters with scope exceeding ten products.
Note: Exporter-good mean values in US$ million fob. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 7.13: Exports to Mercosur by Exporter Scope and Product Rank

	Product rank									
Exporter scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single product	.209 (.030)									
2 products	.307 (.040)	.035 (.004)								
3 products	.565 (.131)	.115 (.029)	.021 (.004)							
4 products	.555 (.101)	.133 (.020)	.042 (.008)	.012 (.004)						
5 products	.701 (.202)	.139 (.025)	.040 (.007)	.017 (.004)	.004 (.0005)					
6 products	.475 (.091)	.132 (.023)	.063 (.016)	.026 (.007)	.009 (.002)	.003 (.0006)				
7 products	.589 (.090)	.163 (.028)	.082 (.018)	.046 (.013)	.022 (.006)	.009 (.003)	.003 (.0006)			
8 products	.712 (.159)	.274 (.103)	.149 (.064)	.065 (.027)	.036 (.014)	.022 (.010)	.008 (.004)	.004 (.002)		
9 products	2.789 (1.929)	.395 (.141)	.154 (.056)	.085 (.032)	.038 (.013)	.025 (.009)	.010 (.003)	.005 (.002)	.003 (.001)	
10 products	.718 (.164)	.254 (.060)	.136 (.044)	.088 (.030)	.037 (.012)	.023 (.008)	.013 (.006)	.008 (.005)	.005 (.003)	.002 (.001)
Avg. varieties[a]	773	475	335	262	216	177	150	133	125	111

[a] Average number of exporter products across rows.

Source: *SECEX* 2000, all products and firms, except exporters with scope exceeding ten products.
Note: Exporter-good mean values in US$ million fob. Mercosur includes Argentina, Paraguay, Uruguay. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 7.14: Exports to OECD by Exporter Scope and Product Rank

	Product rank									
Exporter scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single product	1.322 (.200)									
2 products	2.171 (.448)	.324 (.084)								
3 products	2.121 (.325)	.610 (.195)	.105 (.023)							
4 products	3.342 (.628)	.716 (.145)	.237 (.065)	.056 (.015)						
5 products	2.149 (.319)	.532 (.087)	.204 (.040)	.063 (.011)	.020 (.006)					
6 products	6.312 (3.025)	2.377 (1.660)	.327 (.077)	.143 (.041)	.040 (.010)	.010 (.002)				
7 products	5.490 (1.419)	1.746 (.490)	.753 (.309)	.217 (.074)	.085 (.032)	.030 (.011)	.012 (.008)			
8 products	8.396 (1.793)	2.735 (.797)	1.366 (.401)	.510 (.145)	.258 (.075)	.095 (.030)	.040 (.014)	.010 (.003)		
9 products	18.919 (10.019)	4.601 (2.425)	3.347 (2.050)	1.317 (.778)	.158 (.052)	.045 (.012)	.016 (.004)	.007 (.002)	.002 (.0006)	
10 products	5.408 (2.451)	1.219 (.591)	.237 (.081)	.093 (.031)	.038 (.011)	.022 (.008)	.011 (.004)	.004 (.002)	.002 (.0008)	.0007 (.0003)
Avg. varieties[a]	775	417	265	181	136	107	92	77	63	54

[a] Average number of exporter products across rows.

Source: *SECEX* 2000, all products and firms, except exporters with scope exceeding ten products.
Note: Exporter-good mean values in US$ million fob. OECD includes all OECD members in 1990. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 7.15: Exports to U.S. by Exporter Scope and Product Rank

	Product rank									
Exporter scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single product	.822 (.103)									
2 products	1.561 (.287)	.229 (.040)								
3 products	1.344 (.177)	.226 (.028)	.058 (.011)							
4 products	2.209 (.356)	.546 (.147)	.196 (.067)	.050 (.018)						
5 products	1.808 (.315)	.443 (.104)	.141 (.035)	.036 (.008)	.012 (.003)					
6 products	7.244 (3.520)	2.898 (1.773)	.536 (.183)	.333 (.125)	.075 (.032)	.005 (.001)				
7 products	4.290 (1.290)	1.310 (.599)	.760 (.429)	.148 (.049)	.072 (.029)	.035 (.017)	.009 (.006)			
8 products	10.710 (3.828)	1.618 (.463)	.397 (.089)	.157 (.041)	.076 (.022)	.042 (.011)	.015 (.004)	.005 (.001)		
9 products	10.121 (5.005)	3.527 (2.248)	.985 (.456)	.136 (.044)	.068 (.025)	.027 (.013)	.011 (.004)	.005 (.002)	.001 (.0005)	
10 products	7.326 (2.897)	4.070 (2.140)	1.473 (.888)	.392 (.178)	.265 (.160)	.138 (.097)	.104 (.085)	.024 (.017)	.005 (.003)	.001 (.0007)
Avg. varieties[a]	448	217	133	88	65	51	43	35	28	24

[a] Average number of exporter products across rows.

Source: *SECEX* 2000, all products and firms, except exporters with scope exceeding ten products.
Note: Exporter-good mean values in US$ million fob. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 7.16: Exports to Argentina by Exporter Scope and Product Rank

	Product rank									
Exporter scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single product	.263 (.040)									
2 products	.366 (.050)	.042 (.005)								
3 products	.652 (.167)	.152 (.040)	.025 (.005)							
4 products	.921 (.228)	.146 (.023)	.049 (.009)	.015 (.005)						
5 products	.644 (.094)	.190 (.034)	.058 (.011)	.029 (.008)	.007 (.001)					
6 products	.576 (.143)	.210 (.041)	.101 (.032)	.042 (.014)	.017 (.005)	.005 (.001)				
7 products	.921 (.212)	.397 (.147)	.163 (.057)	.062 (.021)	.031 (.011)	.015 (.007)	.003 (.0006)			
8 products	1.151 (.401)	.411 (.120)	.244 (.093)	.141 (.052)	.073 (.024)	.032 (.010)	.016 (.006)	.007 (.004)		
9 products	4.583 (3.866)	.148 (.033)	.069 (.017)	.033 (.010)	.021 (.006)	.014 (.005)	.007 (.003)	.003 (.001)	.001 (.0004)	
10 products	1.157 (.348)	.405 (.123)	.189 (.079)	.115 (.053)	.053 (.023)	.032 (.017)	.022 (.013)	.014 (.009)	.008 (.006)	.004 (.003)
Avg. exp. varieties[a]	541	320	222	169	133	107	96	76	61	53

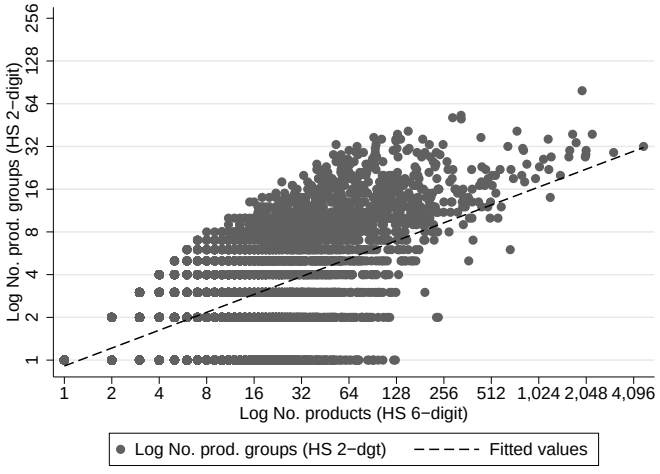
[a] Average number of exporter products across rows.

Source: *SECEX* 2000, all products and firms, except exporters with scope exceeding ten products.
Note: Exporter-good mean values in US$ million fob. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 7.17: Concentration of Exports in HS 2-digit Product Groups

	Firms with # Products, or more						
	2	4	8	16	32	64	128
# of Firms	11,257	7,351	4,496	2,504	1,286	557	229
Share Firms with Single Prod. Grp.	.457	.330	.228	.134	.061	.032	.000
Mean # Product Groups	8.103	9.328	10.935	13.086	15.803	19.374	22.865
Median # Product Groups	5	6	8	10	13	16	19
Share Top ranked Product Group	.887	.859	.831	.799	.764	.744	.739
Share 2nd ranked Product Group	.152	.142	.137	.134	.139	.138	.138
Share 3rd ranked Product Group	.055	.055	.053	.053	.052	.052	.048
Share 4th ranked Product Group	.029	.029	.028	.028	.027	.029	.025
Share 5th ranked Product Group	.018	.018	.018	.018	.016	.016	.014

Source: *SECEX* 2000, all products and firms.
Note: Products at the Harmonized-System 6-digit level, product groups at the Harmonized-System 2-digit level. Product-group shares in worldwide sales.



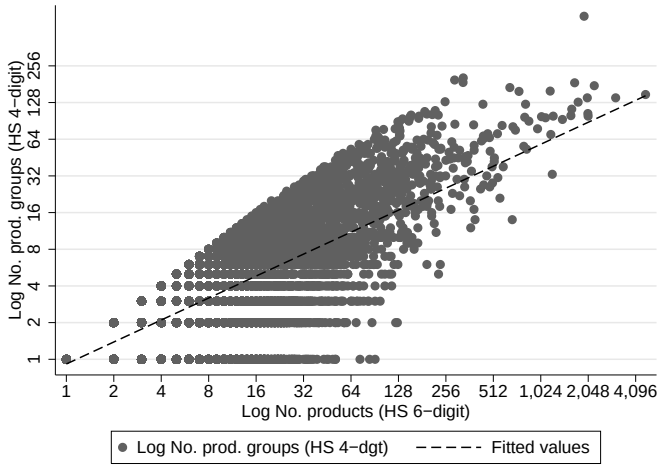
Source: *SECEX* 2000, all products and firms.
Note: Products at the Harmonized-System 6-digit level, product groups at the Harmonized-System 2-digit level.

Figure 7.15: **Worldwide 2-digit Product-group Count and Scope Association**

Table 7.18: Concentration of Exports in HS 4-digit Product Groups

	Firms with # Products, or more						
	2	4	8	16	32	64	128
# of Firms	11,257	7,351	4,496	2,504	1,286	557	229
Share Firms w/ Single Prd. Grp.	.278	.166	.096	.050	.014	.005	.000
Mean # Product Groups	33.656	37.273	42.529	50.375	61.802	82.576	111.901
Median # Product Groups	12	16	20	26	35	52	75
Share Top ranked Product Group	.803	.757	.717	.674	.620	.591	.581
Share 2nd ranked Product Group	.179	.172	.166	.162	.169	.165	.155
Share 3rd ranked Product Group	.073	.072	.071	.071	.073	.075	.075
Share 4th ranked Product Group	.039	.039	.039	.040	.040	.043	.042
Share 5th ranked Product Group	.025	.025	.025	.026	.026	.027	.026

Source: *SECEX* 2000, all products and firms.
Note: Products at the Harmonized-System 6-digit level, product groups at the Harmonized-System 4-digit level. Product-group shares in worldwide sales.



Source: *SECEX* 2000, all products and firms.
Note: Products at the Harmonized-System 6-digit level, product groups at the Harmonized-System 4-digit level.

Figure 7.16: **Worldwide 4-digit Product-group Count and Scope Association**

Table 7.19: Total Exports Decompositions at the Firm Level

OLS	Log # Products	Log Exports/product #≥ 1	#≥ 2	#≥ 3	#≥ 10	#≥ 25	#≥ 100
				World			
Log Total exports	.182 (.003)***	.818 (.003)***	.863 (.004)***	.884 (.004)***	.908 (.007)***	.915 (.009)***	.930 (.019)***
Const.	1.362 (.010)***	-1.362 (.010)***	-1.783 (.011)***	-2.090 (.012)***	-3.141 (.016)***	-3.855 (.022)***	-4.961 (.061)***
Obs.	15,907	15,907	9,396	6,512	1,856	688	85
R^2	.199	.834	.853	.867	.911	.937	.965
				Mercosur			
Log Total exports	.239 (.004)***	.761 (.004)***	.815 (.005)***	.843 (.006)***	.888 (.010)***	.913 (.013)***	.950 (.025)***
Const.	1.651 (.016)***	-1.651 (.016)***	-1.987 (.017)***	-2.248 (.017)***	-3.165 (.021)***	-3.852 (.027)***	-4.934 (.065)***
Obs.	8,691	8,691	5,236	3,645	1,075	384	44
R^2	.256	.777	.812	.833	.887	.925	.972
				OECD			
Log Total exports	.118 (.003)***	.882 (.003)***	.923 (.005)***	.941 (.006)***	.939 (.010)***	.931 (.014)***	.936 (.025)***
Const.	.945 (.012)***	-.945 (.012)***	-1.439 (.013)***	-1.801 (.016)***	-3.050 (.030)***	-3.830 (.040)***	-4.819 (.095)***
Obs.	8,204	8,204	4,208	2,574	509	167	19
R^2	.136	.897	.907	.914	.942	.963	.988
				non-OECD			
Log Total exports	.218 (.004)***	.782 (.004)***	.827 (.004)***	.852 (.005)***	.896 (.008)***	.899 (.011)***	.928 (.023)***
Const.	1.525 (.013)***	-1.525 (.013)***	-1.920 (.013)***	-2.210 (.014)***	-3.164 (.018)***	-3.875 (.024)***	-4.998 (.068)***
Obs.	12,326	12,326	7,265	5,009	1,527	565	70
R^2	.238	.801	.825	.842	.892	.923	.958

Source: *SECEX* 2000, all products and firms.

Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Firm ω's total exports $t_d(\omega)$ to destination market d can be decomposed into: $G_d(\omega)\, a_d(\omega)$, where $G_d(\omega)$ is the exporters' average number of products shipped to destination d (the average scope of the exporter at the destination), and $a_d(\omega)$ are the exporter's average sales per product in destination country d (the scale of the exporter's average product). Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 7.20: Exporter Scale and Exporter Scope Correlations

Log Exp./prod.	Firm data[a]	Firm-destination data[b]			Firm-destination-good data[c]		
	Ind. FE	Ind. FE	Ind. & dest. FE	Firm & dest. FE	Firm & dest. FE	Ind., prd. & dest. FE	Firm, prd. & dest. FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
				World			
Log # Products	.269	.006	.029	.244	1.088	.596	.916
	(.017)***	(.010)	(.010)***	(.012)***	(.011)***	(.012)***	(.012)***
Obs.	14,691	60,529	60,529	62,842	107,296	103,028	107,296
R^2	.018	5.28e-06	.066	.120	.122	.175	.208
Corr. Firm FE, $X'\beta$				-.158	-.183		-.124
				Mercosur			
Log # Products	.152	.064	.070	.185	1.229	.716	1.133
	(.020)***	(.017)***	(.016)***	(.029)***	(.020)***	(.020)***	(.021)***
Obs.	8,269	12,469	12,469	12,956	27,917	26,751	27,917
R^2	.007	.001	.070	.295	.189	.173	.258
Corr. Firm FE, $X'\beta$				-.131	-.222		-.174
				OECD			
Log # Products	.316	.223	.159	.491	1.195	.604	1.005
	(.031)***	(.022)***	(.022)***	(.026)***	(.027)***	(.027)***	(.027)***
Obs.	7,594	20,650	20,650	21,674	30,926	29,484	30,926
R^2 within	.014	.005	.035	.138	.103	.156	.216
Corr. Firm FE, $X'\beta$				-.239	-.283		-.206
				non-OECD			
Log # Products	.232	-.031	-.015	.163	1.107	.610	.936
	(.018)***	(.011)***	(.011)***	(.013)***	(.012)***	(.013)***	(.013)***
Obs.	11,557	39,086	39,086	40,349	75,318	72,535	75,318
R^2	.016	.0002	.061	.122	.138	.178	.224
Corr. Firm FE, $X'\beta$				-.196	-.228		-.166

[a]Aggregation: worldwide exports by firm.
[b]Aggregation: exports by firm and destination.
[c]Aggregation: exports by firm, destination, product group (Harmonized System 2-digit level).

Source: *SECEX* 2000, all products and firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level; product-group fixed effects at the Harmonized-System 2-digit level. Industry fixed effects at the *CNAE* two-digit level. Constant not reported. R^2 is within fit for firm FE regressions. Correlation coefficient between firm fixed effects and all other predictors (including destination and product fixed effects). Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 7.21: Correlates of Firm Effects on Exporter Scale and Exporter Scope

	Firm Eff. on Exporter Scale from Log Exports/prod. regressions			Firm Eff. on Exporter Scope from Log # Products regressions		
	Firm FE only	Firm FE & scope	Firm & dest. FE, & scope	Firm FE only	Firm FE & scale	Firm & dest. FE, & scale
	(1)	(2)	(3)	(4)	(5)	(6)
Log ww. # Products	.150 (.006)***	-.117 (.006)***	-.010 (.007)	.729 (.003)***	.720 (.004)***	.721 (.004)***
Log ww. Exp./prod.	.904 (.004)***	.895 (.004)***	.873 (.005)***	.026 (.002)***	-.027 (.002)***	-.003 (.002)
Log ww. # Dest.	-.969 (.007)***	-.847 (.008)***	-.625 (.009)***	-.333 (.004)***	-.276 (.004)***	-.195 (.005)***
No OECD exp.	-.004 (.016)	-.040 (.018)**	.553 (.021)***	.099 (.010)***	.099 (.010)***	.004 (.011)
Log OECD Exp.[a]	.004 (.003)	.005 (.004)	-.002 (.004)	-.003 (.002)	-.003 (.002)	-.005 (.002)**
No Mercosur exp.	-.052 (.016)***	-.062 (.018)***	.089 (.021)***	.027 (.010)***	.030 (.010)***	.331 (.011)***
Log Mercosur Exp.[a]	.014 (.003)***	.014 (.004)***	.022 (.004)***	.002 (.002)	.001 (.002)	-.004 (.002)
Log # dom. Plants	-.014 (.008)*	-.018 (.009)**	-.0003 (.010)	.010 (.005)**	.011 (.005)**	.015 (.005)***
Log # dom. Loc.	.035 (.008)***	.045 (.009)***	.032 (.011)***	-.028 (.005)***	-.030 (.005)***	-.029 (.006)***
Log Employment	-.006 (.003)**	-.00003 (.003)	-.0005 (.004)	-.016 (.002)***	-.016 (.002)***	-.019 (.002)***
High sch. educ. wf.	-.075 (.018)***	-.066 (.019)***	-.101 (.023)***	-.025 (.011)**	-.021 (.011)*	-.024 (.012)**
College educ. wf.	.051 (.025)**	.126 (.028)***	-.005 (.032)	-.204 (.015)***	-.207 (.016)***	-.216 (.017)***
Obs.	14,691	14,691	14,691	14,691	14,691	14,691
R^2	.927	.917	.883	.833	.832	.806

[a]Log of nonzero exports, times indicator of nonzero exports (one less *no*-exports indicator).

Sources: *RAIS* and *SECEX* 2000, all products and firms.

Note: Aggregation to exports by firm and destination. Regressions of firm fixed effects on firm-level predictors, where firm fixed effects on export scale in column 1 are from a firm fixed effects regression with no additional controls, in column 2 from a firm fixed effects regression controlling for scope (log # products) and in column 3 from a firm fixed effects regression controlling for scope and destination fixed effects (see column 3 in Table 7.20). Firm fixed effects on exporter scope in column 4 are from a firm fixed effects regression with no additional controls, in column 5 from a firm fixed effects regression controlling for scale (log exports/product) and in column 6 from a firm fixed effects regression controlling for scale and destination fixed effects. Worldwide number of products at the Harmonized-System 6-digit level. Domestic Brazilian locations counted at the municipality level. Workforce characteristics in shares of total employment. White-collar, blue-collar employment (insignificant at ten-percent level) and constant not reported. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 7.22: Correlates of Destination Effects on Exporter Scale and Exporter Scope

	Destination Eff. on Exporter Scale from Log Exports/prod. regressions			Destination Eff. on Exp. Scope from Log # Products regressions		
	Dest. FE only	Dest. FE & scope	Firm & dest. FE, & scope	Dest. FE only	Dest. FE & scale	Firm & dest. FE, & scale
	(1)	(2)	(3)	(4)	(5)	(6)
Mean Log Market size	.085 (.050)*	.088 (.050)*	.022 (.033)	-.024 (.015)*	-.021 (.014)	.008 (.012)
Log Population	.217 (.072)***	.213 (.071)***	.329 (.047)***	.018 (.018)	.020 (.018)	.019 (.015)
Log GDP per cap.	.146 (.073)**	.138 (.072)*	.295 (.048)***	-.013 (.019)	-.012 (.019)	.026 (.016)
Log Distance	.003 (.206)	-.031 (.203)	-.537 (.134)***	-.181 (.053)***	-.182 (.052)***	-.231 (.045)***
Common borders	-.548 (.389)	-.547 (.385)	-.328 (.253)	.073 (.100)	.065 (.098)	.213 (.084)**
Common language	-.603 (.367)	-.602 (.363)*	.240 (.238)	.111 (.107)	.096 (.105)	.092 (.090)
Const.	-10.002 (1.899)***	-9.556 (1.877)***	-7.570 (1.232)***	2.429 (.507)***	2.237 (.495)***	1.870 (.427)***
Obs.	90	90	90	92	92	92
R^2	.466	.464	.692	.400	.383	.515

Source: *SECEX* 2000, all products and firms.

Note: Aggregation to exports by firm and destination. Regressions of destination fixed effects on destination-level predictors, where destination fixed effects on exporter scale in column 1 are from a destination fixed effects regression with no additional controls, in column 2 from a destination fixed effects regression controlling for scope (log # products, see column 2 in Table 7.20) and in column 3 from a destination fixed effects regression controlling for scope and firm fixed effects (see column 3 in Table 7.20). Destination fixed effects on exporter scope in column 4 are from a destination fixed effects regression with no additional controls, in column 5 from a destination fixed effects regression controlling for scale (log exports/product) and in column 6 from a destination fixed effects regression controlling for scale and firm fixed effects. Mean log market size is average sectoral absorption over *ISIC rev. 2* industries at destination level. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 7.23: Correlates of Product Effects on Exporter Scale and Exporter Scope

	Product Eff. on Exporter Scale from Log Exports/prod. regressions			Product Eff. on Exporter Scope from Log # Products regressions		
	Prod. FE only	Prod. FE & scope	Firm, dst. & prd. FE, & scope	Prod. FE only	Prod. FE & scale	Firm, dst. & prd. FE, & scale
	(1)	(2)	(3)	(4)	(5)	(6)
Comparative adv.	.519	.520	.118	-.0008	-.013	.042
	(.124)***	(.124)***	(.116)	(.015)	(.015)	(.019)**
Reference priced	-1.115	-1.076	-2.494	-.108	-.082	-.059
	(.909)	(.906)	(.848)***	(.110)	(.111)	(.139)
Differentiated	-1.743	-1.724	-1.963	-.053	-.013	.012
	(.842)**	(.840)**	(.786)**	(.102)	(.102)	(.129)
Log ww. # Dest.	-2.050	-2.108	-1.472	.162	.208	.113
	(.902)**	(.899)**	(.841)*	(.110)	(.110)*	(.138)
No OECD imp.	-16.785	-17.153	-1.746	1.015	1.396	-.668
	(12.314)	(12.280)	(11.488)	(1.496)	(1.498)	(1.882)
Log OECD Imp.[a]	.370	.348	.392	.062	.053	.072
	(.251)	(.250)	(.234)*	(.030)**	(.031)*	(.038)*
No Mercosur imp.	-2.358	-2.329	-1.439	-.079	-.025	-.374
	(2.254)	(2.247)	(2.102)	(.274)	(.274)	(.344)
Log Mercos. Imp.[a]	.109	.107	-.005	.005	.003	.028
	(.228)	(.227)	(.212)	(.028)	(.028)	(.035)
Const.	5.816	5.966	.317	-.411	-.544	-.097
	(4.822)	(4.809)	(4.498)	(.586)	(.587)	(.737)
Obs.	96	96	96	96	96	96
R^2	.386	.397	.164	.341	.389	.323

[a]Log of nonzero imports, times indicator of nonzero imports (one less *no*-imports indicator).

Source: *SECEX* 2000, all products and firms.
Note: Aggregation to exports by firm, destination, product group (Harmonized System 2-digit level). Regressions of product fixed effects at the Harmonized-System 2-digit level on product-level predictors, where product fixed effects on exporter scale in column 1 are from a product fixed effects regression with no additional controls, in column 2 from a product fixed effects regression controlling for scope (log # products) and in column 3 from a product fixed effects regression controlling for scope as well as destination and firm fixed effects (see column 6 in Table 5.22). Product fixed effects on exporter scope in column 4 are from a product fixed effects regression with no additional controls, in column 5 from a product effects regression controlling for scale (log exports/product) and in column 6 from a product fixed effects regression controlling for scale as well as destination and firm fixed effects. Balassa (1965) comparative-advantage for Brazil from UN Comtrade trade data for 2000 at the *ISIC Rev. 2* level: product h's comparative advantage is $BADV_h \equiv [T_h^{\text{Brazil}} / \sum_k T_k^{\text{Brazil}}] / [T_h^{\text{World}} / \sum_k T_k^{\text{World}}]$, where T_h are worldwide exports. Products classification by degree of differentiation from Rauch (1999), conservative definition, revision 2 (2007): share of Harmonized-System 6-digit products at the Harmonized-System 2-digit level; omitted benchmark category is homogeneous products (traded on an organized exchange). Worldwide product-group imports exclude Brazil as importer and exporter. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 7.24: Conditional Exporter Scale and Exporter Scope Correlations

Log Exp./prod.	World			Mercosur	OECD	non-OECD
	(1)	(2)	(3)	(4)	(5)	(6)
Log # Products	.439 (.088)***	.741 (.057)***	.412 (.068)***	-.007 (.177)	.486 (.156)***	.087 (.078)
Squared Log # Products	.224 (.139)	-.332 (.065)***	-.332 (.065)***	-.009 (.180)	.054 (.182)	-.221 (.070)***
Cubic Log # Products	-.274 (.074)***	.044 (.023)*	.038 (.023)	-.038 (.066)	-.148 (.071)**	.040 (.024)*
Quartic Log # Products	.070 (.016)***	.0004 (.002)	.001 (.002)	.009 (.007)	.022 (.008)***	-.0009 (.003)
Pentic Log # Products	-.005 (.001)***					
Log # Prd.×Log ww. # Dst.			.086 (.017)***	.156 (.046)***	.035 (.040)	.086 (.019)***
Log # Prd.×Log Empl.			.025 (.006)***	-.017 (.018)	.054 (.015)***	.020 (.007)***
Log # Prd.×Coll. ed. wf.			-.097 (.062)	.219 (.161)	-.211 (.140)	.007 (.072)
Obs.	62,842	62,842	60,529	12,469	20,650	39,879
R^2	.124	.124	.128	.304	.149	.127
Corr. Firm FE, $X'\beta$	-.151	-.151	-.088	-.097	-.175	-.126
F statistic: Zero Firm FE	4.318***	4.316***	4.143***	2.916***	3.633***	3.826***

Sources: *RAIS* and *SECEX* 2000, all products and firms.
Note: Aggregation to exports by firm and destination. Regressions controlling for firm and destination fixed effects (expanding regression (4) in Table 7.20). Worldwide number of products at the Harmonized-System 6-digit level. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 7.25: Individual Product Sales Regressions

Log Sales	OLS	Dest. FE	Dest. & Ind. FE	Dest. & Firm FE
	(1)	(2)	(3)	(4)
Log # Products	1.100 (.006)***	1.142 (.006)***	1.295 (.006)***	1.486 (.007)***
Log Product Rank	-2.309 (.006)***	-2.342 (.006)***	-2.429 (.006)***	-2.478 (.007)***
Obs.	224,952	224,952	216,628	224,952
Panels			478	15,907
R^2 (R^2 within)[a]	.461	.505	.488	.577

[a] R^2 is within fit for industry and firm FE regressions in columns 3 and 4.

Sources: *SECEX* 2000, all products and firms.
Note: Individual export sales by product, firm and destination. Products at the Harmonized-System 6-digit level. Industry fixed effects at the *CNAE* two-digit level. Constant and destination fixed effects not reported. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

8 Chilean Manufacturing Firms and Products

Table 8.1: Sample Characteristics by Destination

	World	Mercosur	OECD	non-OECD	USA	Argentina
	(1)	(2)	(3)	(4)	(5)	(6)
# of Observations (MNH)	37,183	7,491	8,998	28,185	3,488	4,999
# of Destinations (N)	140	3	23	117	1	1
Regional share in Tot. exports	1.000	.057	.560	.440	.156	.048
			Firms			
# of Firms (M)	4,099	1,642	1,862	3,226	1,137	1,353
Median Total exports (T_{md})	.038	.030	.040	.035	.039	.031
Median Exporter scope (G_{md})	2	2	1	2	1	2
Median Avg. Exp. scale (a_{md})	.014	.013	.022	.013	.022	.015
Mean Total exports ($\bar{t}_d$)	2.779	.393	3.428	1.553	1.559	.404
Mean Exporter scope ($\bar{G}_d$)	5.454	3.941	3.288	5.471	3.068	3.695
Mean Avg. Exp. scale (a_d)	.510	.100	1.043	.284	.508	.109
Shares in Total exports						
Single-prod. firms	.041	.169	.102	.098	.096	.180
Multi-prod. firms' top product	.715	.598	.692	.640	.673	.600
Multi-prod. firms' other prod.	.243	.233	.205	.262	.231	.220
			Varieties			
# of Varieties (MH)	22,356	6,471	6,122	17,650	3,488	4,999
Median Variety sales	.002	.003	.004	.002	.004	.003
Mean Variety sales	.510	.100	1.043	.284	.508	.109

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.

Note: Aggregate regions (world, Mercosur, OECD, non-OECD) treated as single destinations, collapsing product shipments to different countries into single product shipment. The worldwide average number of products across destination countries is 2.909, for instance, but 5.454 for the world as single destination. Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Exports in US$ million fob. Mean average exporter scale (a_d) is the scope-weighted arithmetic mean of exporters' average exporter scales.

Table 8.2: Top 25 Export Products

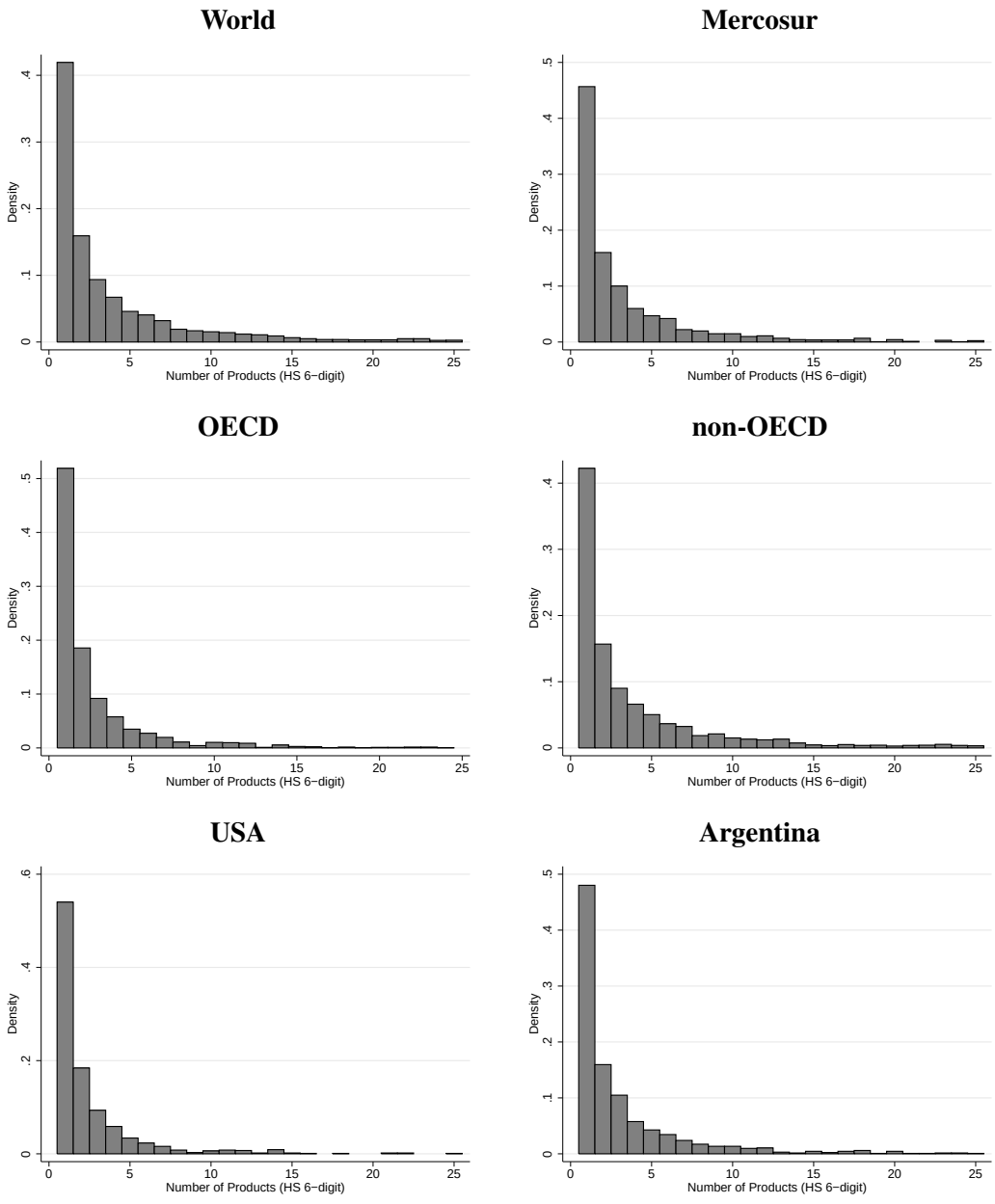
Rank	Product	Exports (US$ mill.)	Share in tot. exports (%)	# of Dest.
1.	Refined copper cathodes and sections of cathodes	3,688	32.4	33
2.	Chemical woodpulp, soda etc. n dis s bl & bl conif	685	6.0	32
3.	Wine, fr grape nesoi & gr must w alc, nov 2 liters	497	4.4	83
4.	Copper ores and concentrates	347	3.0	13
5.	Methanol (methyl alcohol)	297	2.6	12
6.	Unrefnd cppr; cppr anods f elctroltc refining	293	2.6	9
7.	Coniferous wood sawn, sliced etc, over 6 mm thick	291	2.6	45
8.	Gold, nonmonetary, unwrought nesoi	266	2.3	5
9.	Unwrought refined copper nesoi	254	2.2	13
10.	Oil (not crude) from petrol & bitum mineral etc.	173	1.5	18
11.	Chem woodpulp, soda etc, n dis s bl & bl nonconif	171	1.5	21
12.	Flour meal & pellet of fish crustaceans etc inedib	148	1.3	52
13.	Iodine	146	1.3	23
14.	Chem wdpulp sulfate ex disslvng gr conif, unbleach	129	1.1	24
15.	Wood, tongued, grooved, molded etc, coniferous	115	1.0	17
16.	Molybdenum ores and concentrates roasted	115	1.0	17
17.	Newsprint, in rolls or sheets	102	.9	15
18.	Silver, unwrought nesoi	90	.8	9
19.	Potassium nitrate	87	.8	26
20.	Ash and residues nesoi, containing metals nesoi	83	.7	8
21.	Mtr veh trans gds spk ig in c p eng, gvw nov 5 mtn	83	.7	8
22.	Food preparations nesoi	81	.7	38
23.	Wine, fr grape nesoi & gr must with alc, nesoi	74	.6	40
24.	Doors and their frames and thresholds, of wood	64	.6	15
25.	Fish, prepared or preserved, whole or pieces nesoi	61	.5	52

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Export values in US$ million fob. Products at the Harmonized-System 6-digit level.

Table 8.3: Top 25 Export Destinations

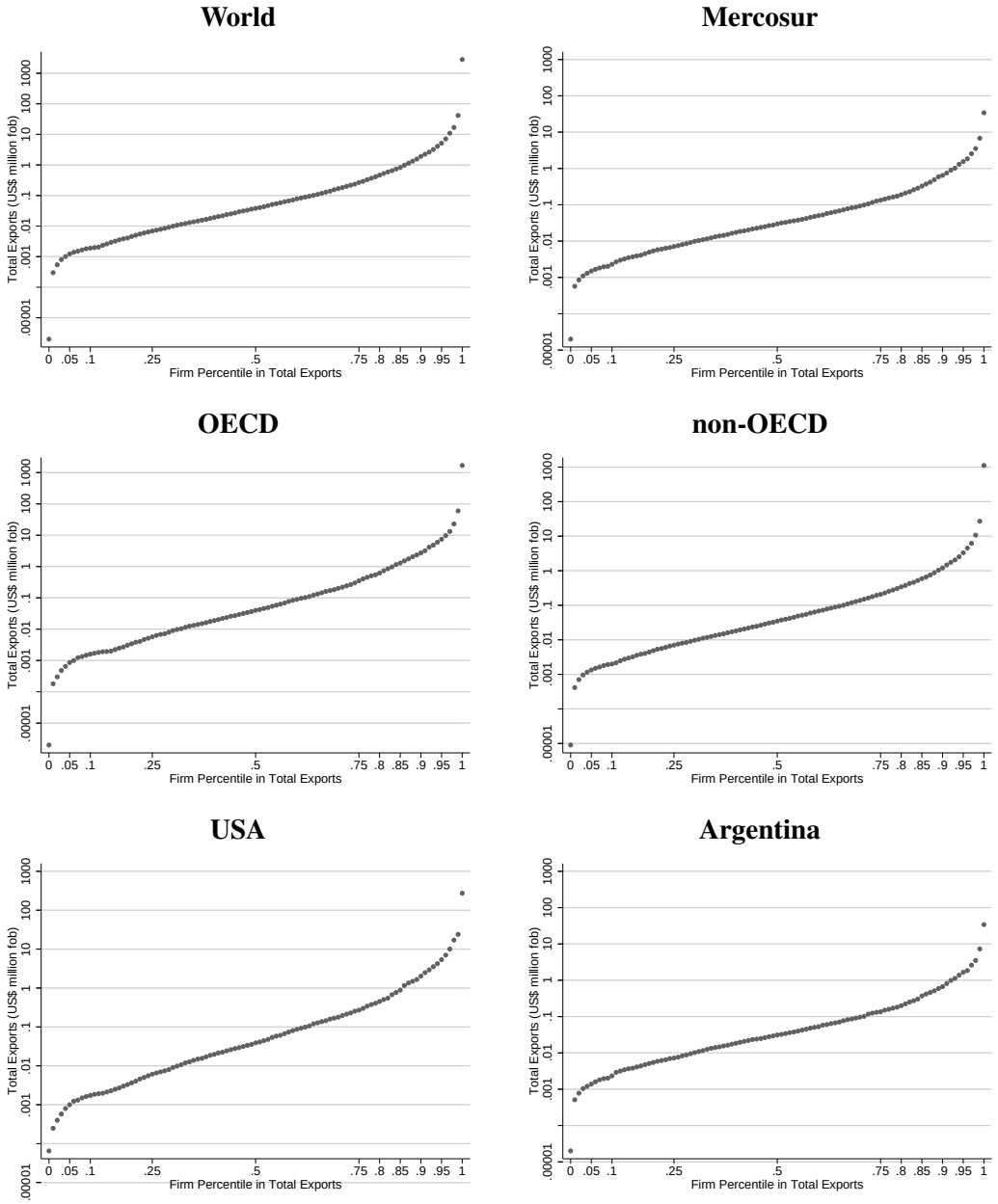
Rank	Destination	Exports (US$ mill.)	Share in tot. exports (%)	# of Products
1.	USA	1,772	15.6	1,211
2.	UK	947	8.3	201
3.	Japan	770	6.8	205
4.	Italy	711	6.2	281
5.	China	710	6.2	94
6.	Brazil	706	6.2	740
7.	Mexico	669	5.9	741
8.	Argentina	547	4.8	1,677
9.	Korea Rep.	536	4.7	81
10.	France Monaco	524	4.6	269
11.	Belgium-Luxembourg	369	3.2	172
12.	Peru	365	3.2	1,718
13.	Netherlands	310	2.7	150
14.	Germany	258	2.3	382
15.	Colombia	190	1.7	606
16.	Venezuela	180	1.6	601
17.	Spain	169	1.5	387
18.	Bolivia	159	1.4	1,714
19.	Ecuador	139	1.2	658
20.	Canada	121	1.1	288
21.	Saudi Arabia	115	1.0	19
22.	Switzerland, Liechtenstein	105	.9	112
23.	Turkey	75	.7	35
24.	Indonesia	69	.6	27
25.	Uruguay	54	.5	715

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Export values in US$ million fob. Products at the Harmonized-System 6-digit level.



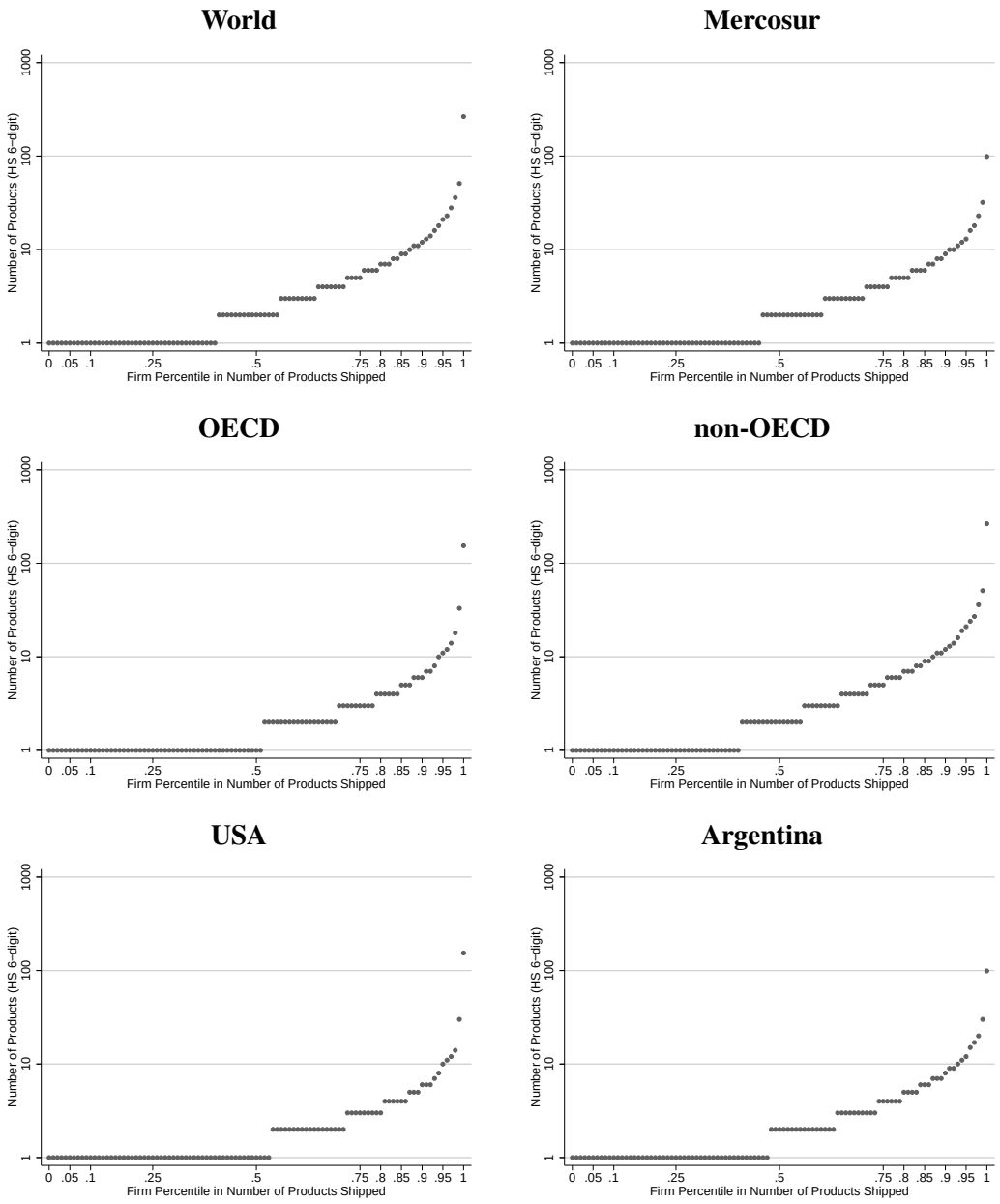
Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members of the OECD in 1990. Products at the Harmonized-System 6-digit level.

Figure 8.1: **Exporter Scope Distribution for Up to 25 Products**



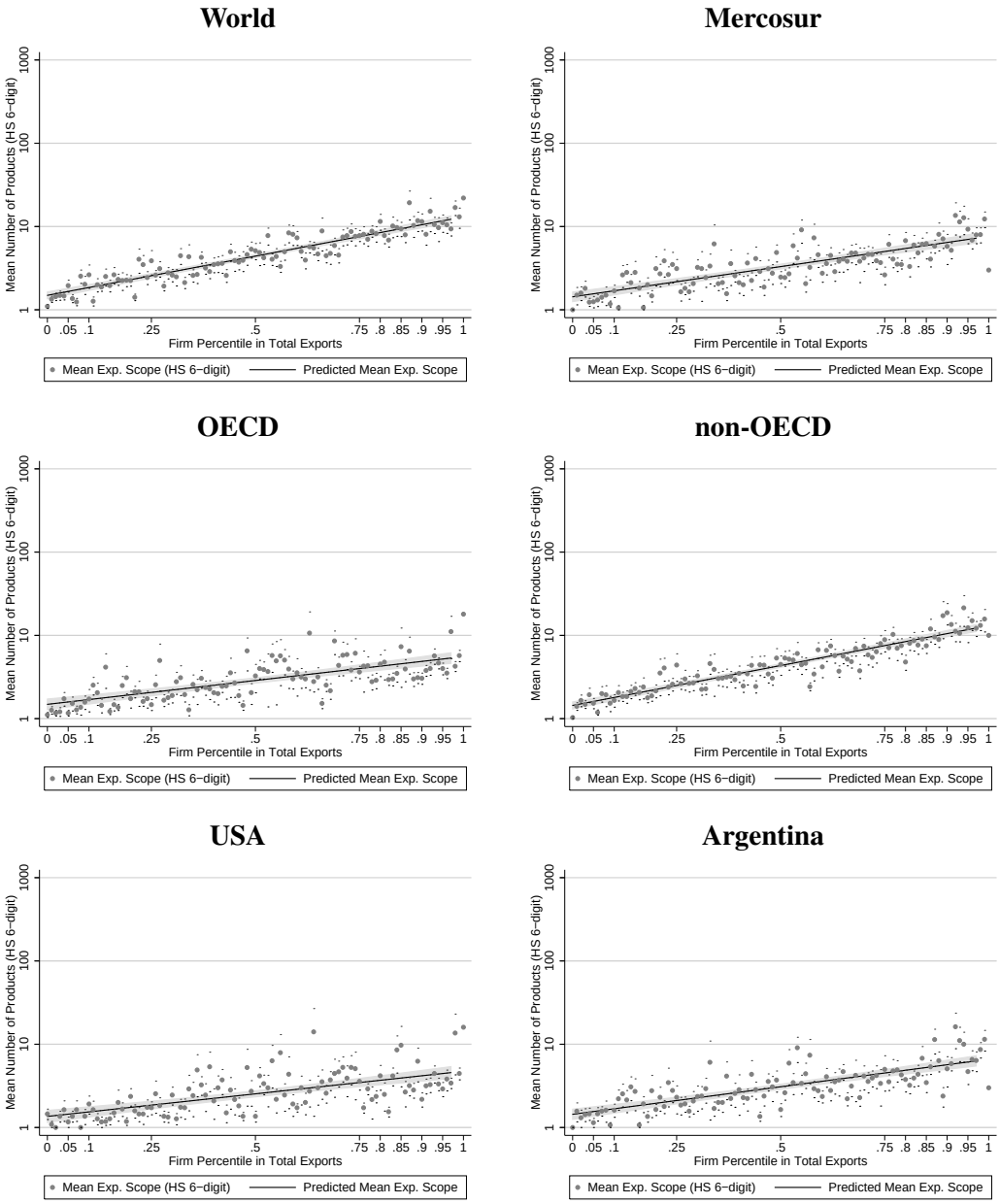
Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.

Figure 8.2: **Total Saless Distribution**



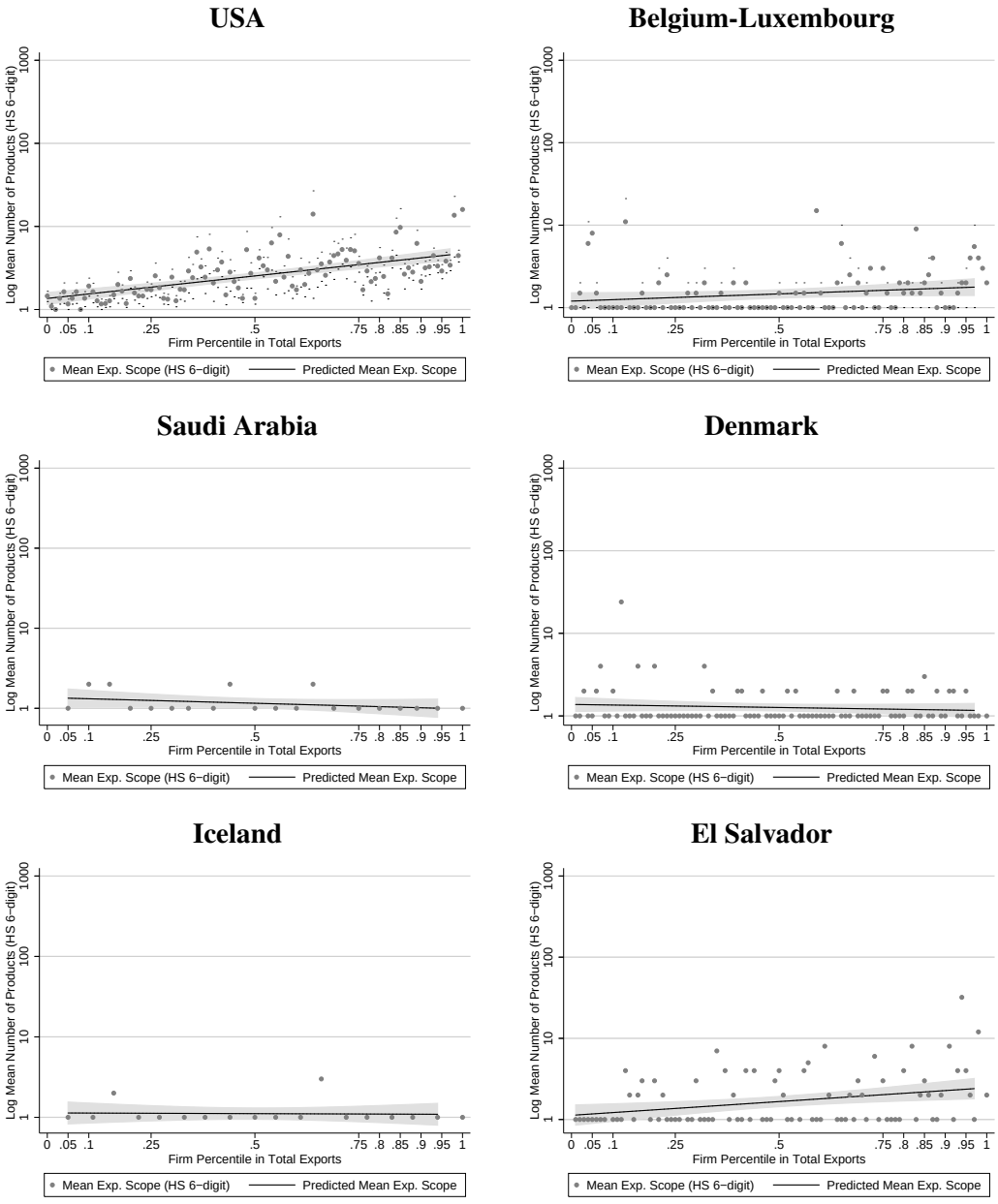
Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products. *Note*: Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.

Figure 8.3: **Exporter Scope Distribution**



Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Large circles depict the mean number of products by percentile, small dots above and below indicate a one-standard-error deviation. Fitted line from an ordinary least squares regression of the mean number of products on the percentile, up to the 98th percentile, with a 95-percent confidence band around.

Figure 8.4: **Exporter Scope and Total Exports Distribution**



Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Selection of the six countries at the fiftieth through hundredth percentiles among Chile's top 100 export destinations (El Salvador, Iceland, Denmark, Saudi Arabia, Belgium-Luxembourg, USA). Products at the Harmonized-System 6-digit level. Large circles depict the mean number of products by percentile, small dots above and below indicate a one-standard-error deviation. Fitted line from an ordinary least squares regression of the mean number of products on the percentile, up to the 98th percentile, with a 95-percent confidence band around.

Figure 8.5: **Exporter Scope and Total Exports Distribution by Country**

Table 8.4: Correlations between Local and Worldwide Total Exports Percentiles

Local and World pctl.	Corr. coeff.	Spearman's rank corr. coeff.	Local on world regression coeff.		Local, firm FE corr. coeff. Dest. & firm FE
			OLS	Dest. FE	
	(1)	(2)	(3)	(4)	(5)
Coefficient	.602	.596	.648	.752	.715
p value[a]	0	0	0	0	0
Obs.	12,785	12,785	12,785	12,785	12,785
# Dest.				140	139
Panels					4,099

[a]Null hypothesis: Coefficient is zero.

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Aggregation to exports by firm and destination. Percentiles in discrete numbers. Unconditional and Spearman's rank correlation coefficients in columns 1 and 2. Regression coefficients of local total-exports percentiles on a firm's worldwide total-exports percentile in columns 3 (OLS with constant) and 4 (destination FE regression). In column 5, correlation coefficient between local total-exports percentiles and the firm-fixed effect from a local total-exports percentile regression on firm and destination fixed effects.

Table 8.5: Exporter Scope and Local Total-Exports Percentile Correlations

Log # Products	OLS	Firm FE	Dest. FE	Dest. & Firm FE
	(1)	(2)	(3)	(4)
Log Local total-exp. percentile	.224 (.008)***	.338 (.009)***	.228 (.007)***	.299 (.009)***
Constant	.774 (.010)***	.886 (.010)***	.806 (.023)***	.913 (.023)***
Observations	12,427	12,427	12,427	12,427
Panels		4,091		4,091
R^2 (R^2 within)[a]	.063	.156	.154	.212

[a]R^2 is within fit for firm FE regressions in columns 2 and 4.

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Aggregation to exports by firm and destination. Products at the Harmonized-System 6-digit level. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 8.6: Correlates of Destination Effects on Exporter Scope

Log # Products	Unconditional Scope			Scope Dest. FE (Table 8.5, col. 3)		
	(1)	(2)	(3)	(4)	(5)	(6)
Mean Log Market size			.044			-.020
			(.011)***			(.015)
Log Population		.028	-.016		.011	.040
		(.015)*	(.015)		(.011)	(.021)*
Log GDP per cap.		-.008	-.056		-.034	-.001
		(.025)	(.028)**		(.013)**	(.023)
Log GDP	.015			-.007		
	(.017)			(.010)		
Log Distance	-.105	-.104	-.138	-.080	-.093	-.158
	(.038)***	(.035)***	(.034)***	(.060)	(.059)	(.072)**
Common borders	.186	.178	.200	.283	.248	.128
	(.078)**	(.070)**	(.066)***	(.166)*	(.162)	(.187)
Common language	.148	.132	.086	.199	.193	.132
	(.034)***	(.034)***	(.045)*	(.083)**	(.081)**	(.091)
Observations	12,202	12,202	10,503	132	132	91
R^2	.067	.068	.071	.228	.274	.347

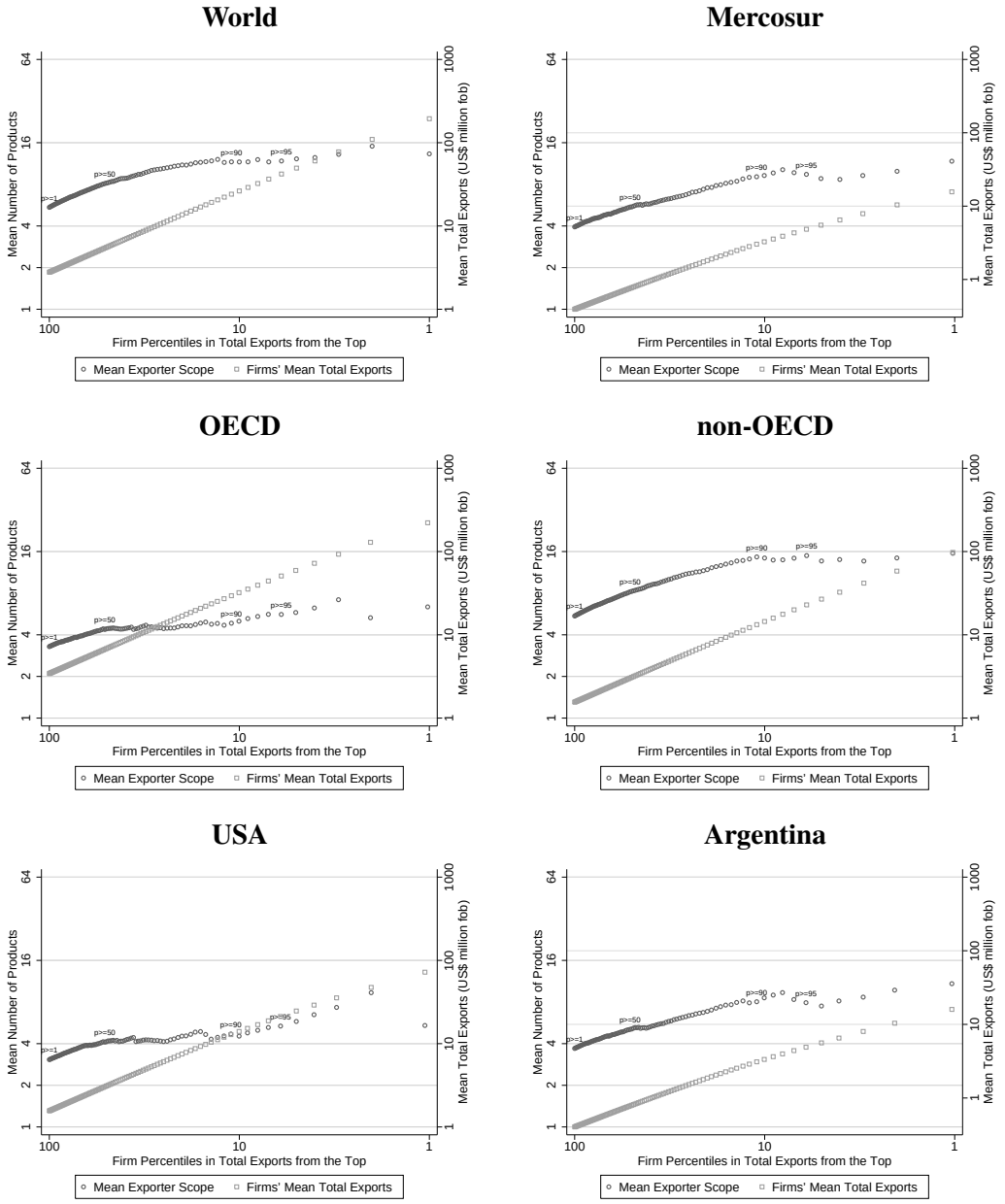
Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.

Note: Aggregation to exports and exporter scope by firm and destination. Regressions of exporter scope (columns 1 through 3) and of destination fixed effects (columns 4 through 6) on destination-level predictors, where latter destination fixed effects in exporter scope are from a destination fixed effects regression controlling for the firm's local total-exports percentile (column 3 in Table 8.5). Mean log market size is average sectoral absorption over *ISIC rev. 2* industries at destination level. Standard errors in parentheses: * significance at ten, ** five, *** one percent. Clustered standard errors at destination level in columns 1 through 3.

Table 8.7: Exporter Scope Distribution by Destination

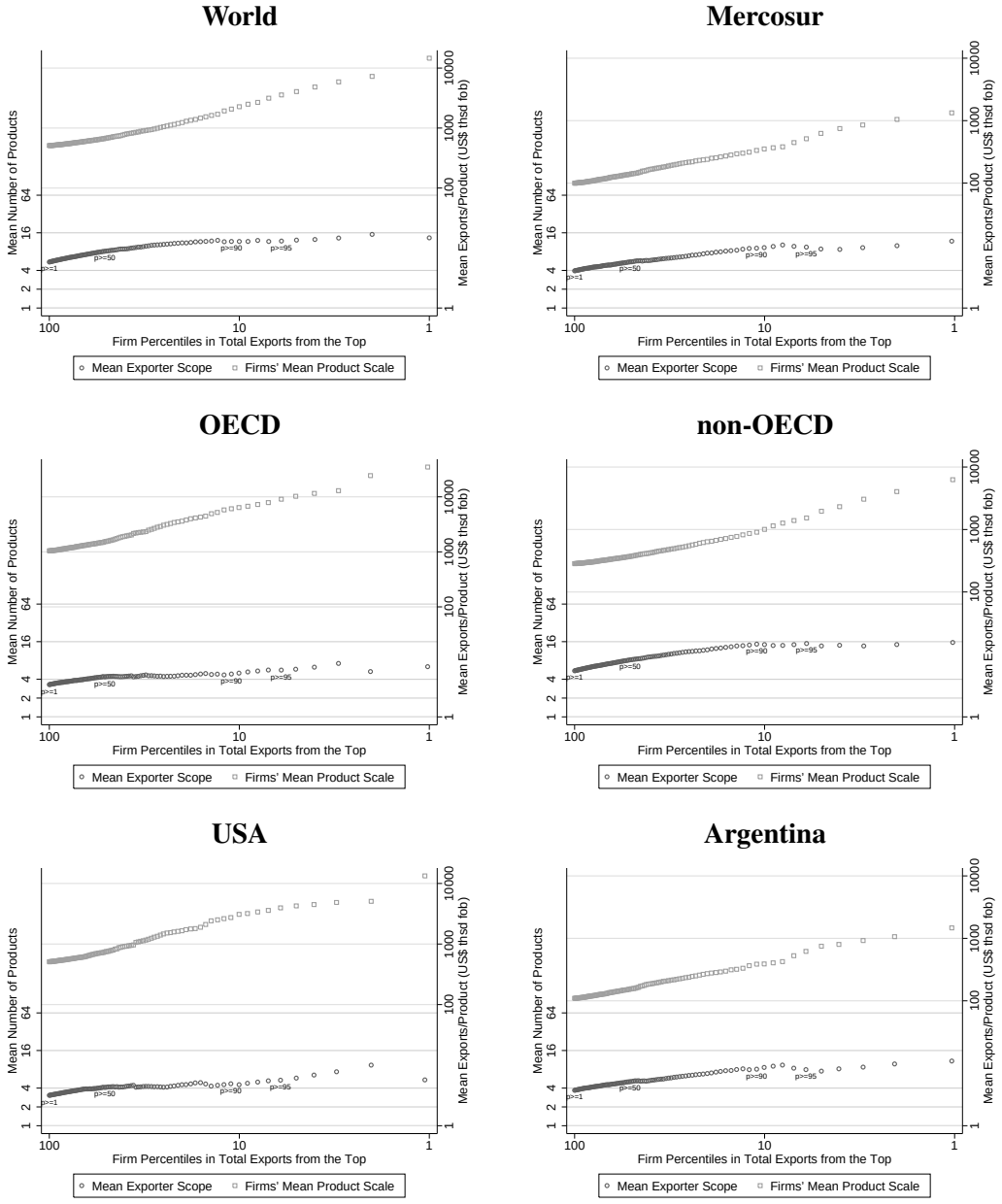
	World	Mercosur	OECD	non-OECD	USA	Argentina
Percentile	(1)	(2)	(3)	(4)	(5)	(6)
00	1	1	1	1	1	1
05	1	1	1	1	1	1
10	1	1	1	1	1	1
25	1	1	1	1	1	1
50	2	2	1	2	1	2
75	5	4	3	5	3	4
80	7	5	4	7	3	5
85	9	6	5	9	4	6
90	12	9	6	12	6	8
95	21	13	11	21	10	12
99	51	32	33	51	30	30
100	265	99	154	265	154	99

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.



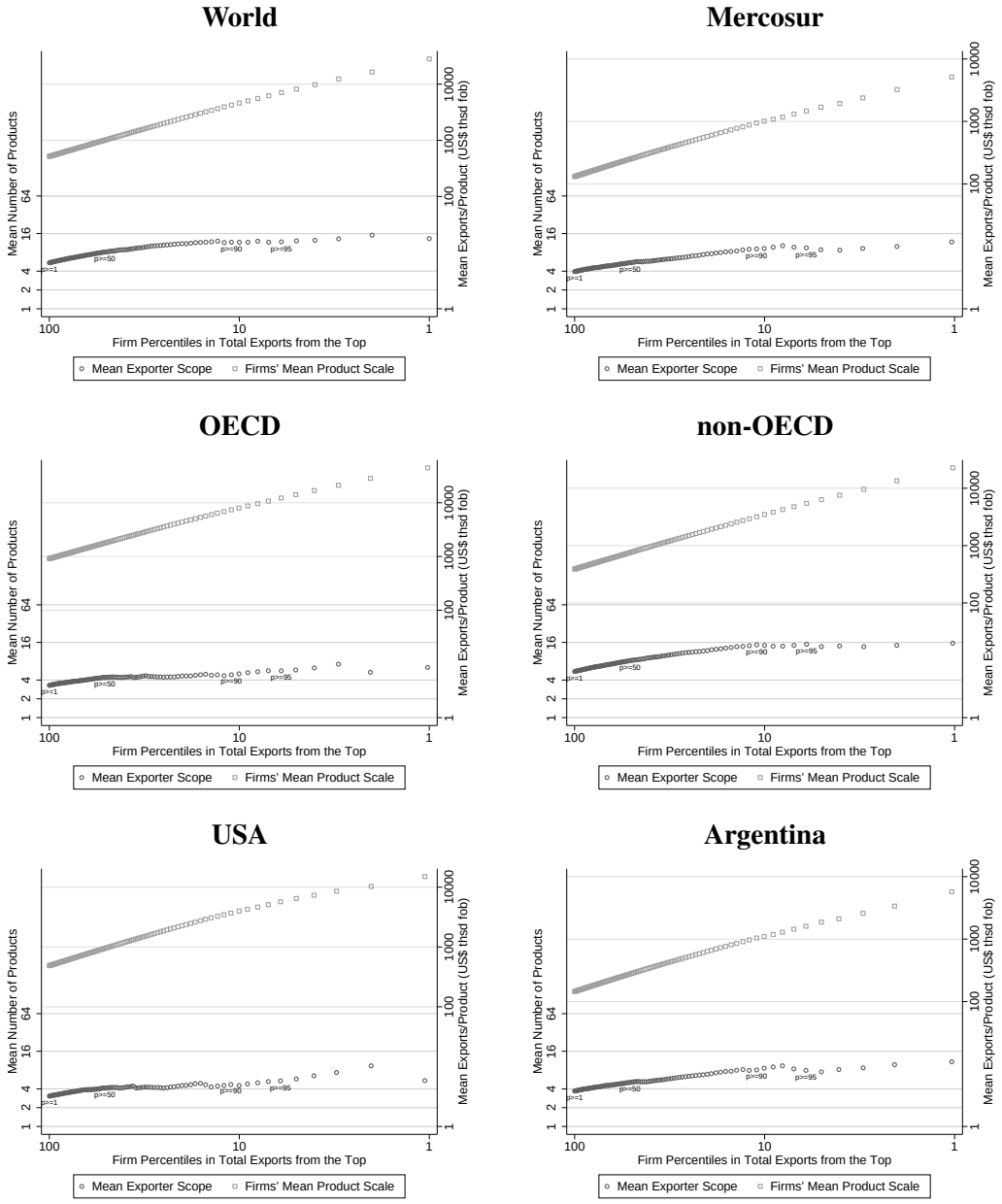
Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products. *Note*: Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters; at the next percentile are exporter observations with shipments in the top 99 percentiles; up to the right-most observations with exporters whose shipments are in the top percentile.

Figure 8.6: **Average Scope, Total Exports and the Total Exports Distribution**



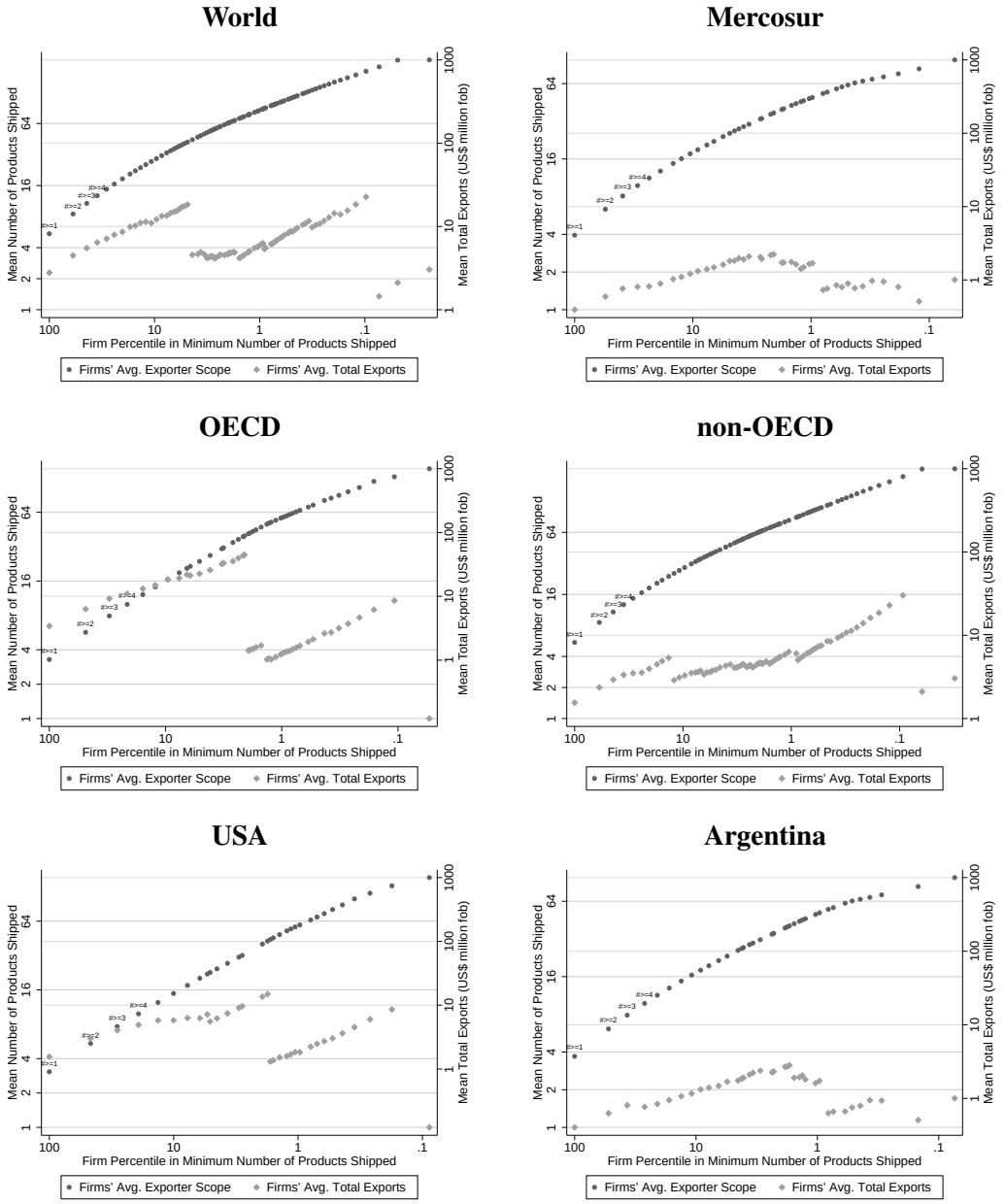
Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products. *Note*: Average scale is scope-weighted mean exporter scale. Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters; at the next percentile are exporter observations with shipments in the top 99 percentiles; up to the right-most observations with exporters whose shipments are in the top percentile.

Figure 8.7: **Average Scope, Average Scale and the Total Exports Distribution**



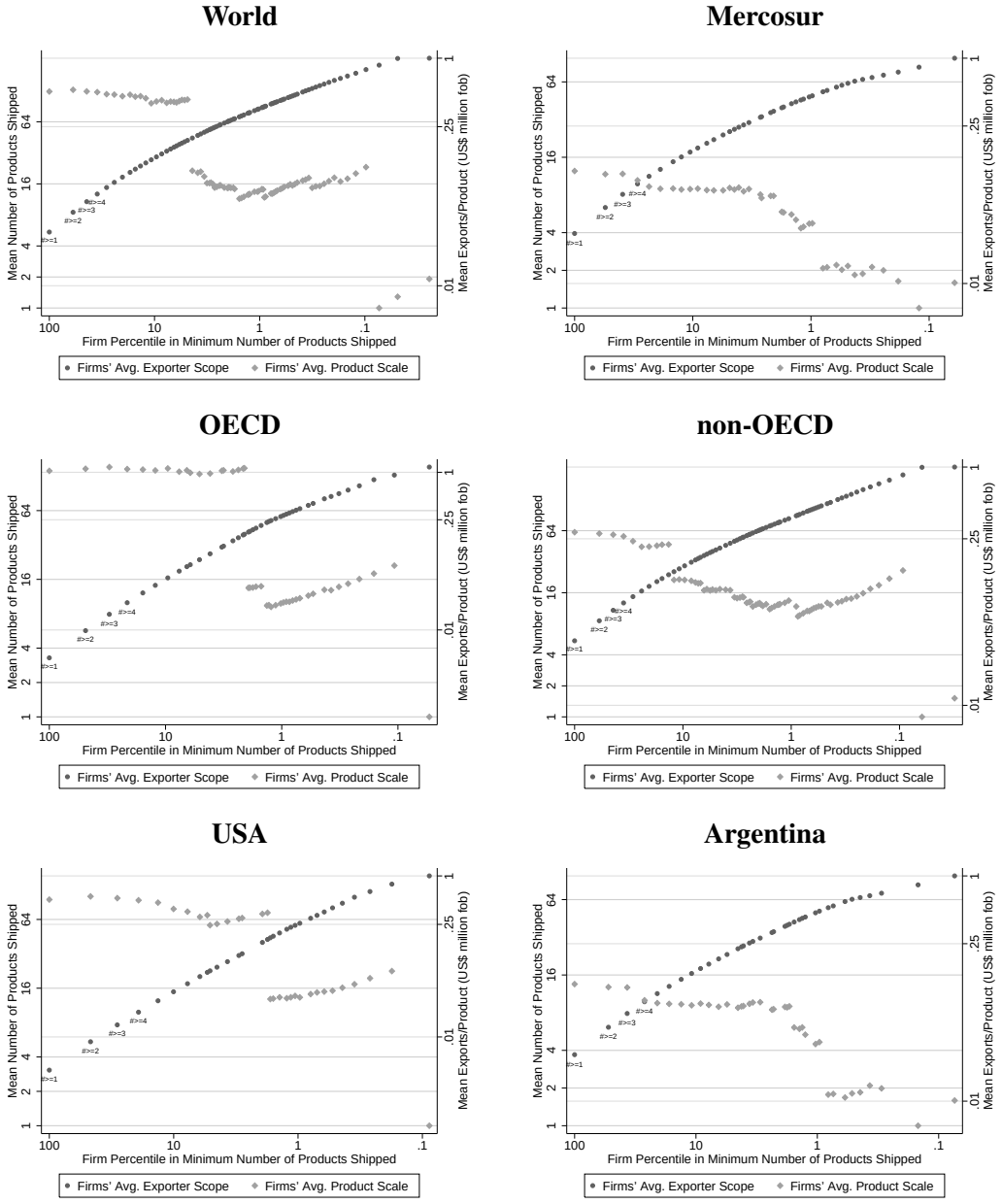
Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Average scale is unweighted mean exporter scale. Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters; at the next percentile are exporter observations with shipments in the top 99 percentiles; up to the right-most observations with exporters whose shipments are in the top percentile.

Figure 8.8: **Average Scope, Unweighted Average Scale and the Total Exports Distribution**



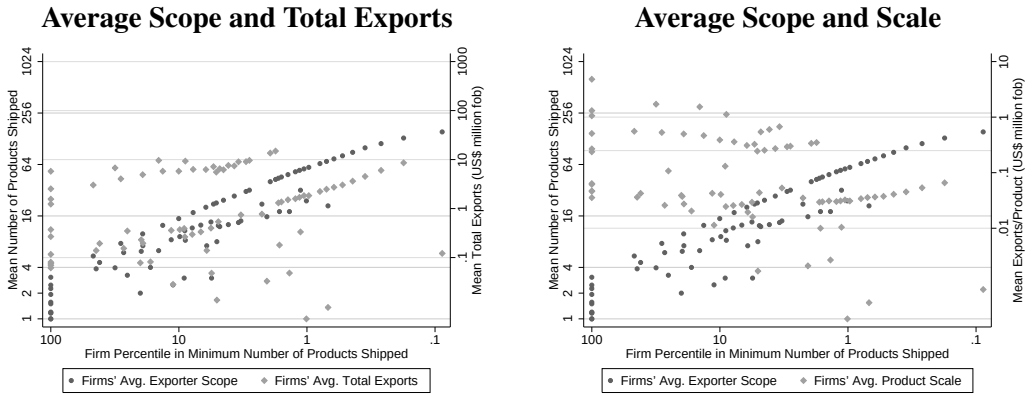
Source: Chilean customs data 2000, manufacturing firms and their manufactured products.
Note: Mean total exports are the average over firms' total exports at a percentile in a destination. Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 8.9: **Average Scope, Total Exports and the Exporter Scope Distribution**



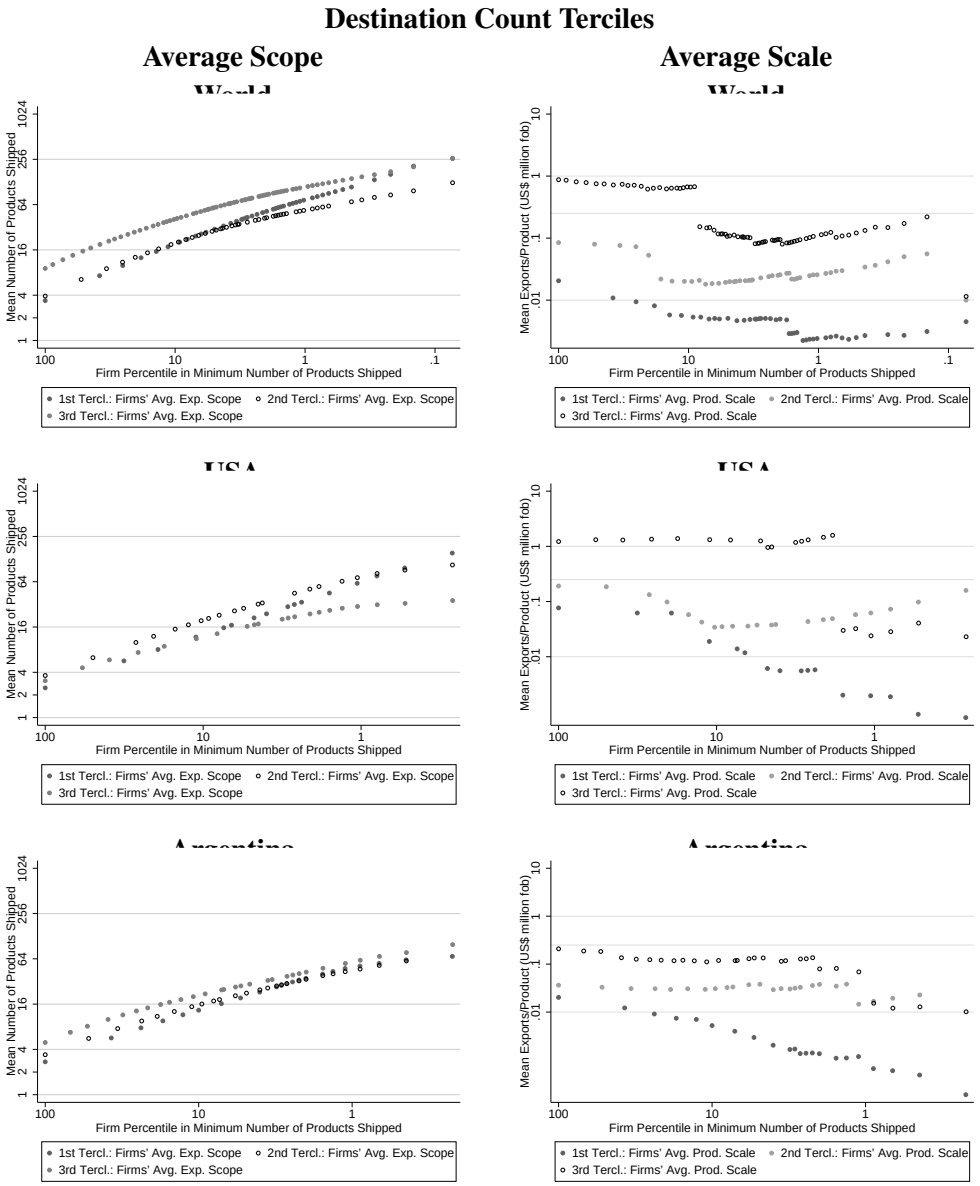
Source: Chilean customs data 2000, manufacturing firms and their manufactured products.
Note: Average scale is scope-weighted mean exporter scale. Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 8.10: **Average Scope, Average Scale and the Exporter Scope Distribution**



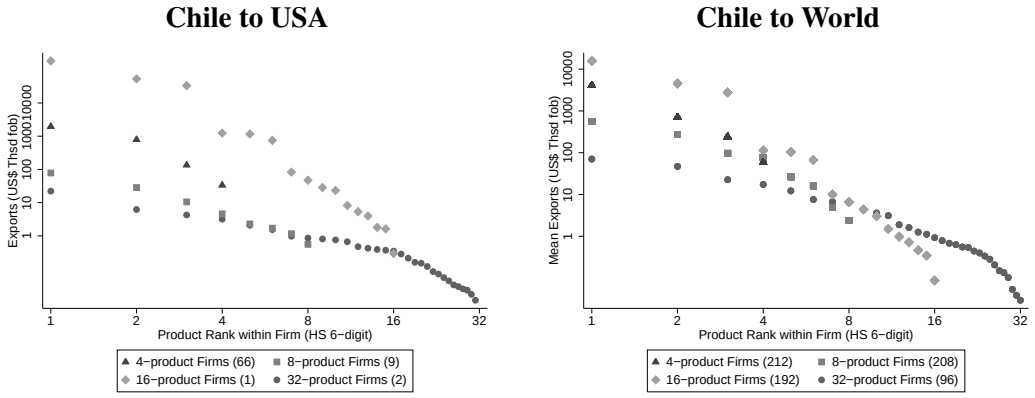
Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Selection of the eleven countries at the first and every tenth percentile among Chile's top 100 export destinations (Armenia, Suriname, Zimbabwe, Bangladesh, Nicaragua, El Salvador, Iceland, Denmark, Saudi Arabia, Belgium-Luxembourg, USA). Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 8.11: **Average Scope, Scale and Exporter Distributions Across Countries**



Sources: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Average scale is scope-weighted mean exporter scale. Products at the Harmonized-System 6-digit level. Firms by tercile of worldwide number of destinations. Left panel: average scope; right panel: average scale. Left-most observations are all exporters, shipping at least one product to the destination; at the next percentile those exporters that ship at least two products to the destination, and so fourth; up to the right-most exporter who ships the largest number of products to the destination.

Figure 8.12: **Average Scope, Average Scale and the Exporter Distribution by Firm Type**



Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products. *Note*: Products at the Harmonized-System 6-digit level. World average from pooling destinations to which firms in a given exporter-scope group ship.

Figure 8.13: **Within-firm Sales Distribution**

Table 8.8: Sales of Lowest-ranked Product and Exporter Scope

	Firm-destination-prod. data			
	All dest.	All dest.	All dest.	All dest.
estimator	OLS	Dest. FE	Firm FE	Firm, Dest. FE
	(1)	(2)	(3)	(4)
Log # Products	-2.268	-2.081	-1.938	-2.001
	(.025)***	(.025)***	(.030)***	(.031)***
Const.	10.127	10.508	9.941	9.889
	(.024)***	(.286)***	(.023)***	(.257)***
Obs.	12,777	12,777	12,777	12,777
Firm panels			4,099	4,099
R^2	.401	.449	.328	.368

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products. *Note*: Products at the Harmonized-System 6-digit level. Standard errors in parentheses.

Underlying regression equation

$$\ln p_{d\phi G}\, x_{d\phi G} = \beta \ln G_{d\phi} \;+\; c_d \;+\; \ln \epsilon_{d\phi G}$$

for firm ϕ exporting $G_{d\phi}$ products to destination d. By convention, a firm's G-th product is the one with the smallest sales at a destination.

Table 8.9: Product Rank Correlations between Reference Countries and Rest of World

Reference country	USA		Argentina	
Elsewhere	World	OECD	World	non-OECD
	(1)	(2)	(3)	(4)
Corr. coeff.	.488	.591	.744	.753
Spearman's rank corr. coeff.	.567	.667	.660	.679
Obs.	6,481	2,261	7,252	5,957
# Firm-goods	35,980	8,273	35,215	26,332
Share Ref. country & elsewhere	.180	.273	.206	.226
Share Ref. country only	.064	.335	.086	.120
Share Elsewhere only	.756	.392	.708	.654
# Firms	4,099	1,862	4,099	3,226
Share Active in Ref. country	.150	.220	.178	.211

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products. *Note*: Products at the Harmonized-System 6-digit level, ranked by decreasing export value within firms and destinations.

Table 8.10: Overlaps between Reference Countries and Rest of World by Product Rank

Prod.	Rest of World				OECD, non-OECD			
rank	Overlap	Overlap	#Dest./	#Firms	Overlap	Overlap	#Dest./	#Firms
in Ref.		top prd.	firm			top prd.	firm	
country	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Reference country: USA (overlap with Rest of World or OECD)								
1	.86	.86	7.7	559	.90	.90	4.2	359
2	.48	.88	10.3	224	.52	.99	4.9	136
4	.42	.68	12.1	71	.45	.86	4.9	39
8	.39	.69	10.8	12	.59	1.13	5.9	7
16	.11	.78	9.00	4	.13	.87	7.50	2
Reference country: Argentina (overlap with Rest of World or non-OECD)								
1	.84	.84	5.8	654	.86	.86	4.8	604
2	.53	.84	7.1	320	.56	.86	5.8	305
4	.40	.74	8.0	137	.44	.77	6.7	134
8	.29	.75	9.9	46	.33	.81	8.2	44
16	.37	.63	8.9	13	.47	.73	7.3	12
32	.18	.57	14.0	2	.16	.64	12.5	2
64	.11	.11	9.0	1	.13	.13	8.0	1

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products. *Note*: Destination counts in columns 3 and 7 are mean numbers of destinations to which firms with at least as many products as reported for a rank ship. Overlap in columns 1 and 5 is the proportion of destinations that a product of reported rank reaches relative to the overall destination counts (in columns 3 and 7). Overlap in columns 2 and 6 is the proportion of destinations that the top-selling product of firms with at least as many products as reported for a rank reaches relative to the overall destination counts (in columns 3 and 7). Products at the Harmonized-System 6-digit level, ranked by decreasing export value within firm in reference country. Sample restricted to firm-products that ship to reference country and at least one other destination.

Table 8.11: Share of Top-selling Products in Total Exports

Scope		USA			Argentina			World	
in Ref.	Top 1	Top 2	Top 3	Top 1	Top 2	Top 3	Top 1	Top 2	Top 3
country	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	1.000			1.000			1.000		
2	.829	1.000		.820	1.000		.821	1.000	
3	.745	.943	1.000	.719	.930	1.000	.755	.943	1.000
4	.691	.887	.968	.683	.896	.975	.693	.894	.970
8	.567	.765	.855	.628	.805	.879	.572	.780	.875
16	.721	.863	.944	.643	.807	.885	.603	.763	.849
32							.369	.550	.664
64	.218	.280	.339				.147	.273	.386
128									
Mean	.662	.769	.814	.642	.772	.832	.577	.715	.784

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products. *Note*: Products at the Harmonized-System 6-digit level. Share of top-two (top-three) products for firms with exporter scope of at least two (three) products.

Table 8.12: Worldwide Exports by Exporter Scope and Product Rank

	Product rank									
Exporter scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single product	.283 (.064)									
2 products	1.521 (.545)	.064 (.016)								
3 products	1.775 (.814)	.091 (.015)	.015 (.003)							
4 products	2.799 (.809)	.499 (.184)	.042 (.011)	.007 (.001)						
5 products	1.999 (.602)	.660 (.279)	.090 (.036)	.032 (.020)	.004 (.001)					
6 products	3.313 (1.616)	.697 (.339)	.275 (.121)	.063 (.022)	.021 (.006)	.009 (.003)				
7 products	1.240 (.355)	.184 (.044)	.088 (.028)	.028 (.007)	.017 (.005)	.007 (.002)	.003 (.0009)			
8 products	4.956 (3.917)	1.881 (1.598)	.222 (.141)	.139 (.102)	.039 (.025)	.010 (.005)	.007 (.004)	.001 (.0005)		
9 products	2.493 (1.076)	.417 (.212)	.121 (.042)	.066 (.018)	.028 (.009)	.017 (.006)	.008 (.003)	.004 (.001)	.001 (.0004)	
10 products	4.972 (3.165)	2.205 (1.421)	.954 (.541)	.257 (.110)	.159 (.074)	.083 (.047)	.034 (.016)	.013 (.006)	.003 (.001)	.0008 (.0004)
Avg. varieties[a]	360	216	164	134	112	98	83	68	64	61

[a] Average number of exporter products across rows.

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing products and firms, except exporters with scope exceeding ten products. Exporter-good mean values in US$ million fob. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 8.13: Exports to Mercosur by Exporter Scope and Product Rank

	Product rank									
Exporter scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single product	.148 (.041)									
2 products	.160 (.030)	.015 (.003)								
3 products	.485 (.195)	.102 (.049)	.037 (.029)							
4 products	.624 (.316)	.119 (.060)	.019 (.008)	.006 (.003)						
5 products	.408 (.103)	.088 (.022)	.027 (.007)	.007 (.001)	.003 (.0009)					
6 products	.286 (.076)	.066 (.019)	.024 (.007)	.013 (.004)	.004 (.001)	.002 (.0007)				
7 products	.443 (.135)	.092 (.030)	.055 (.021)	.017 (.006)	.011 (.005)	.003 (.001)	.002 (.0009)			
8 products	.364 (.135)	.061 (.022)	.032 (.012)	.011 (.004)	.006 (.002)	.003 (.0008)	.001 (.0004)	.0005 (.0001)		
9 products	.350 (.136)	.116 (.044)	.041 (.013)	.021 (.006)	.011 (.004)	.004 (.001)	.002 (.0006)	.001 (.0003)	.0005 (.0001)	
10 products	.625 (.243)	.187 (.086)	.040 (.012)	.024 (.008)	.018 (.007)	.009 (.003)	.006 (.002)	.003 (.0008)	.002 (.0006)	.001 (.0004)
Avg. varieties[a]	152	86	65	51	43	37	29	27	24	24

[a] Average number of exporter products across rows.

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing products and firms, except exporters with scope exceeding ten products.
Note: Exporter-good mean values in US$ million fob. Mercosur includes Argentina, Brazil, Paraguay, Uruguay. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 8.14: Exports to OECD by Exporter Scope and Product Rank

	Product rank									
Exporter scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single product	.684 (.243)									
2 products	1.391 (.512)	.086 (.016)								
3 products	4.580 (1.595)	.493 (.226)	.022 (.006)							
4 products	3.880 (1.042)	.872 (.495)	.097 (.035)	.028 (.010)						
5 products	4.922 (1.768)	1.422 (.556)	.321 (.127)	.096 (.059)	.010 (.005)					
6 products	1.685 (.508)	.636 (.244)	.156 (.065)	.069 (.028)	.028 (.012)	.015 (.007)				
7 products	9.809 (5.814)	4.584 (2.837)	.516 (.242)	.224 (.118)	.151 (.093)	.092 (.068)	.015 (.007)			
8 products	1.455 (.757)	.678 (.392)	.416 (.300)	.137 (.106)	.082 (.060)	.049 (.044)	.021 (.018)	.017 (.016)		
9 products	26.967 (26.595)	4.052 (3.781)	1.044 (.961)	.099 (.063)	.019 (.016)	.012 (.010)	.010 (.010)	.007 (.006)	.0003 (.0002)	
10 products	9.105 (6.870)	2.489 (1.431)	1.488 (.782)	.330 (.180)	.256 (.149)	.126 (.078)	.063 (.040)	.027 (.017)	.008 (.004)	.004 (.002)
Avg. varieties[a]	177	90	59	43	33	27	21	16	14	19

[a] Average number of exporter products across rows.

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing products and firms, except exporters with scope exceeding ten products.
Note: Exporter-good mean values in US$ million fob. OECD includes all OECD members in 1990. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 8.15: Exports to U.S. by Exporter Scope and Product Rank

	Product rank									
Exp. scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single prod.	.280 (.060)									
2 products	1.288 (.362)	.143 (.054)								
3 products	1.875 (.455)	.318 (.100)	.038 (.016)							
4 products	1.963 (.833)	.791 (.427)	.135 (.061)	.034 (.014)						
5 products	4.681 (1.760)	.748 (.295)	.240 (.090)	.075 (.033)	.023 (.011)					
6 products	2.174 (1.382)	1.384 (1.063)	.226 (.137)	.151 (.128)	.104 (.094)	.010 (.006)				
7 products	3.897 (2.134)	1.705 (.843)	.568 (.285)	.164 (.080)	.091 (.047)	.048 (.033)	.024 (.018)			
8 products	.078 (.034)	.028 (.013)	.011 (.005)	.005 (.0009)	.002 (.0004)	.002 (.0003)	.001 (.0003)	.0006 (.0002)		
9 products	31.007 (30.067)	7.165 (6.773)	.082 (.075)	.028 (.026)	.019 (.018)	.017 (.016)	.011 (.011)	.002 (.001)	.0003 (.0002)	
10 products	.467 (.281)	.200 (.163)	.058 (.030)	.037 (.020)	.027 (.017)	.024 (.017)	.017 (.015)	.006 (.005)	.004 (.003)	.0003 (.0002)
Varieties[a]	109	53	34	24	17	13	9	6	5	7

[a] Average number of exporter products across rows.

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing products and firms, except exporters with scope exceeding ten products.
Note: Exporter-good mean values in US$ million fob. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 8.16: Exports to Argentina by Exporter Scope and Product Rank

	Product rank									
Exp. scope	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Single prod.	.154 (.041)									
2 products	.203 (.038)	.018 (.003)								
3 products	.715 (.294)	.142 (.061)	.042 (.032)							
4 products	.384 (.117)	.086 (.045)	.022 (.009)	.005 (.002)						
5 products	.303 (.078)	.092 (.025)	.026 (.009)	.007 (.002)	.002 (.0005)					
6 products	.342 (.098)	.080 (.026)	.028 (.009)	.013 (.004)	.004 (.001)	.002 (.001)				
7 products	.396 (.113)	.119 (.036)	.069 (.024)	.021 (.006)	.013 (.005)	.004 (.002)	.002 (.001)			
8 products	.251 (.149)	.038 (.020)	.012 (.004)	.008 (.003)	.006 (.002)	.002 (.0005)	.001 (.0003)	.0005 (.0002)		
9 products	.595 (.226)	.202 (.086)	.049 (.016)	.026 (.008)	.011 (.004)	.007 (.002)	.004 (.002)	.002 (.0008)	.0007 (.0003)	
10 products	.654 (.277)	.205 (.103)	.057 (.024)	.030 (.013)	.023 (.012)	.011 (.005)	.003 (.001)	.002 (.0009)	.0009 (.0003)	.0003 (.0001)
Varieties[a]	127	69	51	39	32	27	23	20	18	18

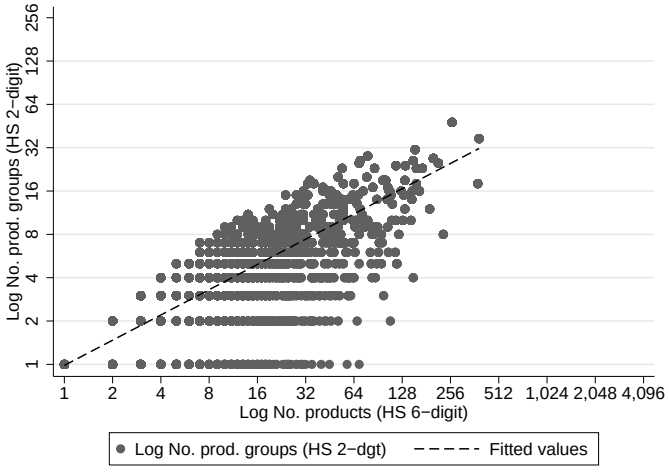
[a] Average number of exporter products across rows.

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing products and firms, except exporters with scope exceeding ten products.
Note: Exporter-good mean values in US$ million fob. Products at the Harmonized-System 6-digit level, ranked by decreasing export value from first to last column. Standard errors in brackets.

Table 8.17: Concentration of Exports in HS 2-digit Product Groups

	Firms with # Products, or more						
	2	4	8	16	32	64	128
# of Firms	2,713	1,830	1,116	579	249	86	22
Share Firms with Single Prod. Grp.	.313	.183	.107	.074	.024	.012	.000
Mean # Product Groups	6.804	7.696	9.046	11.135	14.139	18.405	24.789
Median # Product Groups	5	6	7	9	13	16	23.500
Share Top ranked Product Group	.847	.813	.790	.764	.729	.673	.615
Share 2nd ranked Product Group	.162	.155	.150	.152	.148	.166	.175
Share 3rd ranked Product Group	.058	.057	.054	.054	.057	.065	.076
Share 4th ranked Product Group	.032	.032	.030	.028	.029	.032	.036
Share 5th ranked Product Group	.021	.021	.020	.019	.020	.021	.025

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level, product groups at the Harmonized-System 2-digit level. Product-group shares in worldwide sales.



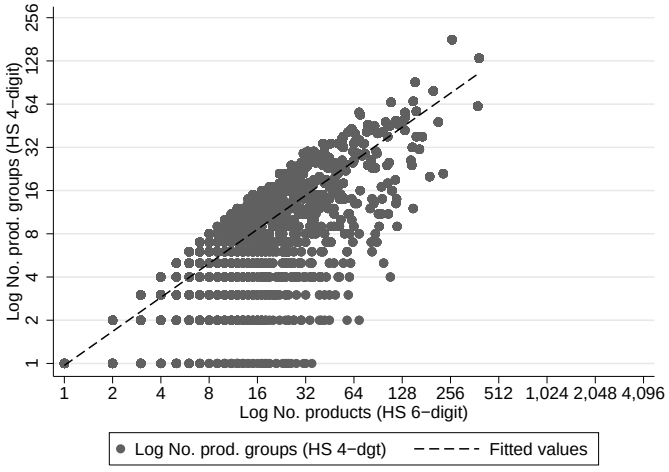
Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level, product groups at the Harmonized-System 2-digit level.

Figure 8.14: **Worldwide 2-digit Product-group Count and Scope Association**

Table 8.18: Concentration of Exports in HS 4-digit Product Groups

	Firms with # Products, or more						
	2	4	8	16	32	64	128
# of Firms	2,713	1,830	1,116	579	249	86	22
Share Firms w/ Single Prd. Grp.	.178	.087	.050	.036	.008	.000	.000
Mean # Product Groups	18.442	20.342	23.687	29.623	39.095	54.373	81.359
Median # Product Groups	10	11	14	21	29	45	62
Share Top ranked Product Group	.765	.714	.683	.653	.605	.526	.499
Share 2nd ranked Product Group	.179	.175	.167	.163	.162	.177	.156
Share 3rd ranked Product Group	.074	.074	.072	.073	.077	.092	.083
Share 4th ranked Product Group	.042	.042	.042	.042	.043	.048	.054
Share 5th ranked Product Group	.028	.028	.028	.029	.030	.034	.040

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level, product groups at the Harmonized-System 4-digit level. Product-group shares in worldwide sales.



Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level, product groups at the Harmonized-System 4-digit level.

Figure 8.15: **Worldwide 4-digit Product-group Count and Scope Association**

Table 8.19: Total Exports Decompositions at the Firm Level

	Log #	Log Exports/product				
OLS	Products	#≥ 1	#≥ 2	#≥ 3	#≥ 10	#≥ 25
			World			
Log Total exports	.180	.820	.896	.921	.959	.966
	(.006)***	(.006)***	(.007)***	(.007)***	(.010)***	(.017)***
Const.	1.520	-1.520	-1.859	-2.109	-2.990	-3.770
	(.022)***	(.022)***	(.022)***	(.022)***	(.027)***	(.039)***
Obs.	4,099	4,099	2,438	1,807	557	149
R^2	.205	.842	.881	.901	.940	.955
			Mercosur			
Log Total exports	.195	.805	.888	.926	.967	1.007
	(.010)***	(.010)***	(.012)***	(.013)***	(.019)***	(.034)***
Const.	1.476	-1.476	-1.779	-1.979	-2.852	-3.622
	(.039)***	(.039)***	(.040)***	(.039)***	(.050)***	(.076)***
Obs.	1,642	1,642	903	644	149	28
R^2	.199	.810	.858	.894	.945	.970
			OECD			
Log Total exports	.105	.895	.965	1.003	1.004	.924
	(.006)***	(.006)***	(.009)***	(.010)***	(.020)***	(.044)***
Const.	.967	-.967	-1.403	-1.721	-2.829	-3.982
	(.026)***	(.026)***	(.029)***	(.032)***	(.066)***	(.120)***
Obs.	1862	1862	908	567	114	24
R^2	.129	.915	.934	.944	.956	.951
			non-OECD			
Log Total exports	.199	.801	.870	.890	.939	.958
	(.007)***	(.007)***	(.008)***	(.008)***	(.012)***	(.020)***
Const.	1.602	-1.602	-1.951	-2.201	-3.021	-3.757
	(.027)***	(.027)***	(.027)***	(.026)***	(.031)***	(.044)***
Obs.	3,226	3,226	1,909	1,420	437	118
R^2	.215	.815	.860	.887	.931	.951

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products. *Note*: Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Firm ω's total exports $t_d(\omega)$ to destination market d can be decomposed into: $G_d(\omega)\, a_d(\omega)$, where $G_d(\omega)$ is the exporters' average number of products shipped to destination d (the average scope of the exporter at the destination), and $a_d(\omega)$ are the exporter's average sales per product in destination country d (the scale of the exporter's average product). Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 8.20: Exporter Scale and Exporter Scope Correlations

Log Exp./prod.	Firm data[a]	Firm-destination data[b]			Firm-destination-good data[c]		
	Ind. FE	Ind. FE	Ind. & dest. FE	Firm & dest. FE	Firm & dest. FE	Ind., prd. & dest. FE	Firm, prd. & dest. FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
				World			
Log # Products	.180 (.031)***	-.092 (.023)***	-.023 (.023)	.226 (.027)***	.840 (.028)***	.370 (.029)***	.792 (.028)***
Obs.	4,099	12,777	12,777	12,777	21,142	21,142	21,142
R^2	.008	.001	.058	.124	.082	.200	.176
Corr. Firm FE, $X'\beta$				-.203	-.113		-.094
				Mercosur			
Log # Products	.068 (.049)***	-.001 (.044)***	-.017 (.044)***	.168 (.082)***	1.104 (.068)***	.373 (.063)***	1.075 (.070)***
Obs.	1,642	2,193	2,193	2,193	4,158	4,158	4,158
R^2	.001	5.09e-07	.017	.241	.108	.128	.215
Corr. Firm FE, $X'\beta$				-.198	-.255		-.255
				OECD			
Log # Products	.194 (.061)***	.015 (.050)***	-.026 (.050)***	.440 (.071)***	.892 (.068)***	.295 (.061)***	.752 (.063)***
Obs.	1,862	4,046	4,046	4,046	5,679	5,679	5,679
R^2	.006	.00002	.030	.135	.070	.301	.312
Corr. Firm FE, $X'\beta$				-.280	-.217		-.210
				non-OECD			
Log # Products	.140 (.034)***	-.115 (.025)***	-.026 (.025)***	.172 (.031)***	.886 (.032)***	.407 (.032)***	.835 (.032)***
Obs.	3,226	8,724	8,724	8,724	15,455	15,455	15,455
R^2	.005	.002	.076	.139	.094	.182	.170
Corr. Firm FE, $X'\beta$				-.184	-.117		-.091

[a]Aggregation: worldwide exports by firm.
[b]Aggregation: exports by firm and destination.
[c]Aggregation: exports by firm, destination, product group (Harmonized System 2-digit level).

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products. *Note*: Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level; product-group fixed effects at the Harmonized-System 2-digit level. Industry fixed effects at the *ISIC* two-digit level. Constant not reported. R^2 is within fit for firm FE regressions. Correlation coefficient between firm fixed effects and all other predictors (including destination and product fixed effects). Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 8.21: Correlates of Firm Effects on Exporter Scale and Exporter Scope

	Firm Eff. on Exporter Scale from Log Exports/prod. regressions			Firm Eff. on Exporter Scope from Log # Products regressions		
	Firm FE only	Firm FE & scope	Firm & dest. FE, & scope	Firm FE only	Firm FE & scale	Firm & dest. FE, & scale
	(1)	(2)	(3)	(4)	(5)	(6)
Log ww. # Products	.114 (.008)***	-.138 (.009)***	-.057 (.010)***	.763 (.005)***	.757 (.006)***	.736 (.006)***
Log ww. Exp./prod.	.917 (.005)***	.914 (.006)***	.896 (.007)***	.009 (.003)**	-.038 (.004)***	-.017 (.004)***
Log ww. # Dest.	-.912 (.013)***	-.773 (.014)***	-.610 (.017)***	-.420 (.009)***	-.374 (.009)***	-.326 (.010)***
No OECD exp.	-.066 (.027)**	-.077 (.029)***	.288 (.034)***	.035 (.017)**	.038 (.018)**	-.118 (.020)***
Log OECD Exp.[a]	.010 (.005)**	.005 (.006)	.005 (.007)	.018 (.003)***	.017 (.004)***	.019 (.004)***
No Mercosur exp.	-.175 (.029)***	-.213 (.032)***	-.048 (.037)	.116 (.019)***	.125 (.020)***	.233 (.022)***
Log Mercosur Exp.[a]	.019 (.006)***	.021 (.007)***	.030 (.008)***	-.004 (.004)	-.005 (.004)	-.008 (.005)*
Obs.	4,099	4,099	4,099	4,099	4,099	4,099
R^2	.947	.940	.919	.861	.860	.812

[a]Log of nonzero exports $\times$ indicator.

Sources: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.

Note: Aggregation to exports by firm and destination. Regressions of firm fixed effects on firm-level predictors, where firm fixed effects on exporter scale in column 1 are from a firm fixed effects regression with no additional controls, in column 2 from a firm fixed effects regression controlling for scope (log # products) and in column 3 from a firm fixed effects regression controlling for scope and destination fixed effects (see column 3 in Table 8.20). Firm fixed effects on exporter scope in column 4 are from a firm fixed effects regression with no additional controls, in column 5 from a firm fixed effects regression controlling for scale (log exports/product) and in column 6 from a firm fixed effects regression controlling for scale and destination fixed effects. Worldwide number of products at the Harmonized-System 6-digit level. Domestic Brazilian locations counted at the municipality level. Workforce characteristics in shares of total employment. White-collar, blue-collar employment (insignificant at ten-percent level) and constant not reported. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 8.22: Correlates of Destination Effects on Exporter Scale and Exporter Scope

	Destination Eff. on Exporter Scale from Log Exports/prod. regressions			Destination Eff. on Exp. Scope from Log # Products regressions		
	Dest. FE only	Dest. FE & scope	Firm & dest. FE, & scope	Dest. FE only	Dest. FE & scale	Firm & dest. FE, & scale
	(1)	(2)	(3)	(4)	(5)	(6)
Mean Log Market size	-.032	-.031	.043	.011	.012	-.003
	(.075)	(.074)	(.058)	(.014)	(.014)	(.013)
Log Population	.190	.193	.287	.017	.018	.033
	(.108)*	(.107)*	(.085)***	(.021)	(.020)	(.018)*
Log GDP per cap.	.265	.263	.291	-.033	-.030	.005
	(.110)**	(.109)**	(.086)***	(.022)	(.021)	(.019)
Log Distance	.350	.327	-.462	-.199	-.196	-.155
	(.389)	(.384)	(.304)	(.065)***	(.063)***	(.057)***
Common borders	-.283	-.270	-.282	.139	.133	.255
	(.806)	(.797)	(.630)	(.157)	(.152)	(.138)*
Common language	-.246	-.235	.007	.100	.095	.099
	(.486)	(.480)	(.380)	(.097)	(.094)	(.085)
Const.	-11.207	-11.008	-8.124	1.868	1.727	1.278
	(3.812)***	(3.768)***	(2.980)***	(.638)***	(.617)***	(.562)**
Obs.	94	94	94	94	94	94
R^2	.197	.194	.401	.384	.388	.396

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products. *Note*: Aggregation to exports by firm and destination. Regressions of destination fixed effects on destination-level predictors, where destination fixed effects on exporter scale in column 1 are from a destination fixed effects regression with no additional controls, in column 2 from a destination fixed effects regression controlling for scope (log # products, see column 2 in Table 8.20) and in column 3 from a destination fixed effects regression controlling for scope and firm fixed effects (see column 3 in Table 8.20). Destination fixed effects on exporter scope in column 4 are from a destination fixed effects regression with no additional controls, in column 5 from a destination fixed effects regression controlling for scale (log exports/product) and in column 6 from a destination fixed effects regression controlling for scale and firm fixed effects. Mean log market size is average sectoral absorption over *ISIC rev. 2* industries at destination level. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 8.23: Correlates of Product Effects on Exporter Scale and Exporter Scope

	Product Eff. on Exporter Scale from Log Exports/prod. regressions			Product Eff. on Exporter Scope from Log # Products regressions		
	Prod. FE only	Prod. FE & scope	Firm, dst. & prd. FE, & scope	Prod. FE only	Prod. FE & scale	Firm, dst. & prd. FE, & scale
	(1)	(2)	(3)	(4)	(5)	(6)
Comparative adv.	.110	.111	.012	-.004	-.006	.004
	(.040)***	(.040)***	(.037)	(.006)	(.006)	(.006)
Reference priced	.243	.246	-1.594	-.006	-.012	.072
	(.884)	(.882)	(.833)*	(.133)	(.133)	(.142)
Differentiated	-1.285	-1.265	-1.858	-.050	-.021	-.007
	(.807)	(.805)	(.761)**	(.121)	(.121)	(.130)
Log ww. # Dest.	-1.257	-1.301	-.883	.114	.143	.212
	(.954)	(.952)	(.899)	(.143)	(.143)	(.153)
No OECD imp.	-18.145	-17.362	-6.657	-2.022	-1.611	-.991
	(12.019)	(11.993)	(11.326)	(1.803)	(1.806)	(1.929)
Log OECD Imp.[a]	.172	.139	.234	.085	.081	.108
	(.242)	(.242)	(.228)	(.036)**	(.036)**	(.039)***
No Mercosur imp.	.933	.889	1.180	.113	.092	.132
	(2.339)	(2.334)	(2.204)	(.351)	(.351)	(.376)
Log Mercos. Imp.[a]	.172	.176	-.042	-.009	-.013	-.009
	(.229)	(.229)	(.216)	(.034)	(.034)	(.037)
Const.	2.037	2.153	-1.826	-.297	-.344	-.822
	(5.119)	(5.108)	(4.824)	(.768)	(.769)	(.822)
Obs.	94	94	94	94	94	94
R^2	.370	.375	.167	.236	.254	.37

[a]Log of nonzero imports $\times$ indicator.

Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.

Note: Aggregation to exports by firm, destination, product group (Harmonized System 2-digit level). Regressions of product fixed effects at the Harmonized-System 2-digit level on product-level predictors, where product fixed effects on exporter scale in column 1 are from a product fixed effects regression with no additional controls, in column 2 from a product fixed effects regression controlling for scope (log # products) and in column 3 from a product fixed effects regression controlling for scope as well as destination and firm fixed effects (see column 6 in Table 8.20). Product fixed effects on exporter scope in column 4 are from a product fixed effects regression with no additional controls, in column 5 from a product effects regression controlling for scale (log exports/product) and in column 6 from a product fixed effects regression controlling for scale as well as destination and firm fixed effects. Balassa (1965) comparative-advantage for Brazil from UN Comtrade trade data for 2000 at the *ISIC Rev. 2* level: product h's comparative advantage is $BADV_h \equiv [T_h^{\text{Brazil}}/\sum_k T_k^{\text{Brazil}}]/[T_h^{\text{World}}/\sum_k T_k^{\text{World}}]$, where T_h are worldwide exports. Products classification by degree of differentiation from Rauch (1999), conservative definition, revision 2 (2007): share of Harmonized-System 6-digit products at the Harmonized-System 2-digit level; omitted benchmark category is homogeneous products (traded on an organized exchange). Worldwide product-group imports exclude Brazil as importer and exporter. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 8.24: Conditional Exporter Scale and Exporter Scope Correlations

Log Exp./prod.	World			Mercosur	OECD	non-OECD
	(1)	(2)	(3)	(4)	(5)	(6)
Log # Products	.666 (.295)**	.483 (.166)***	.113 (.184)	-1.181 (.603)*	.500 (.472)	-.283 (.206)
Squared Log # Products	-.429 (.579)	-.029 (.227)	-.051 (.226)	1.322 (.764)*	.019 (.622)	.343 (.244)
Cubic Log # Products	.193 (.384)	-.086 (.096)	-.070 (.096)	-.648 (.329)**	-.181 (.287)	-.185 (.101)*
Quartic Log # Products	-.058 (.102)	.018 (.012)	.016 (.012)	.091 (.043)**	.034 (.039)	.027 (.013)**
Pentic Log # Products	.007 (.009)					
Log # Prd. × Log ww. # Dest.			.162 (.035)***	.272 (.117)**	.117 (.093)	.133 (.041)***
Obs.	12,777	12,777	12,777	2,193	4,046	8,731
R^2	.126	.126	.129	.255	.143	.143
Corr. Firm FE, $X'\beta$	-.191	-.19	-.085	-.052	-.178	-.082
F statistic: Zero Firm FE	3.954***	3.955***	3.532***	2.130***	3.756***	3.279***

Sources: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Aggregation to exports by firm and destination. Regressions controlling for firm and destination fixed effects (expanding regression (4) in Table 8.20). Worldwide number of products at the Harmonized-System 6-digit level. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 8.25: Individual Product Sales Regressions

Log Sales	OLS	Dest. FE	Dest. & Firm FE
	(1)	(2)	(3)
Log # Products	.826 (.017)***	.929 (.017)***	1.177 (.017)***
Log Product Rank	-2.239 (.017)***	-2.258 (.017)***	-2.349 (.017)***
Obs.	37,172	37,172	37.172
Panels			4,099
R^2 (R^2 within)[a]	.418	.450	.543

[a] R^2 is within fit for firm FE regressions in column 3.

Sources: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Individual export sales by product, firm and destination. Products at the Harmonized-System 6-digit level. Industry fixed effects at the *CNAE* two-digit level. Constant and destination fixed effects not reported. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Appendix: Data Sources

A Exports and firm data for Brazil

Exports data. Our data are based on the universe of Brazilian customs declarations for merchandize exports. The Brazilian customs office *SECEX* (*Secretaria de Comércio Exterior*) collects and compiles the reports by plant, month and *NCM* product code (*Nomenclatura Comum do Mercosul*). We restrict our data to the year 2000, for which *SECEX* provides export values in current US$, export quantities, and mass of shipment. These customs declarations are legally mandatory for merchandize exports. Exports of services are not reported to *SECEX*, but manufactures exports by non-manufacturing firms are reported.

NCM product codes are eight-digit numbers, of which the first six digits coincide with the first six digits in the Harmonized System. We aggregate the pristine eight-digit subproduct information from the monthly plant level to annual information by exporting firm at the six-digit Harmonized System level. This facilitates comparability to other Brazilian and international data sources (e.g. to export-country studies at the six-digit Harmonized System level such as Feenstra (1994) or Hummels and Klenow (2005), and to firm-level studies such as Eaton et al. (2004)). Gomes and Ellery Jr. (2007) document main statistics for a subsample of the *SECEX* data by exporter and destination;[1] they show that the data exhibit market access patterns broadly similar to the French exporter-destination data (Eaton et al. 2004).

The full data for the year 2000 include 15,907 firms with shipments of 4,357 products at the six-digit Harmonized System level to 173 destinations. We remove all export records with zero value, which include shipments of commercial samples but also potential reporting errors. We retain 224,952 firm-destination-product observations. Our results on exporter scope are robust to removing zero-scale products from the product count.

Firm data. We obtain a record of all Brazilian firms, including only domestically operating firms, as well as the sector affiliation of Brazilian exporters, from *RAIS* (*Relação Anual de Informações Sociais* of the Brazilian labor ministry *MTE*). By Brazilian law, every private or public-sector employer must report workforce information to *RAIS* every year.[2] *RAIS* does

[1] Gomes and Ellery Jr. (2007) link the *SECEX* data to survey data for a sample of medium to large manufacturing firms in order to obtain domestic sales and productivity information. We use the universe of exporters instead and choose to control for firm-specific characteristics, such as productivity or the domestic Brazilian market share, with firm fixed effects.

[2] *RAIS* primarily provides information to a federal wage supplement program (*Abono Salarial*), by which every worker with formal employment during the calendar year receives the equivalent of a monthly minimum wage. *RAIS* records are then shared across government agencies. An employer's failure to report complete workforce information can, in principle, result in fines proportional to the workforce size, but fines are rarely issued. In practice, workers and employers have strong incentives to ascertain complete *RAIS* records because payment of the annual public wage supplement is exclusively based on *RAIS*. The ministry of labor estimates

not provide information on sales or factor uses other than labor so that we cannot obtain domestic sales or productivity information.

B Exports data for Chile

The Chilean comparison data are courtesy of Álvarez et al. (2007) and ultimately derive from the universe of Chilean customs declarations for merchandize exports, similar to the Brazilian *SECEX* data. The Chilean customs authorities collect the reports by firm and Harmonized System eight-digit code. Services exports are not reported. We restrict our data to the year 2000, as for Brazil.

We aggregate the pristine eight-digit Harmonized System information to annual information by exporting firm at the six-digit Harmonized System level. This ensures comparability to our Brazilian data (and international sources, as mentioned above). The full data for the year 2000 include 5,558 firms (about a third of the Brazilian number) with shipments of 3,324 products at the six-digit Harmonized System level (about three quarters of the Brazilian number) to 146 destinations (27 less than from Brazil). We remove all export records with zero value, which include shipments of commercial samples but also potential reporting errors. We retain 48,431 firm-destination-product observations (about a fifth of the Brazilian number).

The sector affiliation of Chilean exporters is reported at *ISIC revision 2* three-digit level. We use the *ISIC revision 2* for the export firm from the original data. Robustness checks using product-level information for sector affiliates from the Harmonized System six-digit level and using the product code of the top selling product for the firm do not yield substantively different results. For Chile, we only retain observations of manufacturing firms and their manufacturing products (comparable to Section 5 for Brazil).

C Auxiliary data for Brazil and Chile

Concordances. We map destination information from Brazilian and Chilean country codes into the international ISO system. There are six-digit product codes in the 999000s in Brazil, for which there exist no corresponding Harmonized System entries. These codes are not closely related to traded merchandize and include entries such as on-board aircraft consumption of combustibles or merchandize for non-financial rental. We remove the codes from the data in Section 5. To compare our Brazilian data to sector-level product-market information by destination country, we map the Harmonized System six-digit codes to *ISIC revision 2*

that well above 90 percent of all formally employed workers in Brazil are covered in *RAIS* throughout the 1990s. Data collection is typically concluded by March following the year of observation. For a data description, see Menezes-Filho, Muendler and Ramey (2008).

at the two-digit level.[3] In the Chilean data, product codes are reported at the Harmonized System information.

Trade flow data by industry and destination. We link the firm-level product and destination information for Brazil and Chile to *WTF* (*World Trade Flow*) data for the year 2000 (Feenstra et al. 2005). We extract sector-level trade flow statistics in current US$ for Brazil's and Chile's export destination markets. For Brazil, we map the *SITC Rev. 2* four-digit sector information to the *SITC Rev. 2* two-digit level, and then to the two-digit *ISIC revision 2* level for combination with *SECEX*. For Chile, we map the *ISIC revision 2* information at the three-digit level to the two-digit *ISIC revision 2* level for combination.

For Brazil, he link between *SECEX* and *WTF* also provides us with an estimate of the coverage of Brazil's self-reported exports declarations. For manufactured merchandize sold directly by Brazilian manufacturers (Sections 3 and 5), *SECEX* covers 81.7 of *WTF* manufactures trade. Firm-based data selection of manufacturing activity in Section 5 is most closely comparable to Eaton et al. (2004), but we lose many observations because of missing sector information for the firms. With our focus on product-level explanations for international trade patterns, a product-related selection criterion for manufactures is a more natural one. Moreover, a product-level selection criterion for manufactured merchandize in Section 6 offers the most comprehensive coverage of manufacturing export activity: *SECEX* data for manufactured merchandize sold by firms from any sector, including commercial intermediaries (Section 6), covers 95.9 percent of *WTF*. The complete *SECEX* data across all sectors (Section 7) cover 88.7 percent of the reported *WTF* exports from Brazil: we find in *SECEX* US$ 54.1 billion of the US$ 61.0 billion exports in *WTF*. Conversely, only 1.3 percent of the observed *SECEX* product-destination observations have no corresponding *WTF* sector-destination entry. For firms from any sector with exports of any merchandize product, we have no *SECEX* information for only .45 percent of the *WTF* sector-destination observations.

Output data by industry and destination. We obtain manufacturing output by destination country and manufacturing industry for 2000 from the *Unido* Industrial Statistics Database at the two-digit *ISIC revision 2* level in current US$ (UNIDO 2005). We map the Harmonized System six-digit codes to *ISIC revision 2* at the two-digit level for this purpose.

Country and geographic data by destination. National accounts information for host-country regressors comes from the World Bank's World Development Indicators and the IMF's International Financial Statistics (population, GDP, consumption expenditure and household consumption expenditure in current US$). We use CEPII bilateral geographic data;[4] the data include the mean distance between Brasília or Santiago de Chile on the one hand and foreign capital cities (km) on the other hand, common borders with Brazil

[3] Our novel concordance will become available at *www.econ.ucsd.edu/muendler/brazil*.

[4] From *www.cepii.fr/anglaisgraph/bdd/distances.htm*.

or Chile, and a common language with Brazil (Portuguese-speaking Angola, China Macão SAR, Guinea Bissau, Mozambique and Portugal) or Chile (Spanish speaking countries).

Products data. We calculate Balassa (1965) comparative-advantage measures for Brazilian and Chilean products from UN Comtrade trade data for the year 2000 at the *ISIC rev. 2* four-digit level. Product h's Balassa advantage is

$$BADV_h \equiv \frac{X_h^{\text{Brazil}} / \sum_k X_{k,t}^{\text{Brazil}}}{X_h^{\text{World}} / \sum_k X_{k,t}^{\text{World}}},$$

where X_h are exports. Note that this index measures revealed comparative advantage from international comparisons of exports data, and is blind to possible sources of advantage. Any explanation of comparative advantage is consistent with this measure. We first map the *ISIC rev. 2* information to the Harmonized System six-digit level and then aggregate to the Harmonized System two-digit level by taking the unweighed average across six-digit products in the Brazilian data.

We use the Rauch (1999) classification of products by degree of differentiation under Rauch's conservative definition.[5] We first map Rauch's *SITC Rev. 2* four-digit sector information to the Harmonized System six-digit level and then aggregate to the Harmonized System two-digit level by taking the unweighed average across six-digit products in the Brazilian data.

We reuse the *WTF* data for the year 2000 (Feenstra et al. 2005) to obtain products-level measures of typical import destinations. For this purpose, we drop Brazilian or Chilean exports and imports from the *WTF* data and calculate for the rest of the world the number of destinations to which products at the *SITC Rev. 2* four-digit level (Brazil) or the *ISIC rev. 2* three-digit level (Chile) ship, and what import values they exhibit worldwide, in the OECD and Mercosur (Argentina, Paraguay, Uruguay). For Brazil, we map the *SITC Rev. 2* four-digit sector information to the Harmonized System six-digit level and then aggregate to the Harmonized System two-digit level by taking the unweighed average across six-digit products. For Chile, we just aggregate from the Harmonized System six-digit level to the Harmonized System two-digit level by taking the unweighed average across six-digit products.

[5] We use Rauch's revision 2 from 2007 (available at *www.econ.ucsd.edu/∼jrauch/intltrad*)

References

Álvarez, Roberto, Hasan Faruq, and Ricardo A. López, "New Products in Export Markets: Learning from Experience and Learning from Others," August 2007. Indiana University, Bloomington, unpublished manuscript.

Arkolakis, Costas and Marc-Andreas Muendler, "The Extensive Margin of Exporting Products: A Firm-level Analysis," *NBER Working Paper*, December 2010, *16641*.

Balassa, Bela, "Trade Liberalization and Revealed Comparative Advantage," *Manchester School of Economic and Social Studies*, May 1965, *33*, 99–123.

Bernard, Andrew B., J. Bradford Jensen, Stephen J. Redding, and Peter K. Schott, "Firms in International Trade," *Journal of Economic Perspectives*, Summer 2007, *21* (3), 105–30.

_ , Stephen J. Redding, and Peter K. Schott, "Multi-product Firms and Trade Liberalization," *Quarterly Journal of Economics*, 2011. advance access July 19, 2011.

Broda, Christian and David E. Weinstein, "Globalization and the Gains from Variety," *Quarterly Journal of Economics*, May 2006, *121* (2), 541–85.

Cameron, A. Colin, Jonah B. Gelbach, and Douglas L. Miller, "Robust Inference with Multi-way Clustering," *Journal of Business and Economic Statistics*, April 2011, *29* (2), 238–249.

Eaton, Jonathan and Samuel Kortum, "Technology, Geography, and Trade," *Econometrica*, September 2002, *70* (5), 1741–79.

_ , _ , and Francis Kramarz, "Dissecting Trade: Firms, Industries, and Export Destinations," *American Economic Review: Papers and Proceedings*, May 2004, *94* (2), 150–54.

Feenstra, Robert C., "New Product Varieties and the Measurement of International Prices," *American Economic Review*, March 1994, *84* (1), 157–77.

_ , Robert E. Lipsey, Haiyan Deng, Alyson C. Ma, and Hengyong Mo, "World Trade Flows: 1962-2000," *NBER Working Paper*, January 2005, *11040*.

Gomes, Victor and Roberto Ellery Jr., "Perfil das Exportações, Produtividade e Tamanho das Firmas no Brasil," *Revista Brasileira de Economia*, Jan-Mar 2007, *61* (1), 33–48.

Hummels, David and Peter J. Klenow, "The Variety and Quality of a Nation's Exports," *American Economic Review*, June 2005, *95* (3), 704–23.

Krugman, Paul R., "Scale Economies, Product Differentiation, and the Pattern of Trade," *American Economic Review*, 1980, *70* (5), 950–59.

Menezes-Filho, Naércio Aquino, Marc-Andreas Muendler, and Garey Ramey, "The Structure of Worker Compensation in Brazil, with a Comparison to France and the United States," *Review of Economics and Statistics*, May 2008, *90* (2), 324–346.

Poole, Jennifer P., "Knowledge Transfers from Multinational to Domestic Firms: Evidence from Worker Mobility," July 2010. University of California, Santa Cruz, unpublished manuscript.

Rauch, James E., "Networks versus Markets in International Trade," *Journal of International Economics*, June 1999, *48* (1), 7–35.

UNIDO, "INDSTAT3 2005 ISIC Rev. 2 User's Guide," *unido.org/doc/3531*, Vienna 2005.