The Extensive Margin of Exporting Goods: 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 good h (Harmonized System six-digit code). The panel data are unbalanced: firms ship different sets of goods by destination. We compare key statistics to similar data on French merchandize exports in 1986 at the firm-destination level (Eaton, Kortum and Kramarz 2004), and to U.S. data at the firm-destination-product level (Bernard, Jensen, Redding and Schott 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 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 (good) 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 level.

  The number of observations in our Brazilian *SECEX* (Chilean customs) data 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 *product 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 product 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 least 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: $t_d(\omega) = G_d(\omega)\, z_d(\omega)$, where $z_d(\omega) \equiv \sum_{g=1}^{G_d(\omega)} p_{dg}(\omega)\, x_{dg}(\omega)/G_d(\omega)$ is the firm's *average product scale*.

- A firm ω's *product mix*:
  $$\left[\sum_{g=1}^{G_d(\omega)} x_{dg}(\omega)^{\frac{\varepsilon-1}{\varepsilon}}\right]^{\frac{\varepsilon}{\varepsilon-1}},$$
  where ε is the elasticity of substitution between a firm's products. The product mix 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: $T_{sd} = V_{sd}\, \bar{z}_{sd}$.
     $V_{sd} \equiv \sum_{\omega\in\mathbf{\Omega}_{sd}} G_d(\omega) = M_{sd}\, \bar{G}_{sd}$ is the number of varieties shipped to d and these varieties' mean product scale is $\bar{z}_{sd} = [\sum_{\omega\in\mathbf{\Omega}_{sd}} t_d(\omega)]/[\sum_{\omega\in\mathbf{\Omega}_{sd}} G_d(\omega)] = \bar{t}_{sd}/\bar{G}_{sd}$ (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: $T_{sd} = M_{sd}\, G_{sd}\, \bar{\bar{z}}_{sd}$.
     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 $\bar{\bar{z}}_{sd} \equiv \bar{t}_{sd}/G_{sd}$ 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 $\bar{\bar{z}}_{sd} \equiv (\bar{G}_{sd}/G_{sd})\, \bar{z}_{sd}$.
  4. Total exports T_{sd} can finally be decomposed into: $T_{sd} = M_{sd}\, \bar{G}_{sd}\, \bar{z}_{sd}$.
     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 $\bar{z}_{sd} \equiv \bar{t}_{sd}/\bar{G}_{sd}$ is their varieties' mean product 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 2007).

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

- 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: $T_{isd} = V_{isd}\,\bar{z}_{isd}$. $V_{isd} \equiv \sum_{\omega\in\mathbf{\Omega}_{isd}} G_{isd}(\omega) = M_{isd}\,\bar{G}_{isd}$ is the number of export varieties from source country s's industry i shipped to destination d and these varieties' mean product scale is $\bar{z}_{isd} = [\sum_{\omega\in\mathbf{\Omega}_{isd}} t_d(\omega)]/[\sum_{\omega\in\mathbf{\Omega}_{isd}} G_d(\omega)] = \bar{t}_{isd}/\bar{G}_{isd}$ (similar to Broda and Weinstein 2006).

4. Total exports T_{isd} can also be decomposed into: $T_{isd} = M_{isd}\,G_{isd}\,\bar{\bar{z}}_{isd}$. 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 $\bar{\bar{z}}_{isd} \equiv \bar{t}_{isd}/G_{isd}$ 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: $T_{isd} = M_{isd}\,\bar{G}_{isd}\,\bar{z}_{isd}$. 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 $\bar{z}_{isd} \equiv \bar{t}_{isd}/\bar{G}_{isd}$ is the varieties' mean product scale (Arkolakis and Muendler 2007).

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

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

Table 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 2: Percentage of Exporters in Brazil, France and the U.S.

	Brazil 2000	France 1986	U.S. 1987
SIC industry	(1)	(2)	(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: 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 4: Export Market Penetration by Brazil's Manufactured Export Varieties and Brazilian Manufacturing Firms

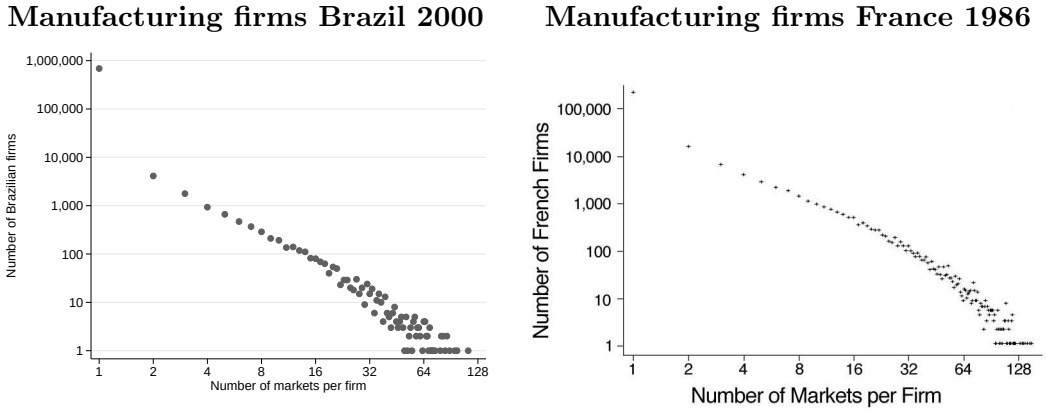
	Brazilian Manufactured Varieties 2000[a]						Brazilian Manufacturing Firms 2000[b]					
	Single mkt.		10+ mkts.		50+ mkts.		Single mkt.		10+ mkts.		50+ mkts.	
SIC industry	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
[20, 21] Food and tobacco products	53.6	(3.8)	8.2	(68.0)	0.2	(6.4)	32.9	(0.7)	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.

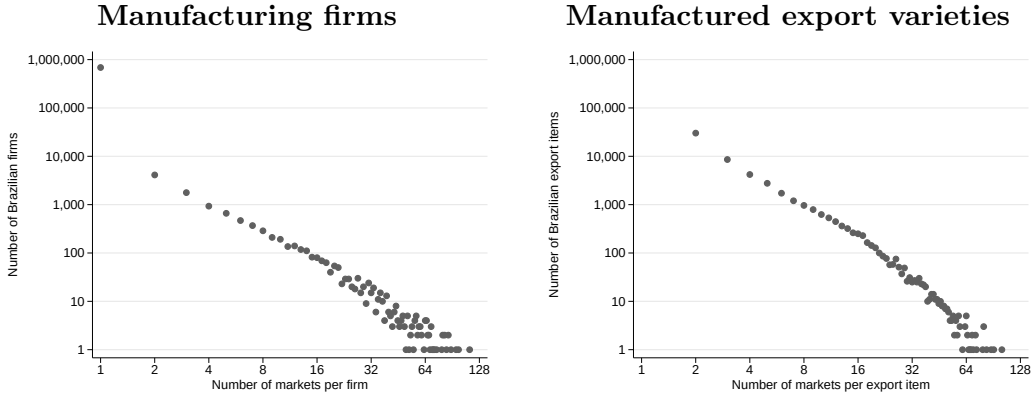
Source: *SECEX* 2000 manufactured export varieties at the Harmonized-System 6-digit level.

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.



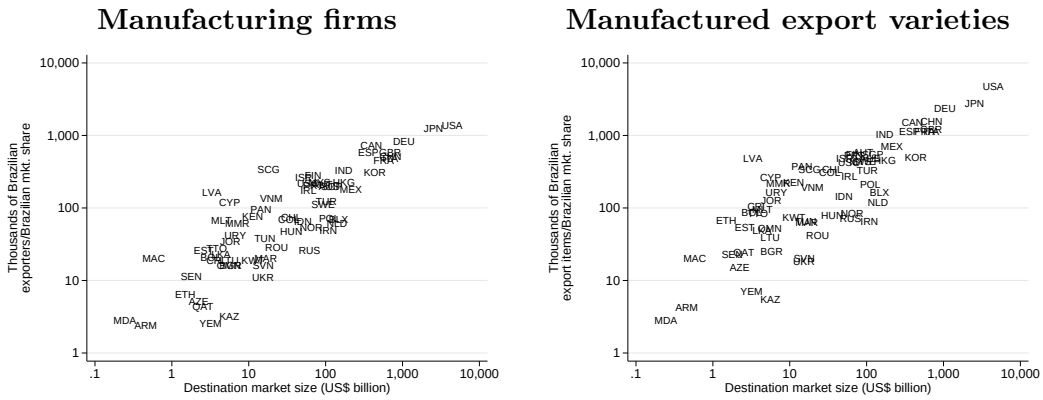
Sources: *SECEX* 2000 manufacturing firms for Brazil 2000; Eaton et al. (2004) for France 1986.
Note: Each manufacturing firm's export product is one variety. Left graph under the assumption that every Brazilian manufacturer has sales of at least one Real in the domestic Brazilian market. The elasticity 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 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 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, Lipsey, Deng, Ma and Mo 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 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 7).

Figure 3: **Export-market presence and market size**

Table 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 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: $M_{isd}\bar{G}_{isd}\bar{z}_{isd}$, 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 $\bar{z}_{isd}$ 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 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, $M_{isd}\bar{G}_{isd}\bar{z}_{isd} = \lambda_{sd}T_dB_{isd}$. 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 $\bar{z}_{isd}$), 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 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_{isd})					-.015	.101
					(.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): $V_{isd}\bar{z}_{isd}$, where V_{isd} is the number of export varieties from source country s's industry i shipped to destination country d and $\bar{z}_{isd}$ is average sales of these export varieties in destination country d (the average scale of the export varieties). As in Tables 5 and 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 5 and 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, $V_{isd}z^g_{sd} = M_{isd}\bar{G}_{isd}z^g_{sd} = \lambda_{sd}T_dB_{isd}$. 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 $\bar{z}_{isd}$). 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.

3 Manufacturing Firms: Bernard et al. (2007) replication

Table 8: 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 9: 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 10: Total Exports Distribution by Exporter Scope and Destinations, 2000

# Products	# Destinations 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 11: 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 12: 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, Faruq and López 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 $T_{sd} = M_{sd}\, G_{sd}\, \bar{\bar{z}}_{sd}$, 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 $\bar{\bar{z}}_{sd} \equiv \bar{t}_{sd}/G_{sd}$ 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 13: 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	.98	.57	.03	.38
	(.05)***	(.04)***	(.01)**	(.03)***
Log Distance	-2.01	-1.93	-.42	.34
	(.26)***	(.18)***	(.07)***	(.16)**
Obs.	175	175	175	175
R^2	.67	.63	.19	.48
	Brazilian Exports 2000 (MCN 8-digit level)			
Log GDP	.98	.57	.04	.38
	(.05)***	(.04)***	(.01)**	(.03)***
Log Distance	-2.01	-1.93	-.46	.38
	(.26)***	(.18)***	(.07)***	(.16)**
Obs.	175	175	175	175
R^2	.67	.63	.21	.48
	Chilean Exports 2000 (HS 6-digit level)			
Log GDP	.86	.52	.03	.31
	(.08)***	(.05)***	(.01)**	(.05)***
Log Distance	-1.02	-1.21	-.37	.56
	(.41)**	(.22)***	(.06)***	(.25)**
Obs.	161	161	161	161
R^2	.40	.47	.19	.22
	Chilean Exports 2000 (HS 8-digit level)			
Log GDP	.86	.52	.03	.31
	(.08)***	(.05)***	(.01)**	(.05)***
Log Distance	-1.02	-1.21	-.38	.57
	(.41)**	(.22)***	(.06)***	(.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 $T_{sd} = M_{sd}\,\bar{G}_{sd}\,\bar{z}_{sd}$, 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 $\bar{z}_{sd} \equiv \bar{t}_{sd}/\bar{G}_{sd}$ is their varieties' mean product scale. Results from country-level ordinary least squares regressions of the dependent variable noted at the top of each column on the covariates noted in the first column. Estimates for the constant suppressed. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

4 Manufacturing Firms and Products

Table 14: 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	124,811	10,775	21,623
# of Destinations (N)	170	3	23	141	1	1
Regional share in Tot. exports	1.000	.172	.559	.441	.257	.144
			Firms			
# of Firms (M)	10,215	6,428	5,041	8,590	3,083	4,590
Median Total exports (T_{md})	.089	.051	.137	.064	.120	.068
Median Exporter scope (G_{md})	2	2	2	2	1	2
Median Avg. prod. scale (z_{md})	.037	.022	.070	.027	.068	.031
Mean Total exports ($\bar{t}_d$)	3.720	1.017	4.217	1.928	3.170	1.192
Mean Exporter scope ($\bar{G}_d$)	5.278	4.908	3.933	5.190	3.495	4.711
Mean Avg. prod. scale (z_d)	.705	.207	1.072	.372	.907	.253
Shares in Total exports						
Single-prod. firms	.090	.078	.142	.069	.123	.086
Multi-prod. firms' top product	.597	.555	.625	.572	.662	.555
Multi-prod. firms' other prod.	.313	.367	.233	.359	.215	.359
			Varieties			
# of Varieties (MH)	53,910	31,548	19,826	44,579	10,775	21,623
Median Variety sales	.006	.005	.009	.005	.009	.006
Mean Variety sales	.705	.207	1.072	.372	.907	.253

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. Exports in US$ million fob. Mean Average product scale (z_d) is the scope-weighted arithmetic mean of exporters' average product scales.

Table 15: Top 25 Export Products

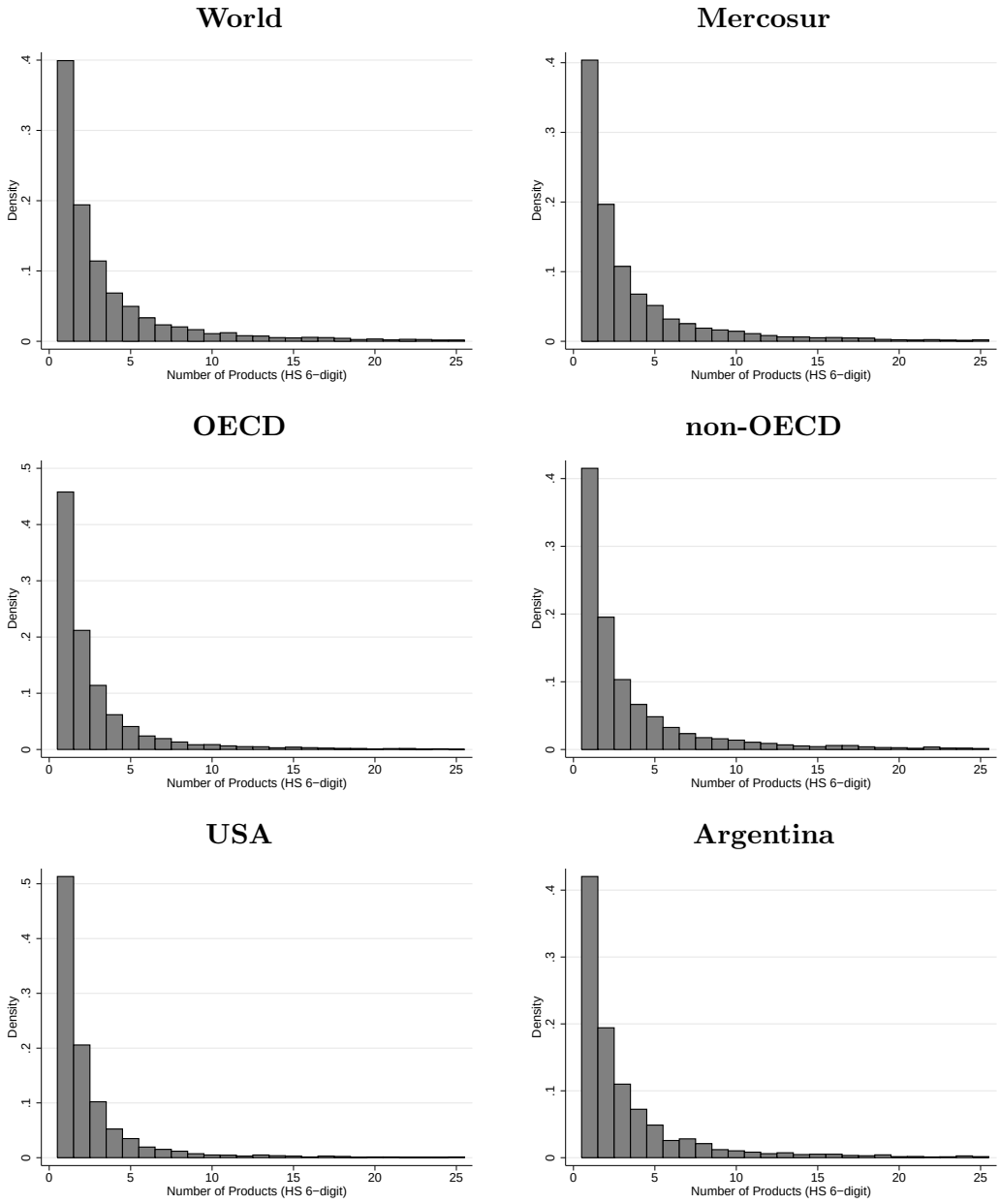
Rank	Product	Exports (US$ mill.)	Share in tot. exports (%)	# of Dest.
1.	Airplane & a/c unladen wght > 2t, nov 15t	2,619	6.9	16
2.	Chem woodpulp, soda etc, n dis s bl & bl nonconif	1,523	4.0	29
3.	Soybean oilcake & oth solid residue, wh/not ground	1,246	3.3	36
4.	Pass veh spk-ig int com rcpr p eng >1500 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 16: Top 25 Export Destinations

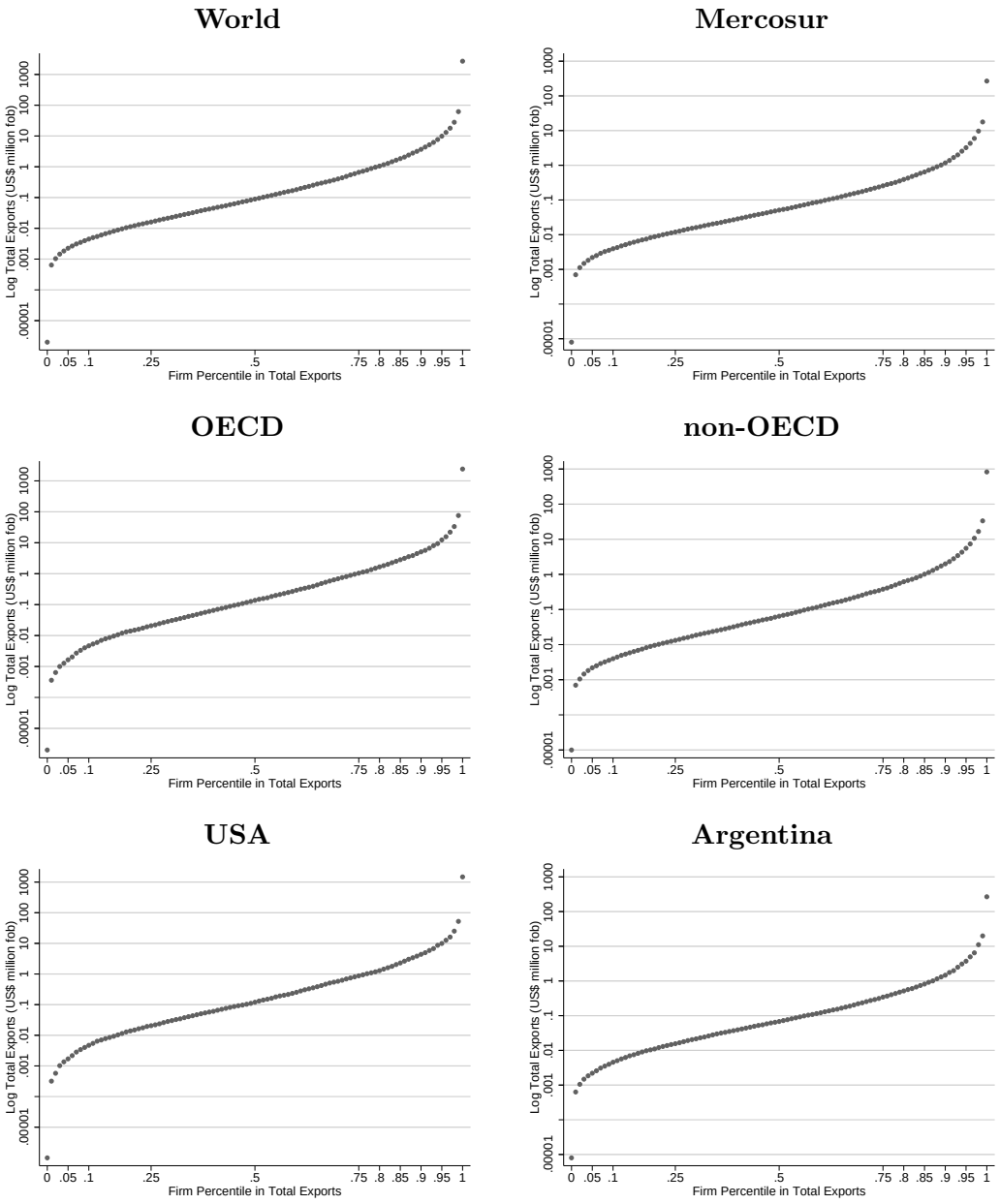
Rank	Destination	Exports (US$ mill.)	Share in tot. exports (%)	# of Products
1.	USA	9,773	25.7	2,146
2.	Argentina	5,472	14.4	2,814
3.	Mexico	1,554	4.1	1,443
4.	Netherlands	1,488	3.9	628
5.	Italy	1,442	3.8	949
6.	Germany	1,365	3.6	1,174
7.	Belgium-Luxembourg	1,184	3.1	584
8.	Japan	1,176	3.1	663
9.	Chile	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.



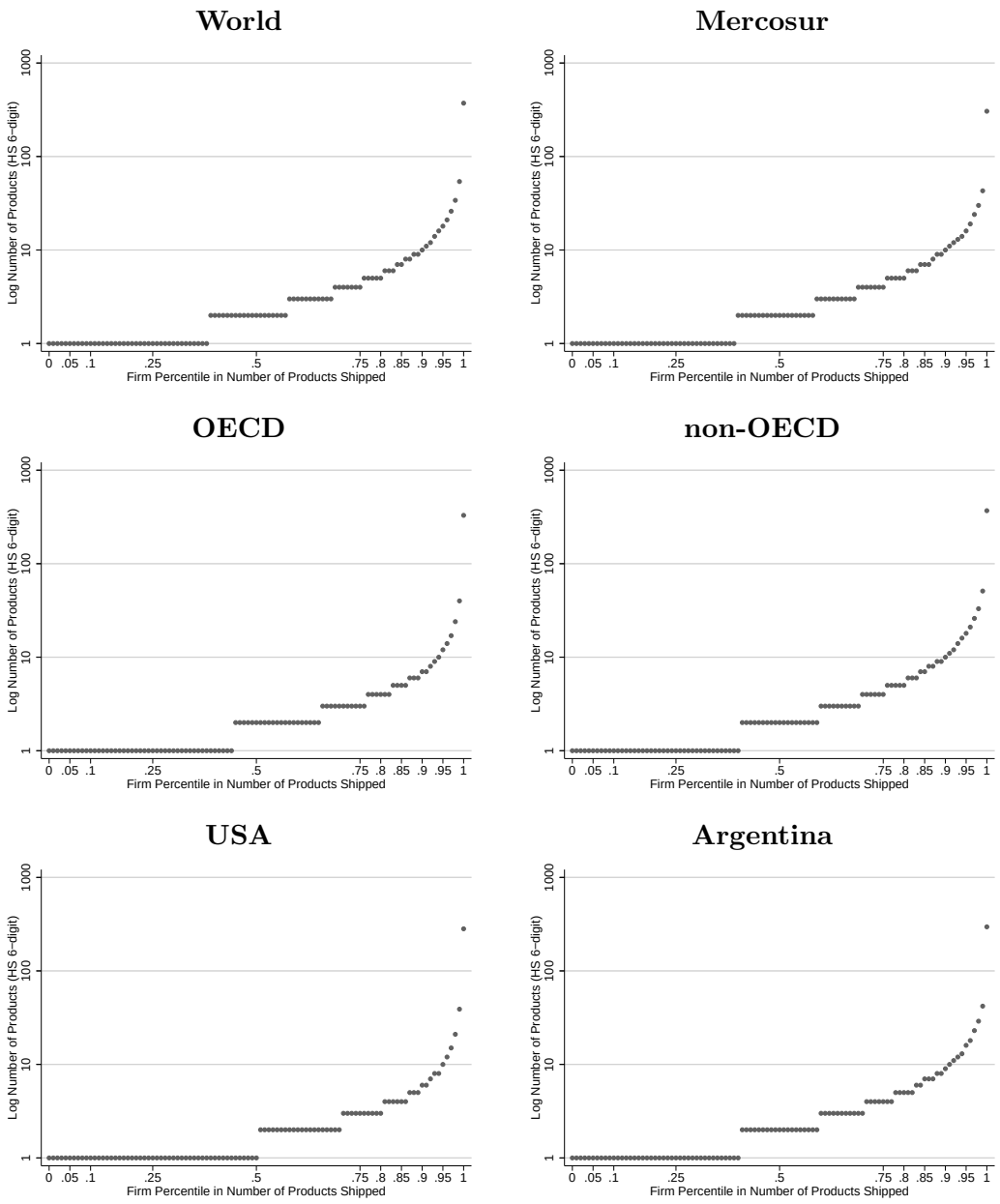
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members of the OECD in 1990. Products at the Harmonized-System 6-digit level.

Figure 4: **Exporter Scope Distribution for Up to 25 Products**



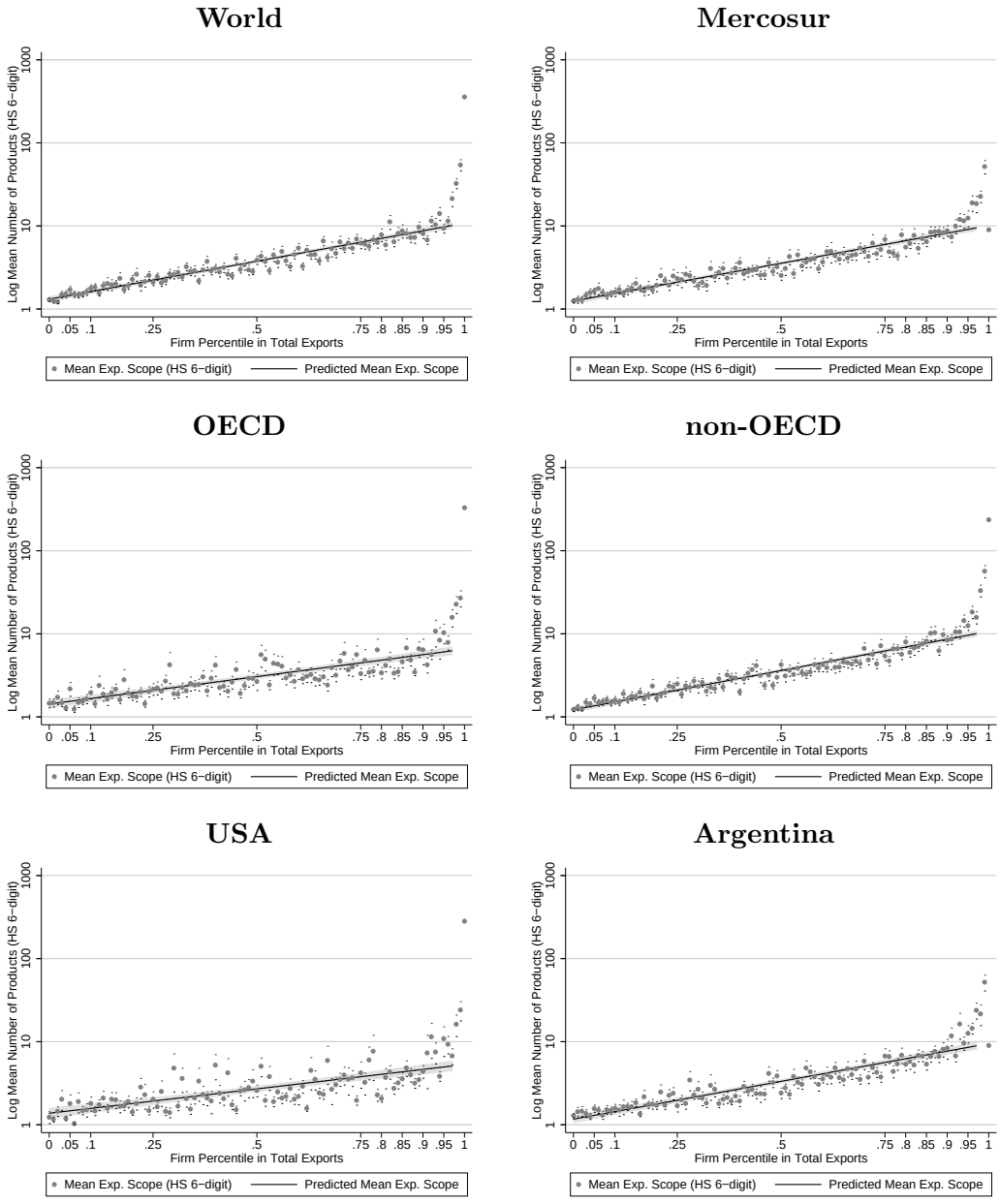
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.

Figure 5: **Total Saless Distribution**



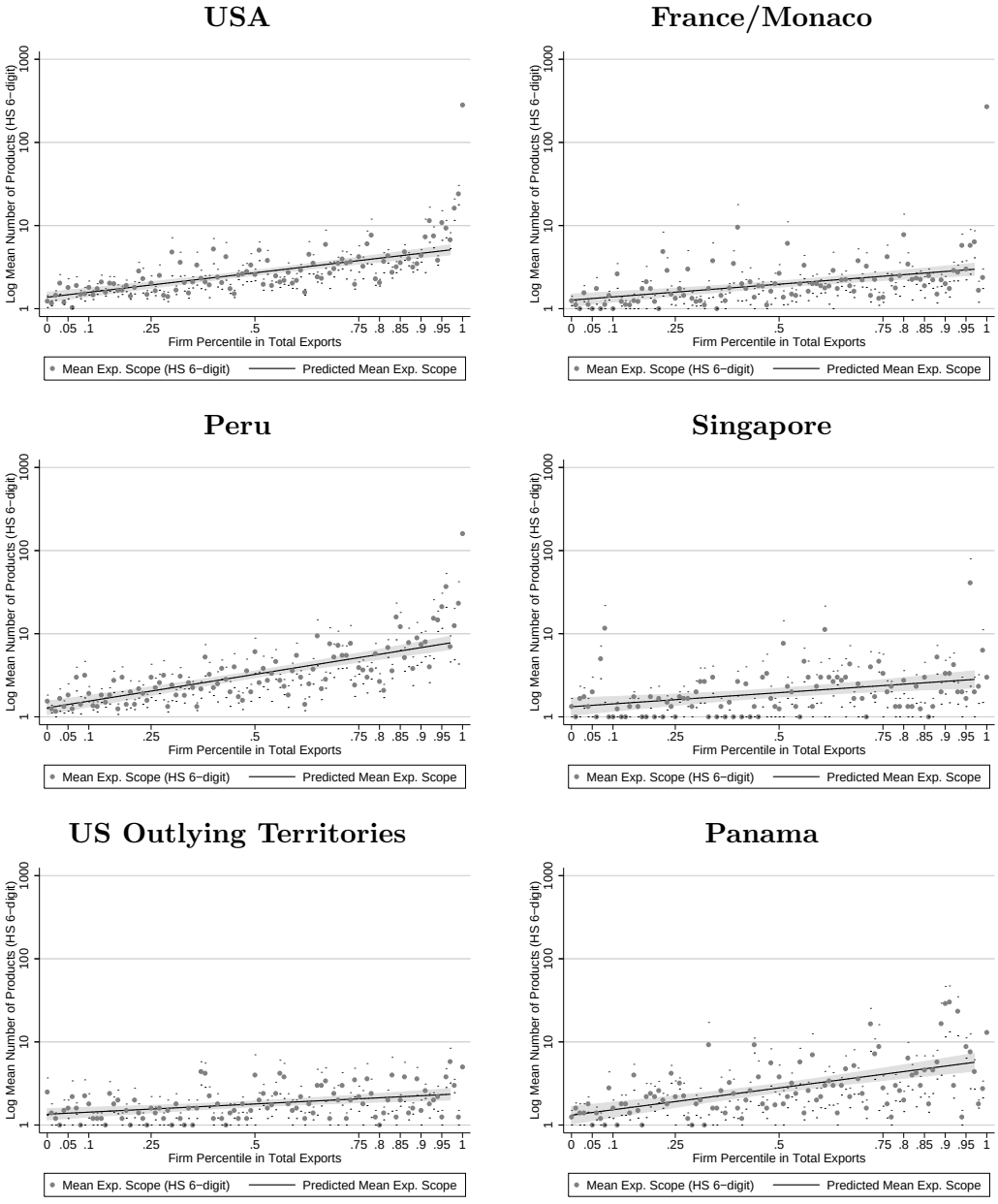
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.

Figure 6: **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 7: **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 8: **Exporter Scope and Total Exports Distribution by Country**

Table 17: 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	.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 18: 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	.393	-3.95e-25	.394	5.11e-25
	(.006)***	(8.60e-15)	(.006)***	(9.00e-15)
Constant	2.572	2.236	2.201	2.236
	(.008)***	(9.34e-15)***	(.021)***	(2.68e-14)***
Observations	68,055	68,055	68,055	68,055
Panels		10,209		10,209
R^2 (R^2 within)[a]	.054	0	.118	0

[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 19: Correlates of Destination Effects on Exporter Scope

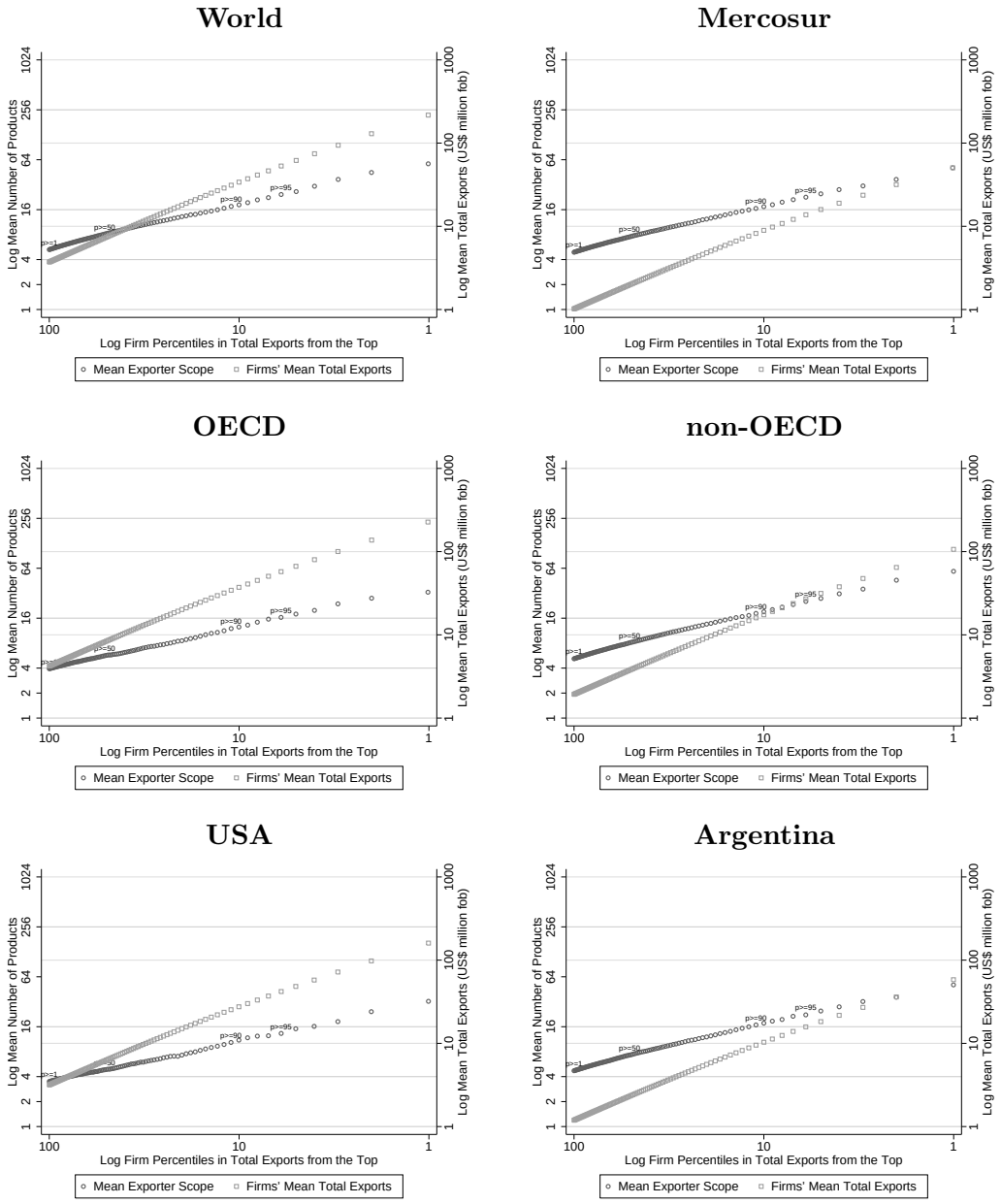
	OLS		
	(1)	(2)	(3)
Mean Log Market size			-.082
			(.036)**
Log Population		.0009	.020
		(.031)	(.054)
Log GDP per cap.		-.136	-.099
		(.033)***	(.055)*
Log GDP	-.062		
	(.027)**		
Log Distance	.014	.004	-.124
	(.147)	(.141)	(.150)
Common borders	-.147	-.145	-.423
	(.295)	(.284)	(.281)
Common language	-.839	-.838	-.464
	(.304)***	(.292)***	(.282)*
Obs.	153	153	104
R^2	.079	.151	.296

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 scope are from a destination fixed effects regression controlling for the firm's local total-exports percentile (column 3 in Table 18). 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 20: Exporter Scope Distribution by Destination

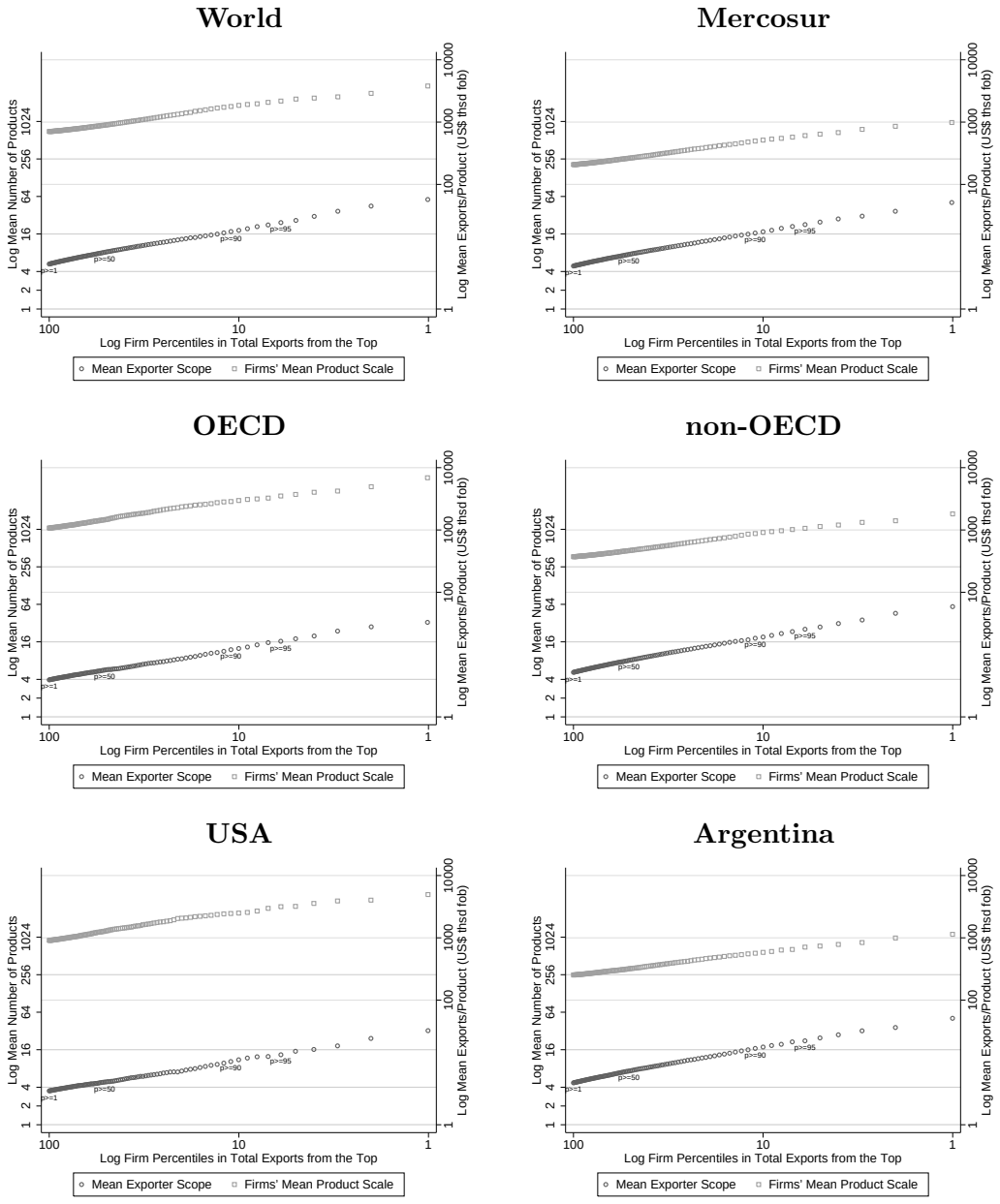
	World	Mercosur	OECD	non-OECD	USA	Argentina
Percentile	(1)	(2)	(3)	(4)	(5)	(6)
00	1	1	1	1	1	1
05	1	1	1	1	1	1
10	1	1	1	1	1	1
25	1	1	1	1	1	1
50	2	2	2	2	1	2
75	4	4	3	4	3	4
80	5	5	4	5	3	5
85	7	7	5	7	4	7
90	10	10	7	10	6	9
95	18	16	12	18	10	16
99	54	43	40	51	39	42
100	372	305	329	369	282	296

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.



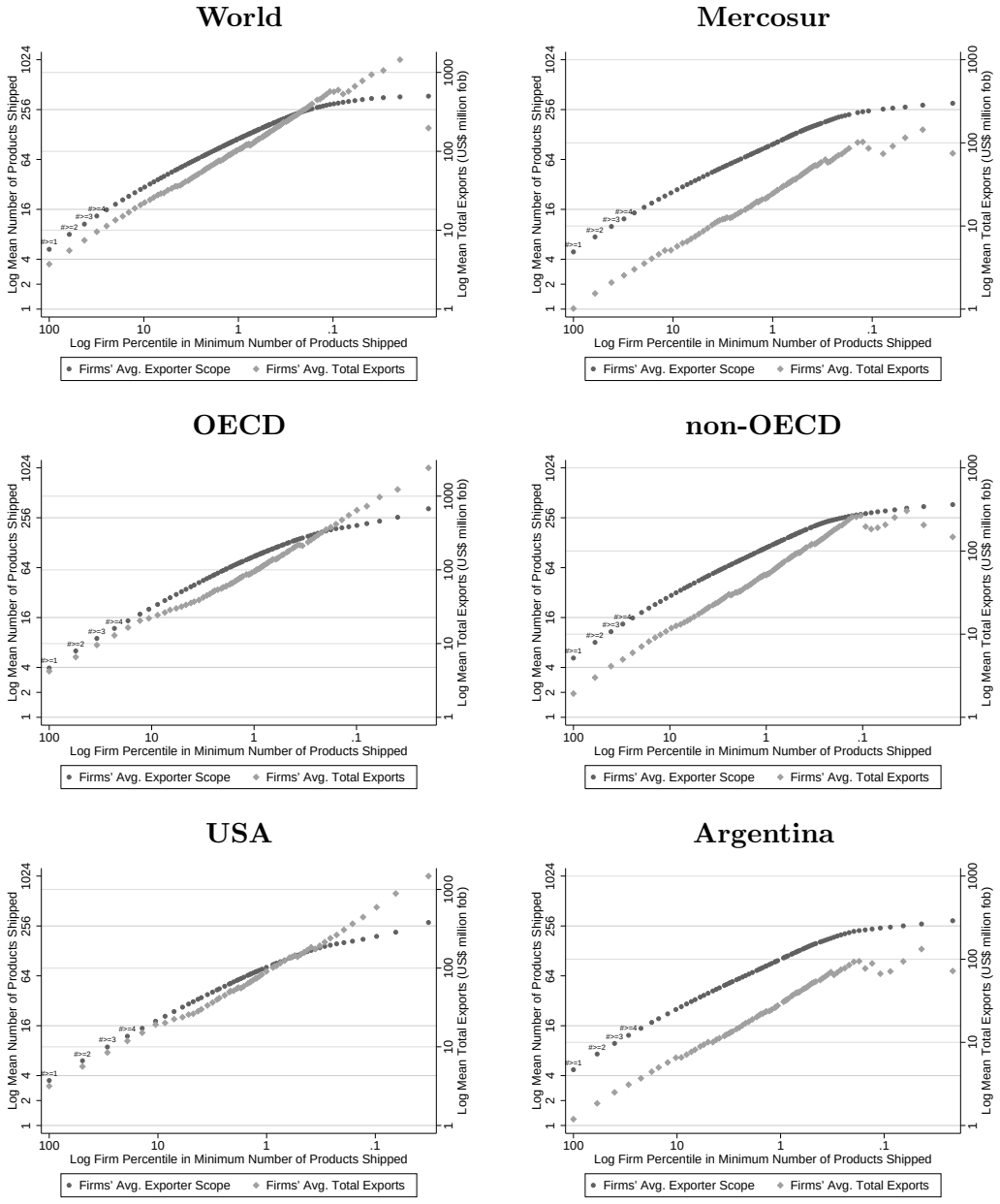
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters; 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 9: **Average Scope, Total Exports and the Total Exports Distribution**



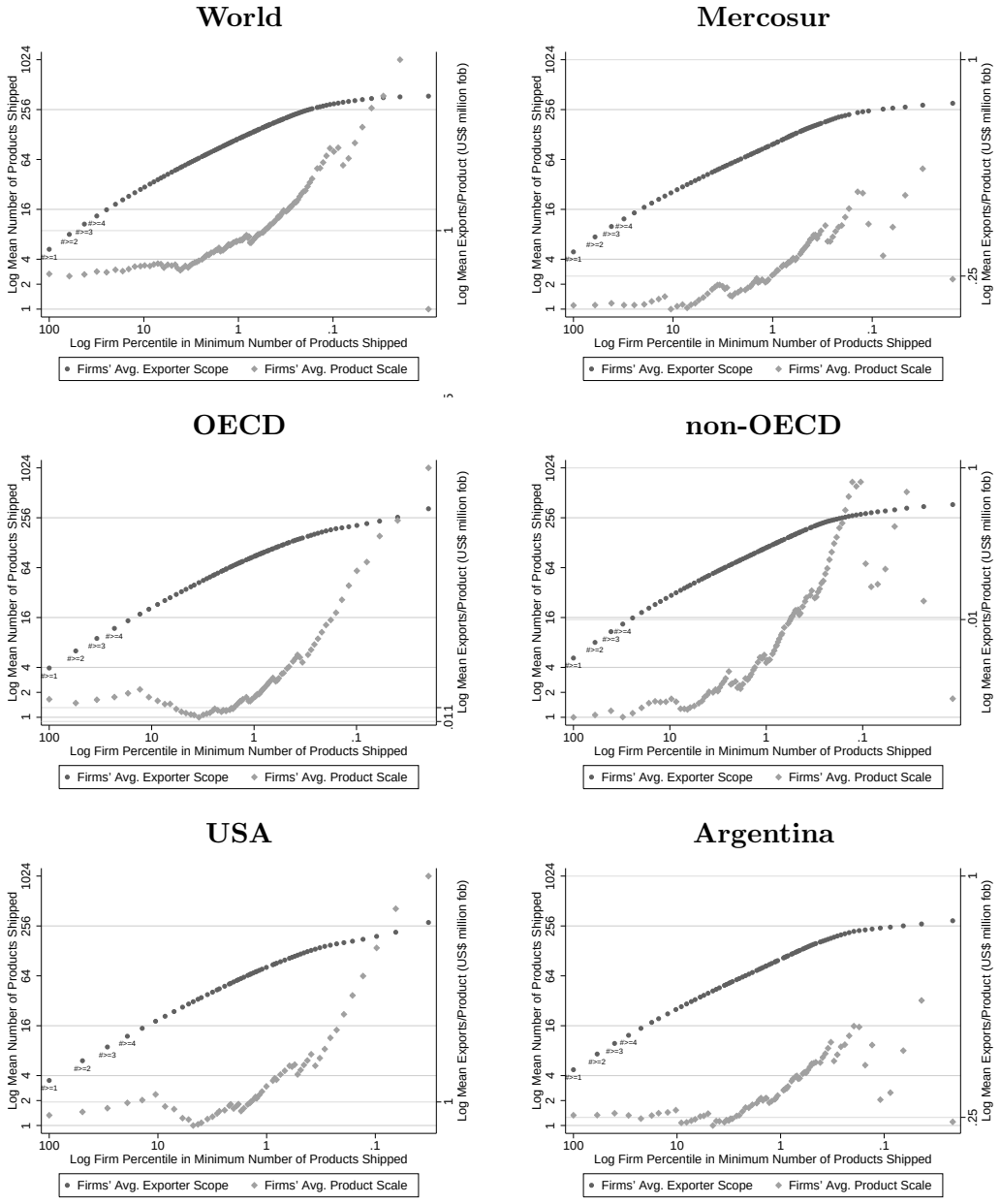
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters; 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 10: **Average Scope, Average Scale and the Total Exports Distribution**



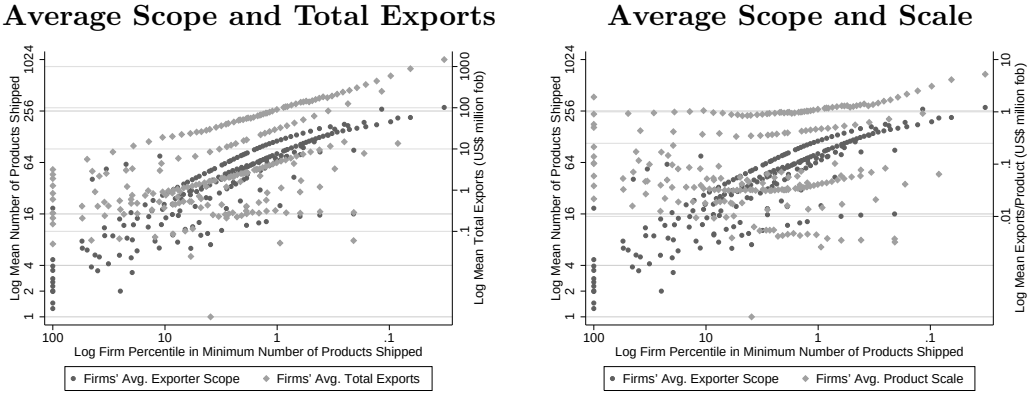
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, 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 11: **Average Scope, Total Exports and the Exporter Scope Distribution**



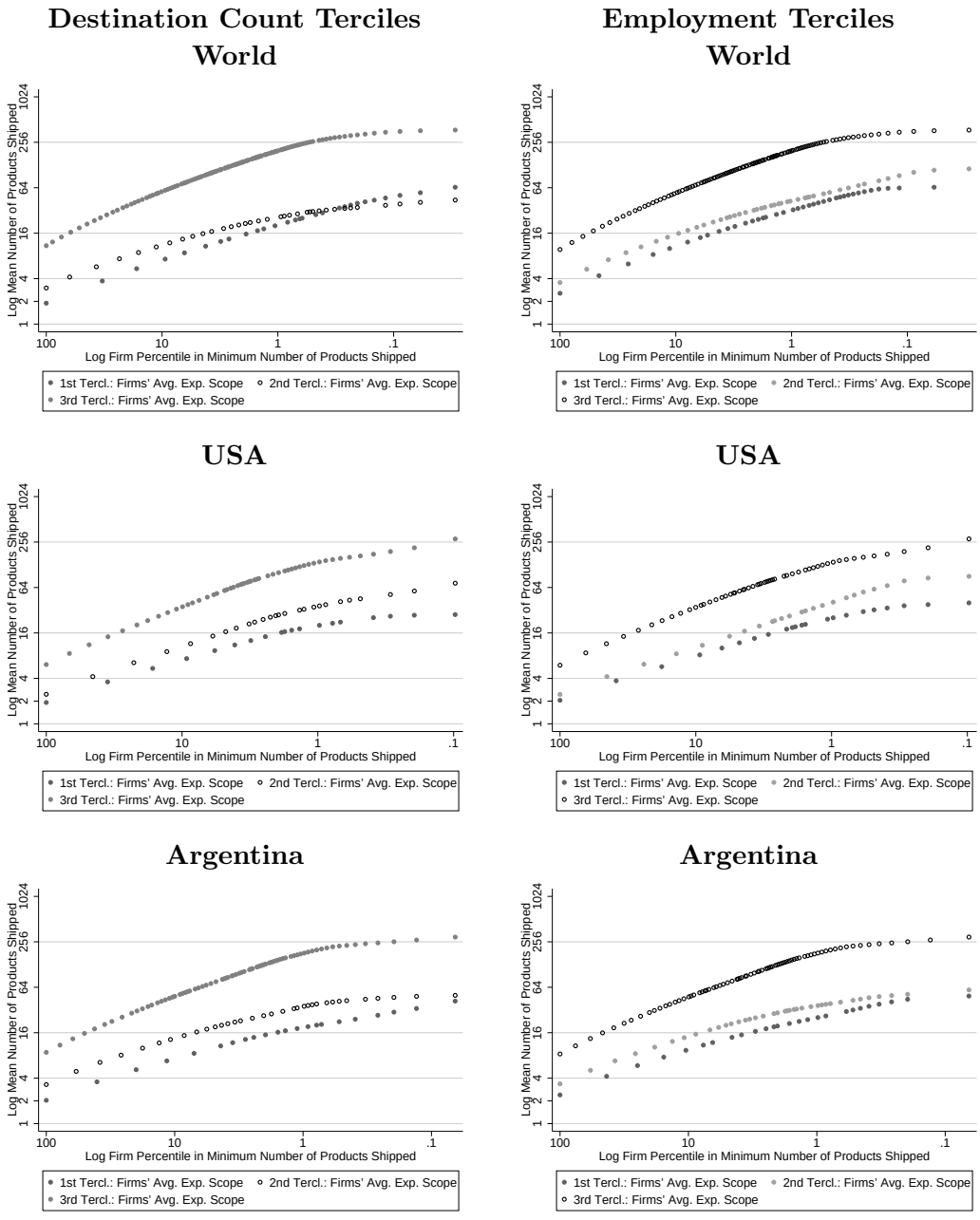
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, 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 12: **Average Scope, Total Exports and the Exporter Scope Distribution**



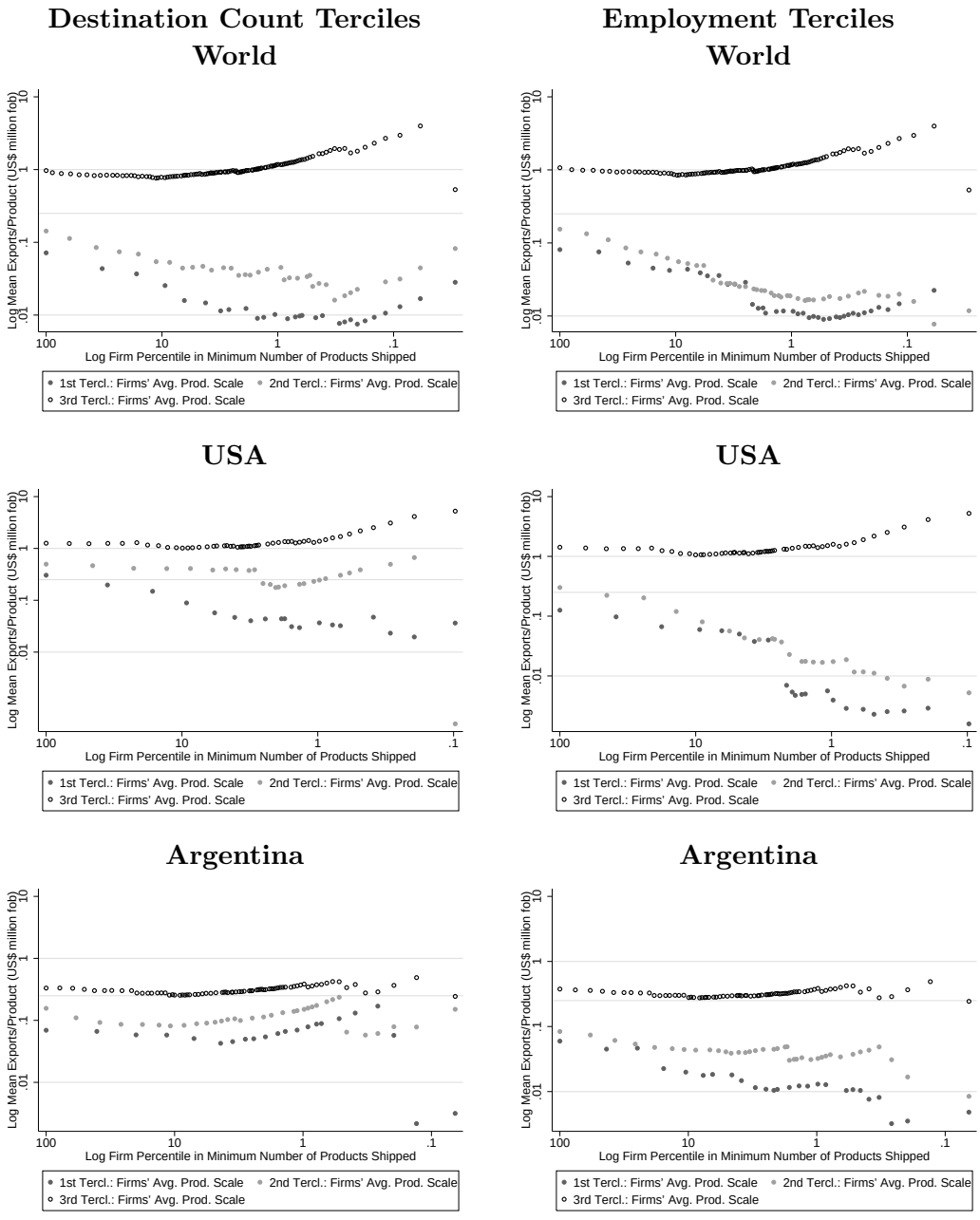
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Selection of the eleven countries at the first and every tenth percentile among Brazil's top 100 export destinations (Other African countries, Somalia, Iraq, Finland, Romania, Panama, US outlying territories, Singapore, 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 13: **Average Scope, Scale and Exporter Distributions Across Countries**



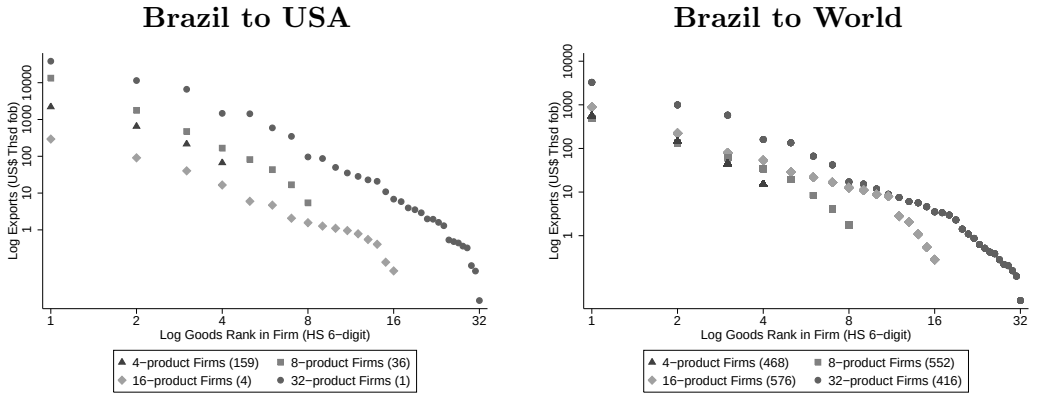
Sources: *RAIS* and *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level. Left panel: firms by tercile of worldwide number of destinations; right panel: firms by tercile of domestic employment. Left-most observations are all exporters, 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 14: **Average Scope and the Exporter Distribution by Firm Type**



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 15: **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 16: **Within-firm Sales Distribution**

Table 21: 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 products and firms, except exporters with scope exceeding ten products. 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 22: 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 products and 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 23: 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 products and 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 24: 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	.239								
	(.182)	(.052)								
3 products	1.608	.301	.092							
	(.252)	(.046)	(.026)							
4 products	2.212	.653	.216	.067						
	(.358)	(.204)	(.088)	(.026)						
5 products	2.098	.425	.118	.041	.014					
	(.391)	(.103)	(.025)	(.010)	(.004)					
6 products	9.494	3.913	.710	.443	.097	.006				
	(4.802)	(2.426)	(.248)	(.169)	(.043)	(.002)				
7 products	5.856	1.667	1.058	.181	.092	.041	.012			
	(1.826)	(.848)	(.621)	(.067)	(.041)	(.024)	(.008)			
8 products	13.289	1.772	.471	.166	.081	.043	.017	.005		
	(5.118)	(.602)	(.116)	(.052)	(.029)	(.014)	(.005)	(.002)		
9 products	7.073	1.762	.855	.134	.067	.036	.015	.007	.001	
	(2.353)	(.531)	(.383)	(.039)	(.026)	(.019)	(.005)	(.003)	(.0007)	
10 products	10.610	5.955	2.256	.548	.415	.214	.164	.037	.008	.002
	(4.376)	(3.333)	(1.396)	(.272)	(.250)	(.153)	(.135)	(.026)	(.005)	(.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 products and 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 25: 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 products and 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 26: Total Exports Decompositions at the Firm Level

OLS	Log # Products	Log Exports/product #≥ 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: $G_d(\omega)\, z_d(\omega)$, 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 $z_d(\omega)$ 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 27: Product Scale and Exporter Scope Correlations

Log Exp./prod.	Firm data[a]	Firm-destination data[b]			Firm-destination-product data[c]		
	OLS	OLS	Dest. FE	Firm & dest. FE	Firm & dest. FE	Prod. & dest. FE	Firm, prod. & dest. FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
				World			
Log # Products	.341	-.160	-.068	.260	1.180	.336	.977
	(.022)***	(.011)***	(.011)***	(.013)***	(.014)***	(.014)***	(.014)***
Obs.	10,215	46,208	46,208	46,208	76,964	76,964	76,964
R^2	.023	.004	.091	.131	.133	.237	.229
Corr. Firm FE, $X'\beta$				-.155	-.202		-.187
				Mercosur			
Log # Products	.239	.082	.075	.171	1.384	.541	1.241
	(.024)***	(.019)***	(.019)***	(.032)***	(.026)***	(.026)***	(.027)***
Obs.	6,428	10,160	10,160	10,160	19,863	19,863	19,863
R^2	.015	.002	.066	.316	.208	.180	.288
Corr. Firm FE, $X'\beta$				-.099	-.244		-.222
				OECD			
Log # Products	.337	.128	.102	.523	1.297	.426	1.074
	(.039)***	(.026)***	(.026)***	(.031)***	(.034)***	(.034)***	(.033)***
Obs.	5,041	13,982	13,982	13,982	19,836	19,836	19,836
R^2	.014	.002	.036	.149	.114	.228	.240
Corr. Firm FE, $X'\beta$				-.202	-.261		-.230
				non-OECD			
Log # Products	.293	-.179	-.115	.175	1.196	.312	.993
	(.022)***	(.012)***	(.012)***	(.015)***	(.015)***	(.016)***	(.015)***
Obs.	8,590	31,562	31,562	31,562	56,281	56,281	56,281
R^2	.020	.007	.084	.135	.148	.217	.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. 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 28: Correlates of Firm Effects on Product Scale and Exporter Scope

	Firm Eff. on Product 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	-.072	-.010	.658	.646	.647
	(.008)***	(.009)***	(.010)	(.004)***	(.004)***	(.005)***
Log ww. Exp./prod.	.887	.880	.835	.018	-.040	-.012
	(.005)***	(.005)***	(.006)***	(.002)***	(.003)***	(.003)***
Log ww. # Dest.	-.970	-.867	-.600	-.263	-.200	-.111
	(.009)***	(.010)***	(.012)***	(.005)***	(.005)***	(.006)***
No OECD exp.	.023	-.018	.504	.106	.105	-.0004
	(.019)	(.021)	(.025)***	(.010)***	(.011)***	(.012)
Log OECD Exp.[a]	.0006	.003	.002	-.006	-.006	-.008
	(.004)	(.004)	(.005)	(.002)***	(.002)***	(.002)***
No Mercosur exp.	-.071	-.085	.093	.036	.040	.375
	(.020)***	(.022)***	(.026)***	(.011)***	(.011)***	(.012)***
Log Mercosur Exp.[a]	.022	.022	.028	-.0001	-.002	-.010
	(.004)***	(.005)***	(.005)***	(.002)	(.002)	(.003)***
Log # dom. Plants	-.013	-.015	-.001	.004	.005	.009
	(.009)	(.010)	(.012)	(.005)	(.005)	(.005)*
Log # dom. Loc.	.028	.039	.029	-.026	-.028	-.026
	(.009)***	(.010)***	(.012)**	(.005)***	(.005)***	(.006)***
Log Employment	-.007	-.004	.009	-.008	-.008	-.010
	(.004)*	(.004)	(.005)*	(.002)***	(.002)***	(.002)***
High sch. educ. wf.	-.115	-.104	-.144	-.027	-.019	-.020
	(.024)***	(.026)***	(.031)***	(.013)**	(.014)	(.014)
College educ. wf.	-.037	.032	-.068	-.177	-.174	-.179
	(.041)	(.045)	(.053)	(.022)***	(.023)***	(.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 product 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 27). 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 29: Correlates of Destination Effects on Product Scale and Exporter Scope

	Destination Eff. on Product 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 product 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 27) and in column 3 from a destination fixed effects regression controlling for scope and firm fixed effects (see column 3 in Table 27). 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 30: Correlates of Product Effects on Product Scale and Exporter Scope

	Product Eff. on Product 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 product 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 27). 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 31: Conditional Product Scale and Exporter Scope Correlations

Log Exp./prod.	World			Mercosur	Oecd	non-Oecd
	(1)	(2)	(3)	(4)	(5)	(6)
Log # Products	.433	.444	.120	-.470	.352	-.190
	(.124)***	(.073)***	(.085)	(.199)**	(.192)*	(.098)*
Squared Log # Products	.099	.076	.050	.132	.217	.140
	(.225)	(.090)	(.090)	(.188)	(.212)	(.099)
Cubic Log # Products	-.126	-.111	-.108	-.093	-.193	-.097
	(.138)	(.034)***	(.034)***	(.069)	(.083)**	(.037)***
Quartic Log # Products	.022	.018	.018	.013	.026	.014
	(.034)	(.004)***	(.004)***	(.008)*	(.010)***	(.004)***
Pentic Log # Products	-.0003					
	(.003)					
Log # Prd. × Log ww. # Dest.			.060	.227	-.031	.092
			(.021)***	(.053)***	(.053)	(.023)***
Log # Prd. × Log Empl.			.036	.006	.094	.012
			(.010)***	(.026)	(.023)***	(.011)
Log # Prd. × Coll. ed. wf.			-.115	.854	-.700	.179
			(.085)	(.209)***	(.209)***	(.096)*
Obs.	46,208	46,208	46,208	10,160	13,982	31,562
R^2	.135	.135	.137	.326	.159	.139
Corr. Firm FE, $X'\beta$	-.151	-.151	-.097	-.059	-.154	-.141
F statistic: Zero Firm FE	3.993***	3.993***	3.619***	2.742***	2.931***	3.498***

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 27). Worldwide number of products at the Harmonized-System 6-digit level. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 32: Individual Product Sales Regressions

Log Sales	OLS	Dest. FE	Dest. & Ind. FE	Dest. & Firm FE
	(1)	(2)	(3)	(4)
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 (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.

5 Manufacturing Products

Table 33: 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	164,905	15,600	26,052
# of Destinations (N)	172	3	23	142	1	1
Regional share in Tot. exports	1.000	.165	.577	.423	.273	.133
			Firms			
# of Firms (M)	14,678	8,293	7,257	11,648	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 (z_{md})	.026	.018	.045	.022	.046	.026
Mean Total exports ($\bar{t}_d$)	3.051	.891	3.560	1.606	2.887	1.061
Mean Exporter scope ($\bar{G}_d$)	6.168	5.960	3.970	6.344	3.686	4.628
Mean Avg. prod. scale (z_d)	.495	.149	.897	.253	.783	.229
Shares in Total exports						
Single-prod. firms	.092	.078	.150	.070	.140	.087
Multi-prod. firms' top product	.604	.550	.627	.569	.652	.555
Multi-prod. firms' other prod.	.304	.372	.222	.361	.207	.358
			Varieties			
# of Varieties (MH)	90,541	49,424	28,809	73,891	15,600	26,052
Median Variety sales	.004	.003	.006	.003	.006	.005
Mean Variety sales	.495	.149	.897	.253	.783	.229

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. Exports in US$ million fob. Mean Average product scale (z_d) is the scope-weighted arithmetic mean of exporters' average product scales.

Table 34: Top 25 Export Products

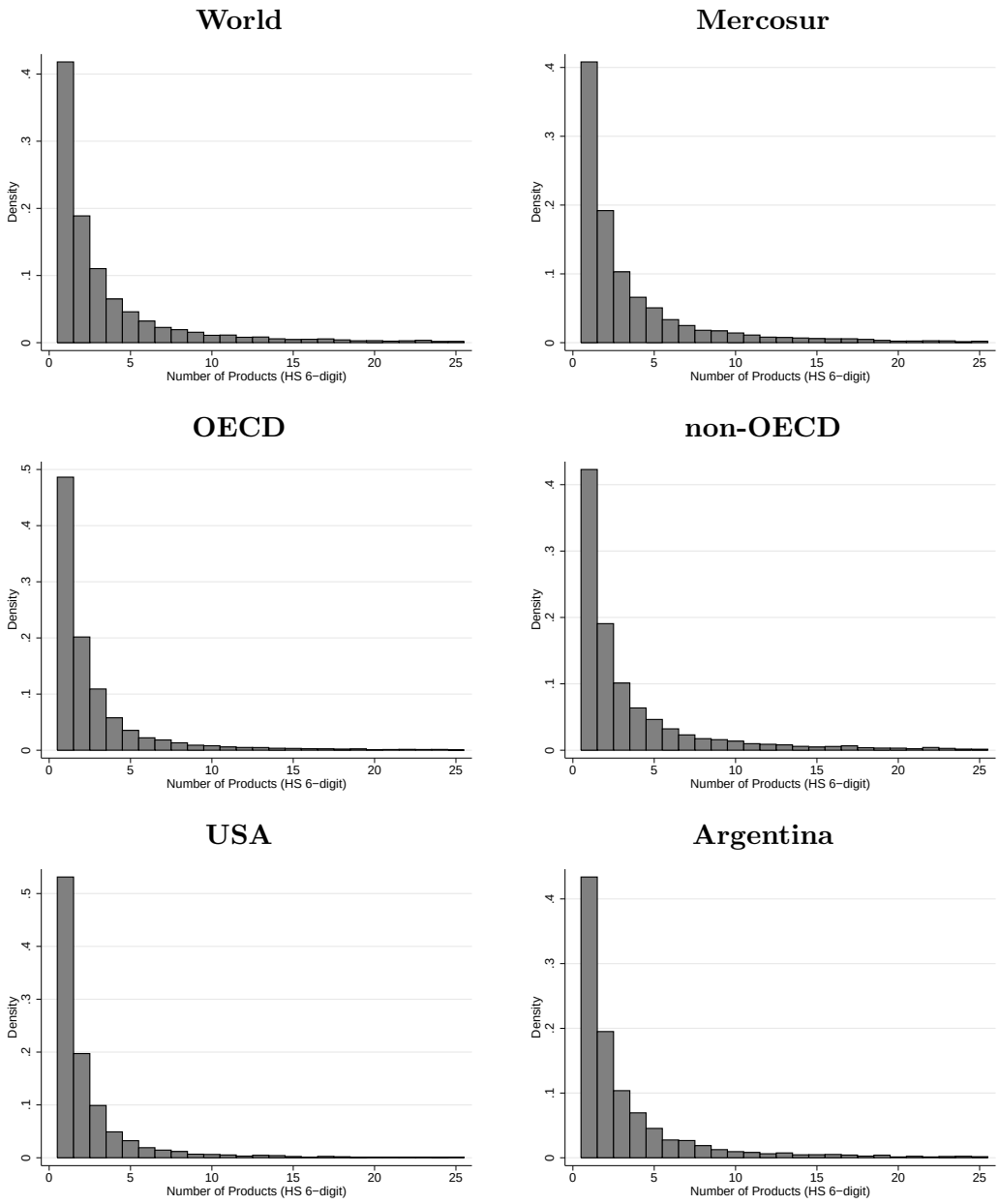
Rank	Product	Exports (US$ mill.)	Share in tot. exports (%)	# of Dest.
1.	Airplane & a/c unladen wght > 2t, nov 15t	2,785	6.2	18
2.	Soybean oilcake & oth solid residue, wh/not ground	1,651	3.7	39
3.	Chem woodpulp, soda etc, n dis s bl & bl nonconif	1,526	3.4	29
4.	Pass veh spk-ig int com rcpr p eng >1500 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 35: Top 25 Export Destinations

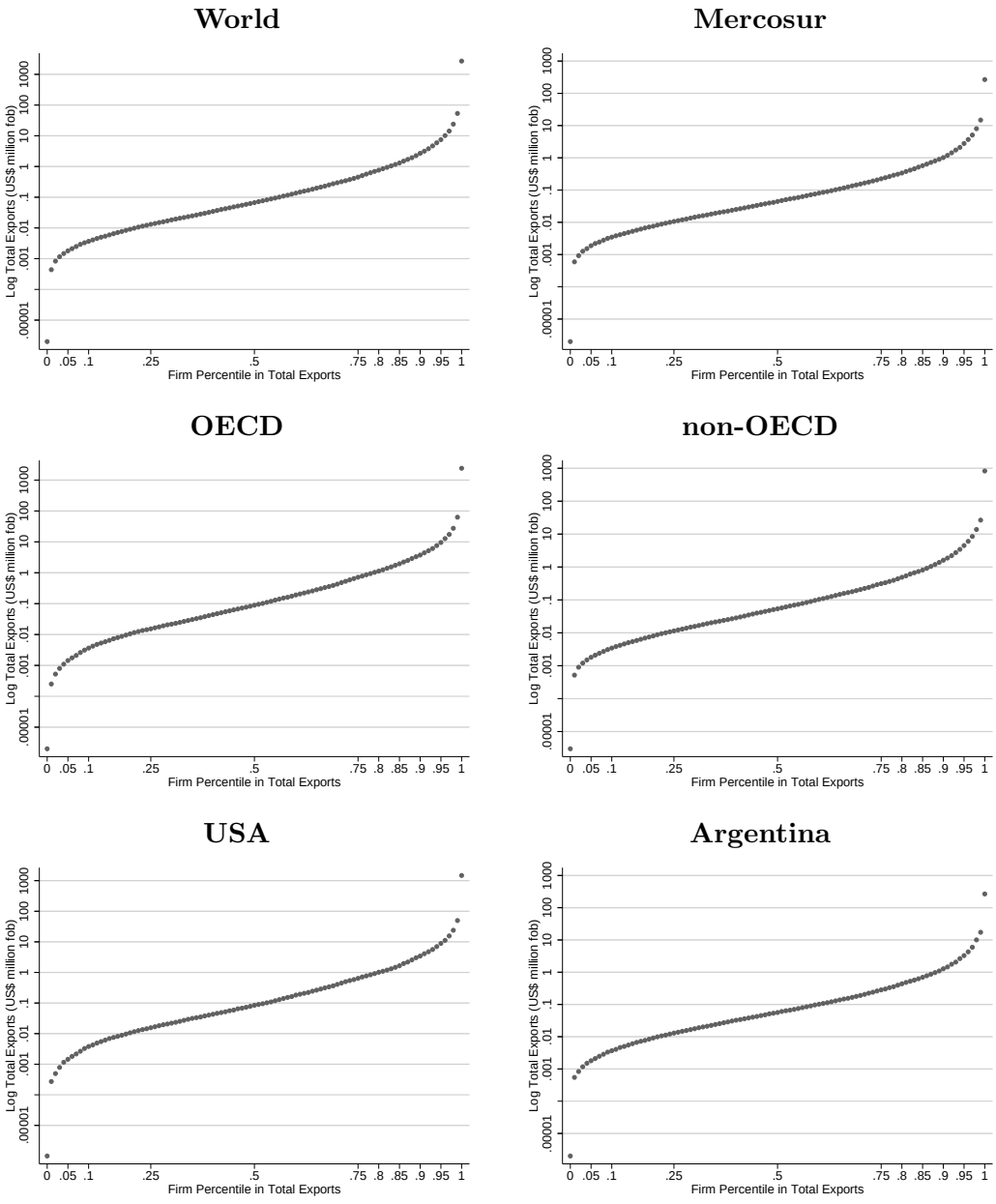
Rank	Destination	Exports (US$ mill.)	Share in tot. exports (%)	# of Products
1.	USA	12,220	27.3	2,484
2.	Argentina	5,973	13.3	2,971
3.	Netherlands	1,882	4.2	724
4.	Mexico	1,607	3.6	1,522
5.	Japan	1,602	3.6	934
6.	Italy	1,581	3.5	1,071
7.	Germany	1,458	3.3	1,326
8.	Belgium-Luxembourg	1,444	3.2	640
9.	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.



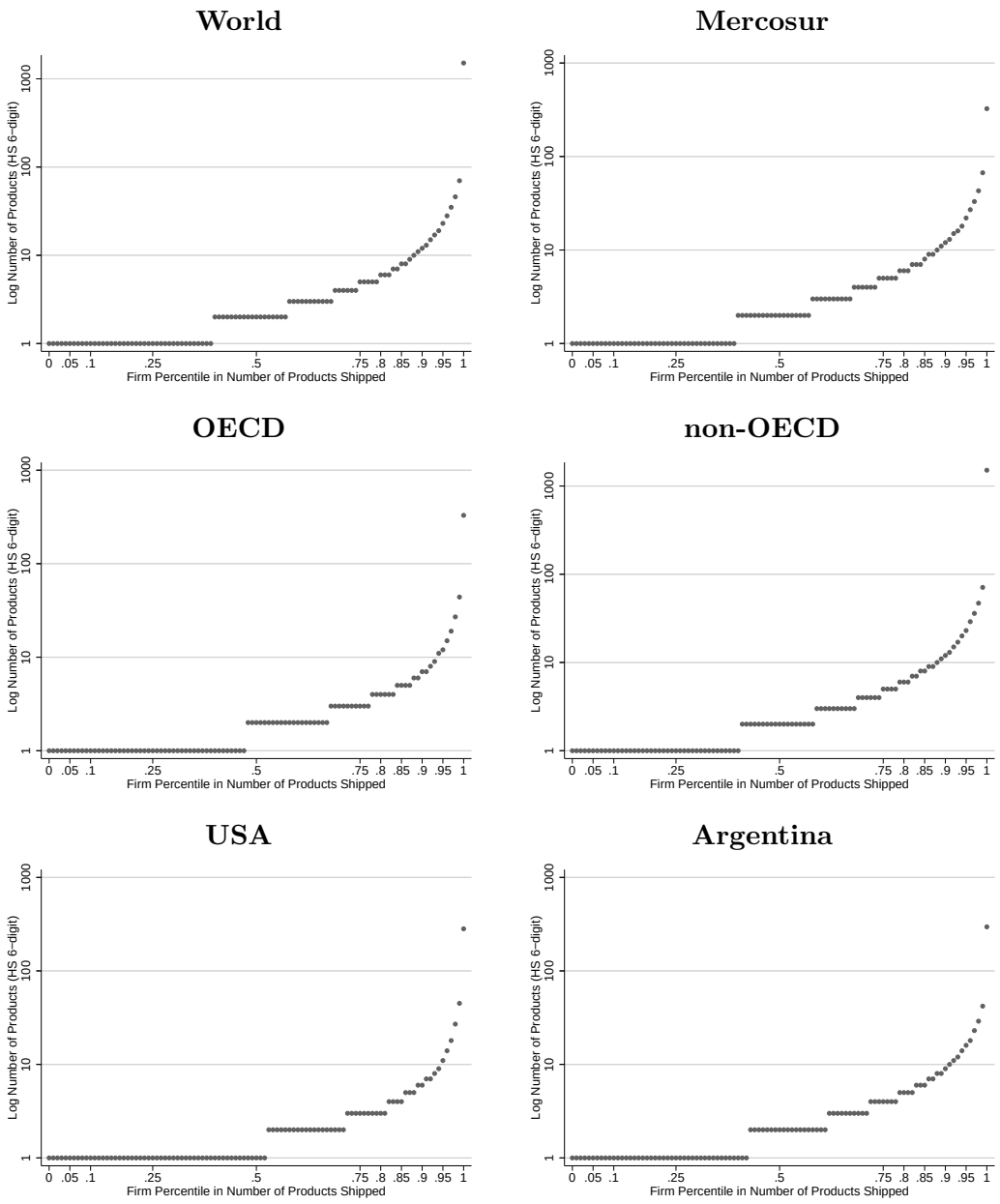
Source: *SECEX* 2000, manufacturing products, all firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members of the OECD in 1990. Products at the Harmonized-System 6-digit level.

Figure 17: **Exporter Scope Distribution for Up to 25 Products**



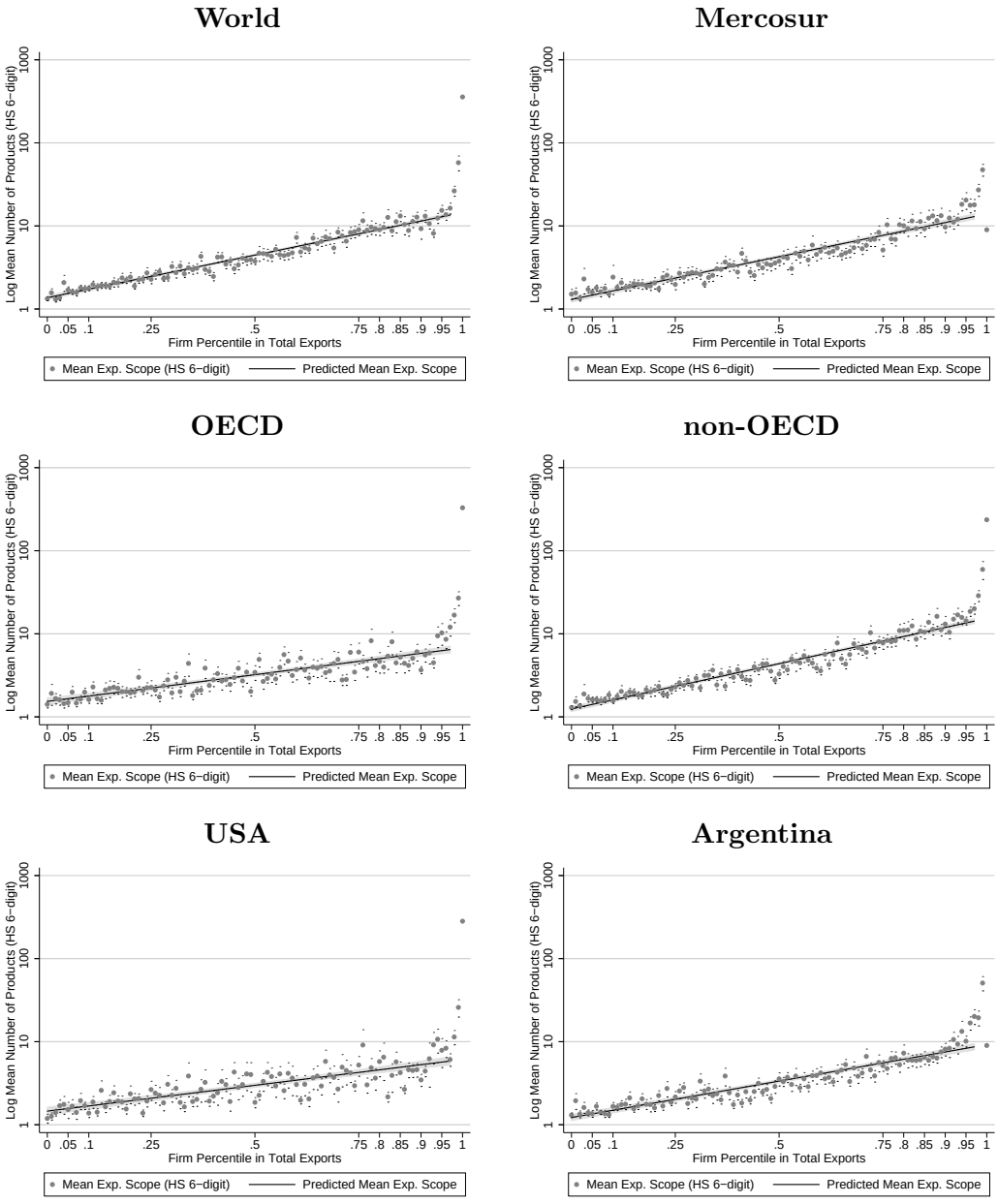
Source: *SECEX* 2000, manufacturing products, all firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.

Figure 18: **Total Sales Distribution**



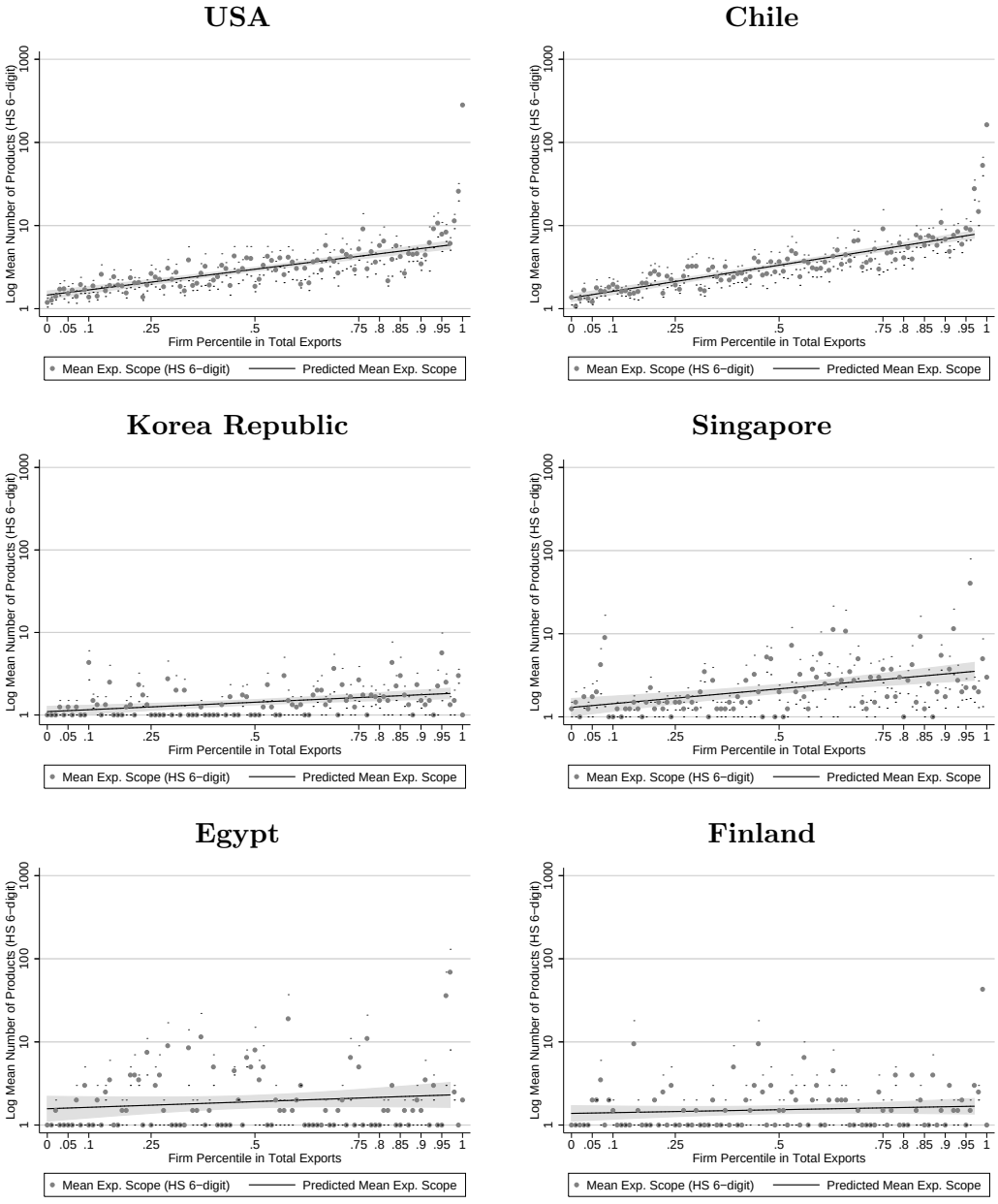
Source: *SECEX* 2000, manufacturing products, all firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.

Figure 19: **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 20: **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 21: **Exporter Scope and Total Exports Distribution by Country**

Table 36: 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	.786	.688
p value	0	0	0	0	0
Obs.	91,575	91,575	91,575	91,575	91,575
# 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 37: Exporter Scope and Local Total-Exports Percentile Correlations

Log # Products	OLS	Firm FE	Dest. FE	Dest. & Firm FE
	(1)	(2)	(3)	(4)
Local total-exp. percentile	1.690	-3.43e-23	1.671	-4.08e-23
	(.017)***	(8.64e-14)	(.016)***	(9.23e-14)
Const.	1.352	2.264	.971	2.264
	(.010)***	(4.99e-14)***	(.019)***	(9.79e-14)***
Obs.	87,271	87,271	87,271	87,271
Panels		14,643		14,643
R^2	.105	0	.170	0

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 38: Correlates of Destination Effects on Exporter Scope

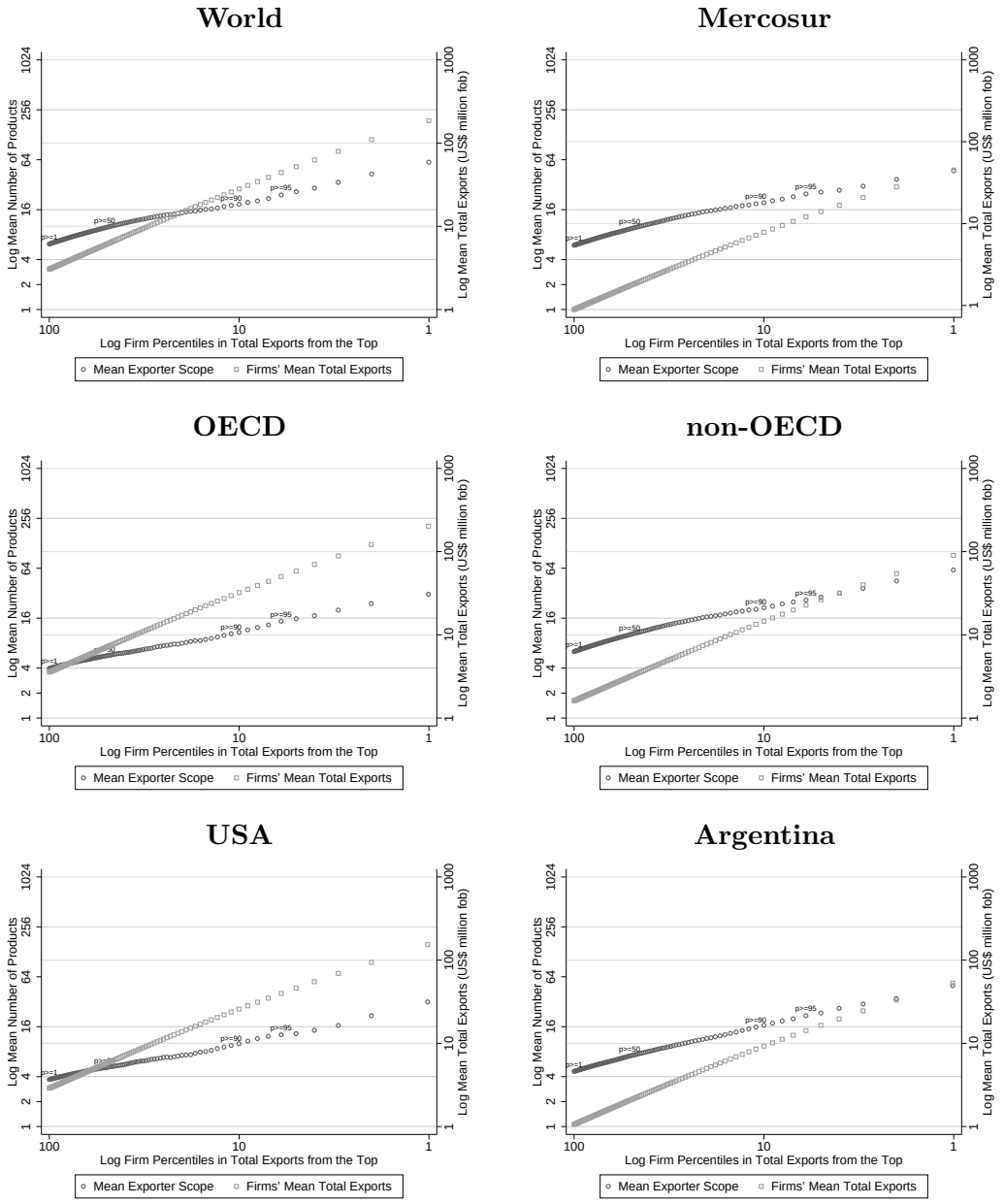
	OLS		
	(1)	(2)	(3)
Mean Log Market size			-.065
			(.044)
Log Population		.006	.005
		(.030)	(.058)
Log GDP per cap.		-.145	-.118
		(.033)***	(.063)*
Log GDP	-.060		
	(.026)**		
Log Distance	-.089	-.094	-.270
	(.147)	(.141)	(.154)*
Common borders	-.219	-.208	-.593
	(.297)	(.284)	(.293)**
Common language	-.749	-.752	-.702
	(.306)**	(.292)**	(.299)**
Obs.	153	153	107
R^2	.075	.162	.296

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 scope are from a destination fixed effects regression controlling for the firm's local total-exports percentile (column 3 in Table 37). 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 39: Exporter Scope Distribution by Destination

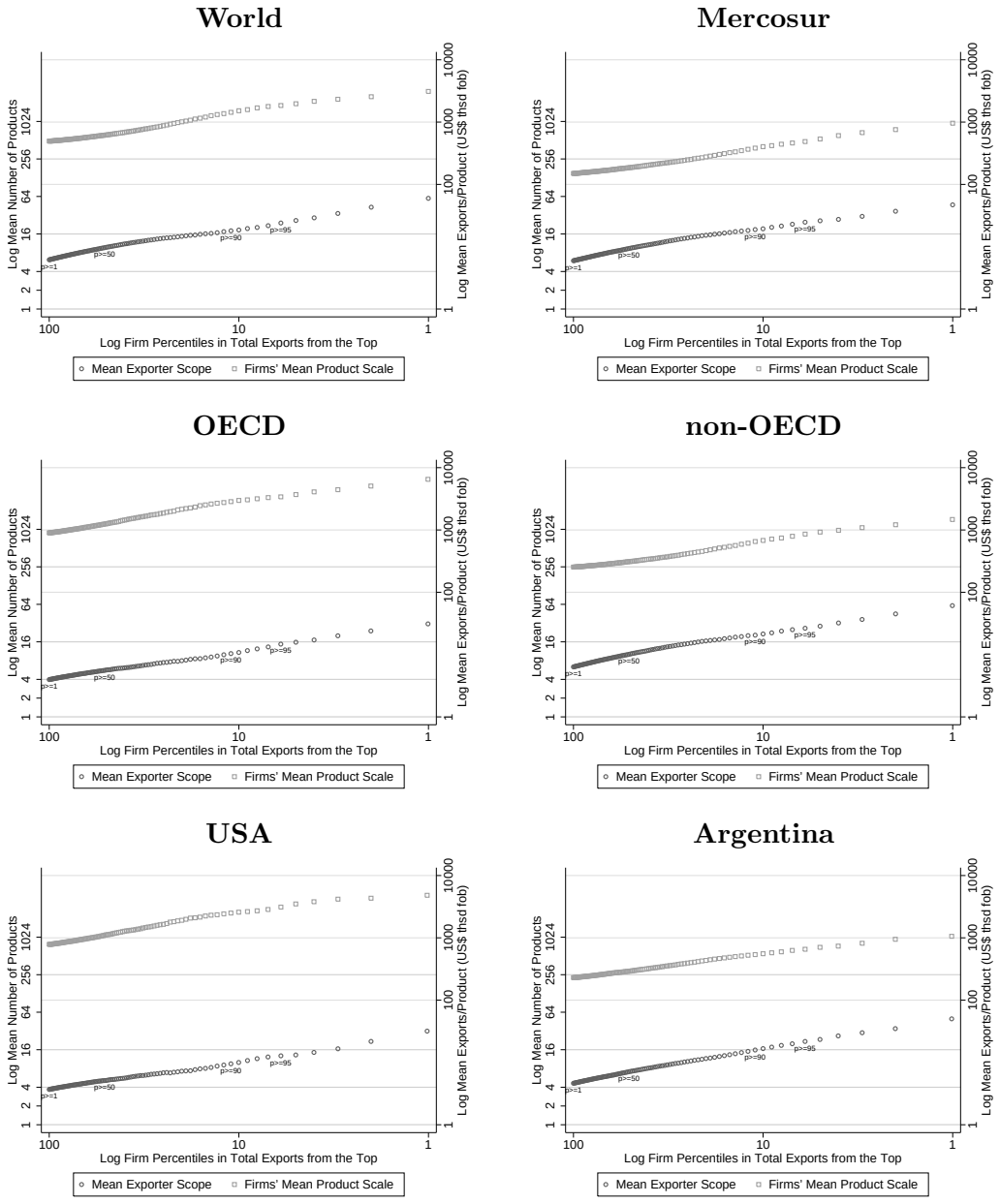
	World	Mercosur	OECD	non-OECD	USA	Argentina
Percentile	(1)	(2)	(3)	(4)	(5)	(6)
00	1	1	1	1	1	1
05	1	1	1	1	1	1
10	1	1	1	1	1	1
25	1	1	1	1	1	1
50	2	2	2	2	1	2
75	5	5	3	5	3	4
80	6	6	4	6	3	5
85	8	8	5	8	4	6
90	12	12	7	12	6	9
95	23	22	12	23	11	16
99	70	67	44	71	45	42
100	1,511	325	329	1,511	282	296

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.



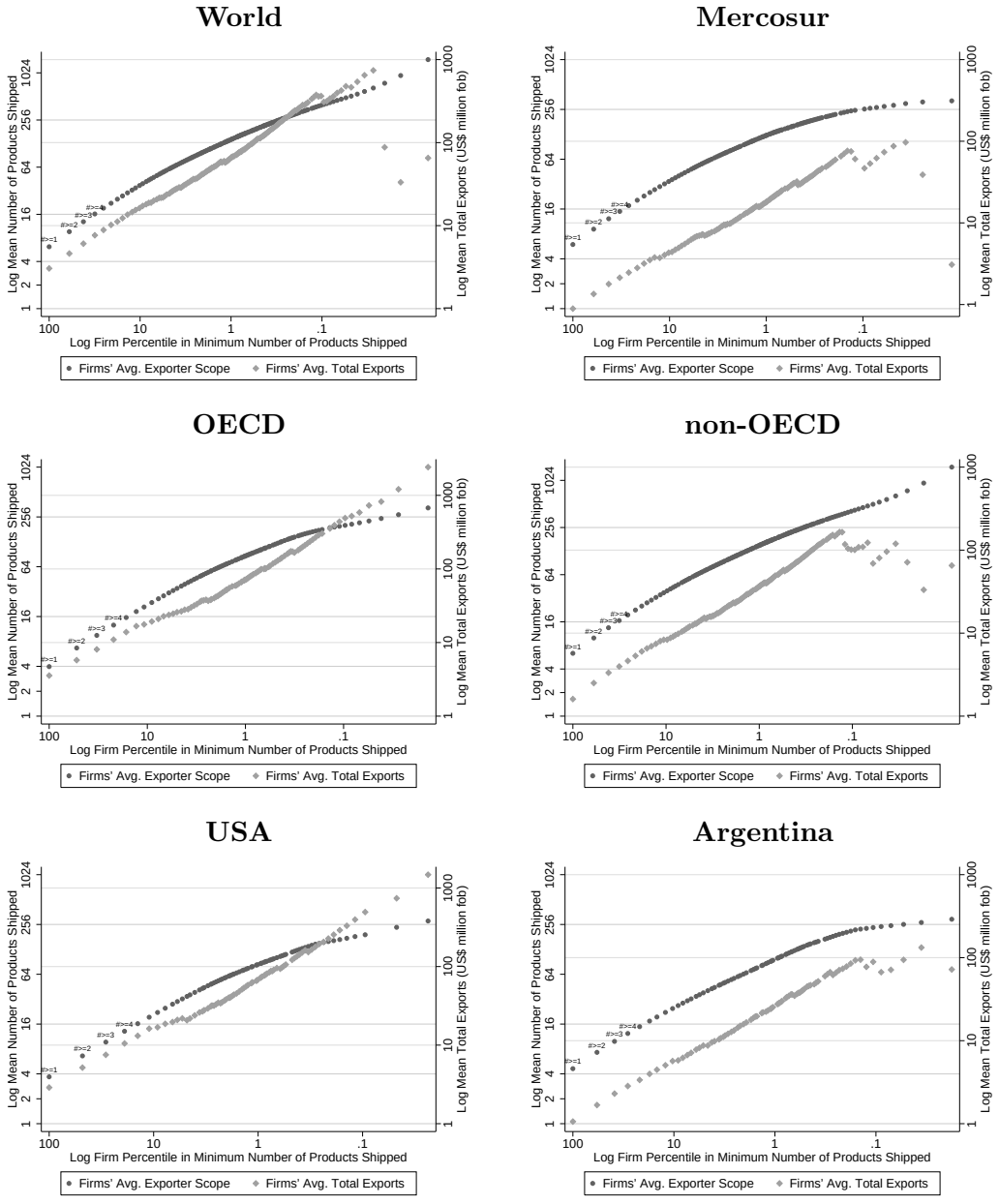
Source: *SECEX* 2000, manufacturing products, all firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters; at the next percentile 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 22: **Average Scope, Total Exports and the Total Exports Distribution**



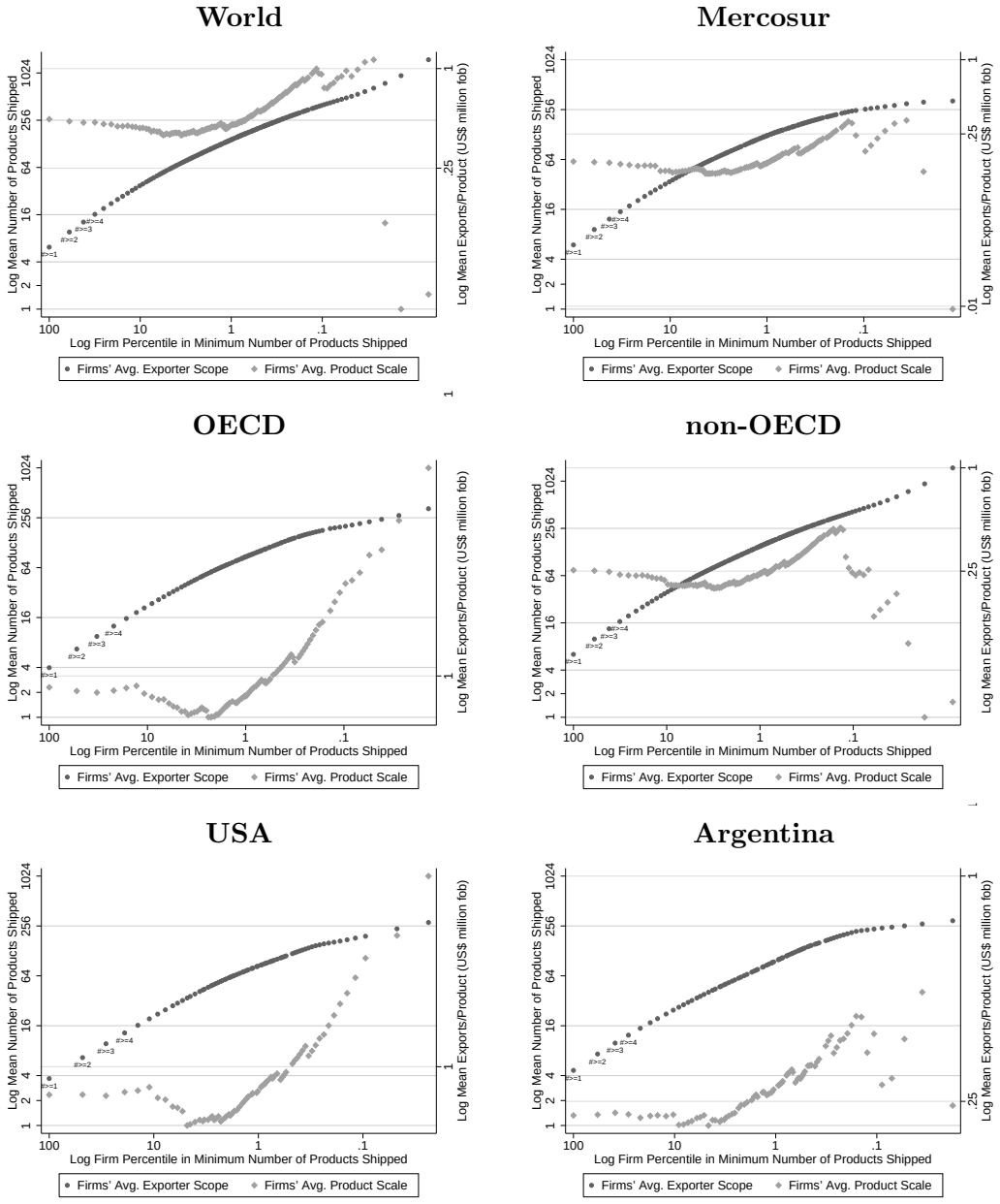
Source: *SECEX* 2000, manufacturing products, all firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters; at the next percentile 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 23: **Average Scope, Average Scale and the Total Exports Distribution**



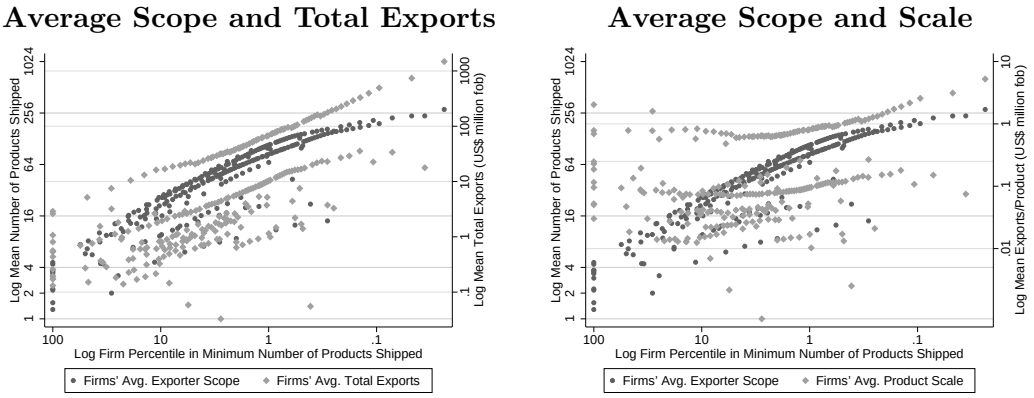
Source: *SECEX* 2000, manufacturing products, all firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least 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 24: **Average Scope, Total Exports and the Exporter Scope Distribution**



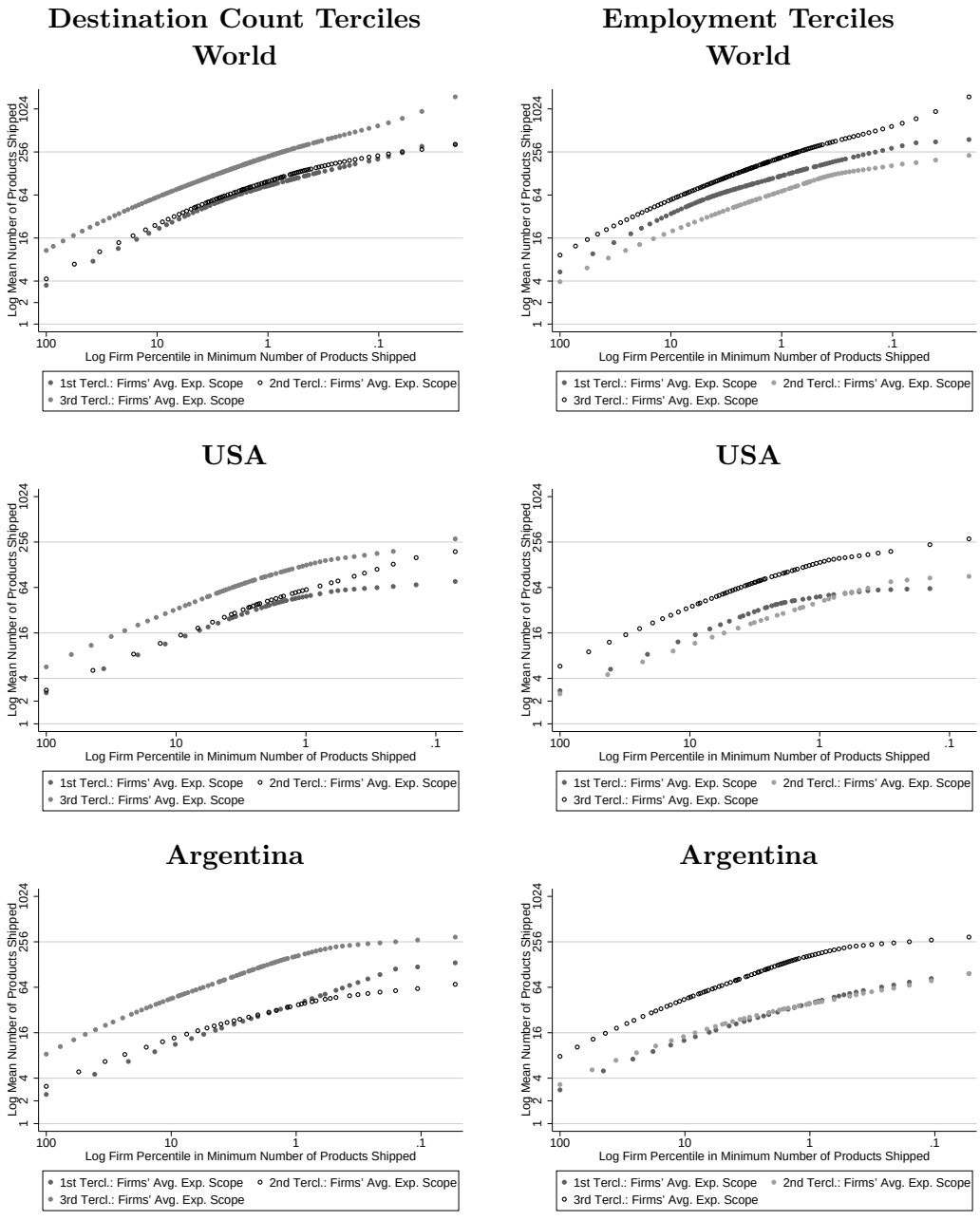
Source: *SECEX* 2000, manufacturing products, all firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least 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 25: **Average Scope, Average Scale and the Exporter Scope Distribution**



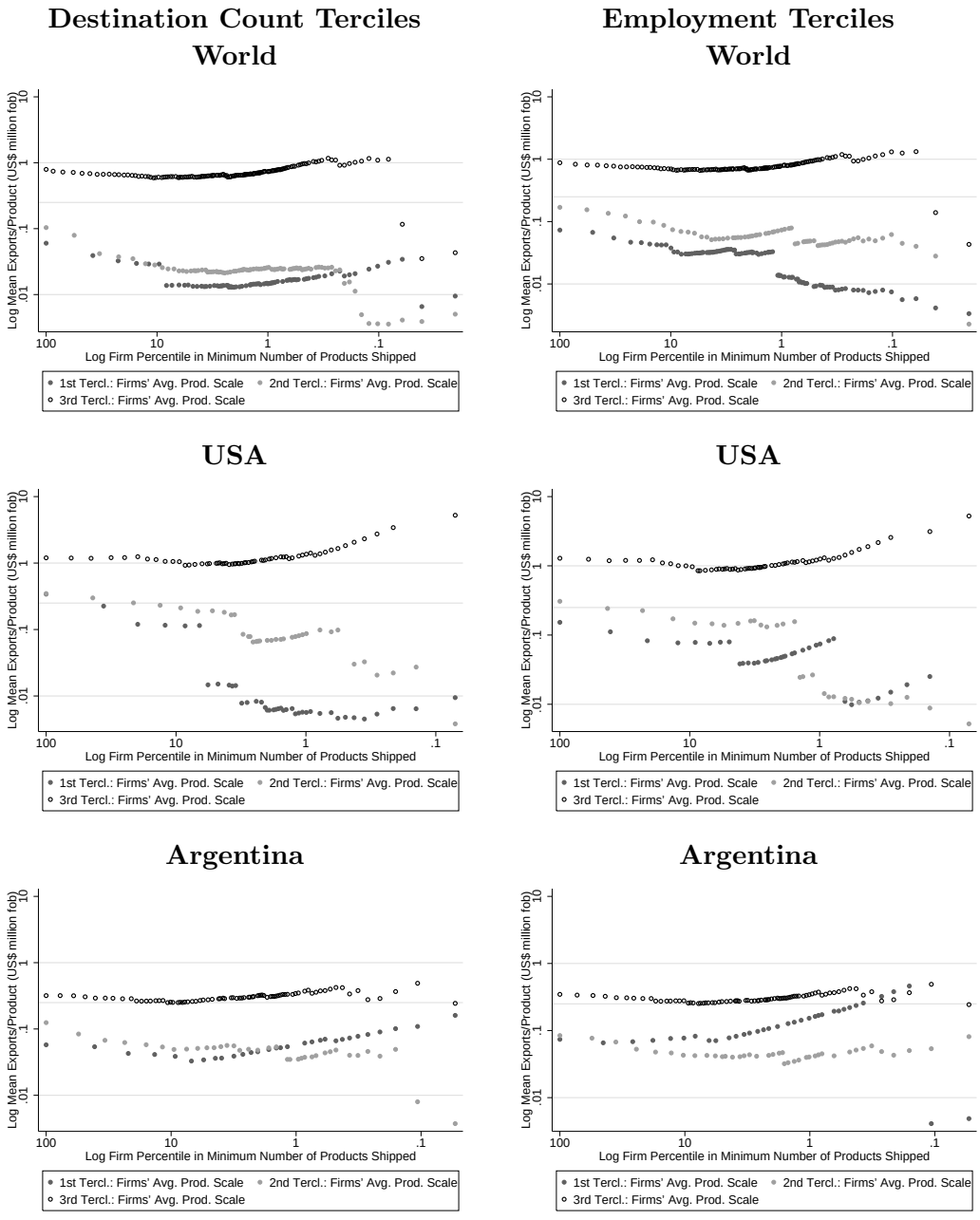
Source: *SECEX* 2000, manufacturing products, all firms.
Note: Selection of the eleven countries at the first and every tenth percentile among Brazil's top 100 export destinations (Cameroon, Jordan, Somalia, Jamaica, Greece, Finland, Egypt, Singapore, Korea Republic, Chile, USA). Products at the Harmonized-System 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 26: **Average Scope, Scale and Exporter Distributions Across Countries**



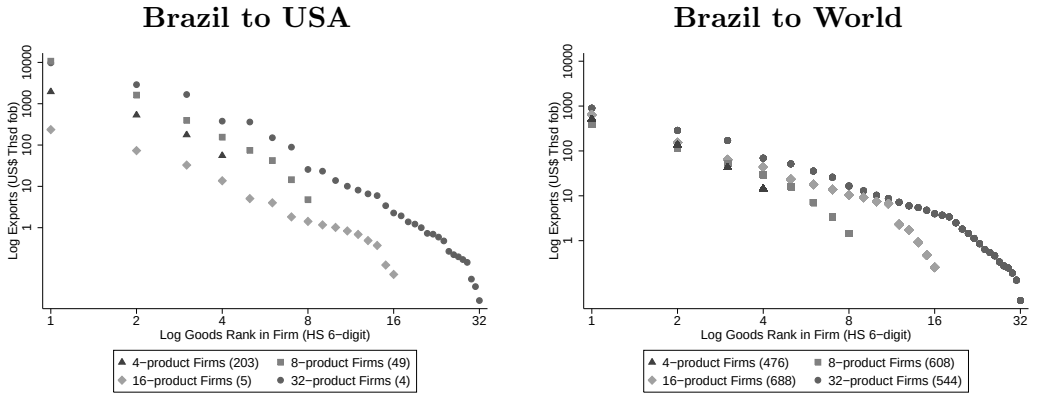
Sources: *RAIS* and *SECEX* 2000, manufacturing products, all firms.
Note: Products at the Harmonized-System 6-digit level. Left panel: firms by tercile of worldwide number of destinations; right panel: firms by tercile of domestic employment. Left-most observations are all exporters, shipping at least 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 27: **Average Scope and the Exporter Distribution by Firm Type**



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 28: **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 29: **Within-firm Sales Distribution**

Table 40: 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	.141								
	(.181)	(.026)								
3 products	1.097	.193	.052							
	(.162)	(.021)	(.009)							
4 products	2.066	.470	.144	.032						
	(.367)	(.088)	(.032)	(.008)						
5 products	1.903	.422	.147	.047	.016					
	(.398)	(.071)	(.024)	(.009)	(.005)					
6 products	3.358	1.027	.118	.057	.018	.004				
	(1.499)	(.643)	(.019)	(.011)	(.003)	(.0007)				
7 products	2.068	.633	.204	.098	.037	.018	.003			
	(.323)	(.137)	(.039)	(.024)	(.009)	(.006)	(.0005)			
8 products	1.949	.536	.225	.090	.059	.043	.012	.007		
	(.434)	(.120)	(.067)	(.033)	(.026)	(.023)	(.005)	(.004)		
9 products	3.477	1.165	.476	.218	.101	.052	.029	.015	.002	
	(.821)	(.265)	(.112)	(.068)	(.028)	(.016)	(.009)	(.006)	(.0004)	
10 products	3.217	1.029	.573	.212	.127	.078	.051	.028	.011	.003
	(1.097)	(.374)	(.234)	(.088)	(.055)	(.033)	(.024)	(.014)	(.005)	(.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 41: 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 42: 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 43: 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	.220								
	(.306)	(.043)								
3 products	1.346	.253	.076							
	(.196)	(.036)	(.020)							
4 products	1.956	.533	.177	.056						
	(.303)	(.161)	(.069)	(.021)						
5 products	1.862	.372	.103	.037	.013					
	(.335)	(.084)	(.020)	(.008)	(.003)					
6 products	9.151	2.960	.542	.336	.075	.005				
	(4.068)	(1.817)	(.188)	(.128)	(.033)	(.001)				
7 products	4.537	1.296	.824	.148	.077	.038	.009			
	(1.431)	(.654)	(.478)	(.053)	(.032)	(.019)	(.006)			
8 products	10.692	1.617	.395	.155	.074	.042	.014	.005		
	(3.829)	(.463)	(.090)	(.041)	(.022)	(.011)	(.004)	(.001)		
9 products	5.970	1.434	.678	.107	.053	.028	.012	.005	.001	
	(1.917)	(.433)	(.307)	(.032)	(.021)	(.015)	(.004)	(.002)	(.0005)	
10 products	6.766	3.757	1.360	.362	.245	.127	.096	.022	.005	.001
	(2.698)	(1.984)	(.822)	(.165)	(.148)	(.090)	(.079)	(.015)	(.003)	(.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 44: 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	.041								
	(.052)	(.005)								
3 products	.614	.141	.025							
	(.169)	(.039)	(.005)							
4 products	.938	.147	.050	.016						
	(.231)	(.024)	(.009)	(.005)						
5 products	.656	.199	.060	.029	.007					
	(.098)	(.036)	(.011)	(.008)	(.001)					
6 products	.838	.264	.115	.044	.018	.006				
	(.292)	(.067)	(.034)	(.014)	(.005)	(.001)				
7 products	.991	.426	.181	.068	.035	.018	.004			
	(.223)	(.155)	(.061)	(.022)	(.012)	(.008)	(.002)			
8 products	.809	.341	.171	.118	.052	.027	.014	.007		
	(.190)	(.094)	(.058)	(.049)	(.017)	(.010)	(.006)	(.004)		
9 products	4.578	.142	.065	.033	.021	.014	.007	.003	.001	
	(3.866)	(.032)	(.016)	(.010)	(.006)	(.005)	(.003)	(.001)	(.0004)	
10 products	1.171	.410	.188	.114	.052	.032	.022	.014	.008	.004
	(.355)	(.125)	(.081)	(.054)	(.023)	(.017)	(.013)	(.010)	(.006)	(.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 45: Total Exports Decompositions at the Firm Level

OLS	Log # Products	Log Exports/product #≥ 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: $G_d(\omega)\, z_d(\omega)$, 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 $z_d(\omega)$ 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 46: Product Scale and Exporter Scope Correlations

Log Exp./prod.	Firm data[a]	Firm-destination data[b]			Firm-destination-product data[c]		
	OLS	OLS	Dest. FE	Firm & dest. FE	Firm & dest. FE	Prod. & dest. FE	Firm, prod. & dest. FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
				World			
Log # Products	.135	-.225	-.126	.228	1.096	.305	.920
	(.018)***	(.010)***	(.010)***	(.012)***	(.011)***	(.012)***	(.012)***
Obs.	14,678	56,883	56,883	56,883	99,637	99,637	99,637
R^2	.004	.009	.083	.121	.126	.227	.212
Corr. Firm FE, $X'\beta$				-.168	-.192		-.144
				Mercosur			
Log # Products	.087	-.007	.009	.175	1.230	.491	1.134
	(.020)***	(.017)***	(.016)***	(.029)***	(.020)***	(.021)***	(.021)***
Obs.	8,293	12,449	12,449	12,449	27,005	27,005	27,005
R^2	.002	1.00e-05	.051	.305	.191	.164	.261
Corr. Firm FE, $X'\beta$				-.126	-.217		-.177
				OECD			
Log # Products	.164	-.015	-.028	.478	1.233	.363	1.027
	(.033)***	(.023)***	(.023)***	(.028)***	(.028)***	(.029)***	(.028)***
Obs.	7,257	18,136	18,136	18,136	26,543	26,543	26,543
R^2	.003	.00002	.029	.140	.112	.225	.225
Corr. Firm FE, $X'\beta$				-.232	-.268		-.214
				non-OECD			
Log # Products	.116	-.231	-.154	.153	1.107	.290	.937
	(.018)***	(.011)***	(.011)***	(.013)***	(.013)***	(.014)***	(.013)***
Obs.	11,648	37,960	37,960	37,960	72,080	72,080	72,080
R^2	.004	.012	.084	.127	.140	.210	.226
Corr. Firm FE, $X'\beta$				-.206	-.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. 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 47: Correlates of Firm Effects on Product Scale and Exporter Scope

	Firm Eff. on Product 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	-.115	-.006	.743	.734	.737
	(.006)***	(.006)***	(.007)	(.004)***	(.004)***	(.004)***
Log ww. Exp./prod.	.906	.897	.873	.025	-.029	-.002
	(.004)***	(.004)***	(.005)***	(.002)***	(.002)***	(.002)
Log ww. # Dest.	-.947	-.823	-.600	-.354	-.298	-.212
	(.008)***	(.008)***	(.010)***	(.005)***	(.005)***	(.005)***
No OECD exp.	.036	.004	.562	.092	.090	-.0009
	(.017)**	(.018)	(.021)***	(.010)***	(.010)***	(.011)
Log OECD Exp.[a]	-.004	-.003	-.008	-.004	-.004	-.007
	(.003)	(.004)	(.004)*	(.002)*	(.002)*	(.002)***
No Mercosur exp.	-.037	-.043	.133	.017	.019	.342
	(.017)**	(.019)**	(.022)***	(.010)	(.011)*	(.011)***
Log Mercosur Exp.[a]	.012	.011	.018	.003	.002	-.004
	(.004)***	(.004)***	(.005)***	(.002)	(.002)	(.002)*
Log # dom. Plants	-.013	-.017	-.002	.010	.011	.015
	(.008)	(.009)*	(.011)	(.005)**	(.005)**	(.006)***
Log # dom. Loc.	.031	.042	.032	-.031	-.032	-.031
	(.009)***	(.009)***	(.011)***	(.005)***	(.005)***	(.006)***
Log Employment	-.007	-.003	-.004	-.013	-.013	-.016
	(.003)**	(.003)	(.004)	(.002)***	(.002)***	(.002)***
High sch. educ. wf.	-.074	-.067	-.104	-.021	-.017	-.023
	(.018)***	(.020)***	(.024)***	(.011)*	(.012)	(.012)*
College educ. wf.	.050	.120	-.023	-.200	-.203	-.212
	(.026)*	(.029)***	(.034)	(.016)***	(.016)***	(.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 product 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 46). 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 48: Correlates of Destination Effects on Product Scale and Exporter Scope

	Destination Eff. on Product 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	.114	.045	-.003	-.0001	.010
	(.050)**	(.049)**	(.038)	(.012)	(.011)	(.010)
Log Population	.131	.132	.252	.001	.004	.018
	(.072)*	(.072)*	(.055)***	(.018)	(.018)	(.015)
Log GDP per cap.	.053	.052	.215	-.027	-.026	.023
	(.074)	(.073)	(.056)***	(.017)	(.016)	(.014)*
Log Distance	.068	.039	-.314	-.242	-.239	-.200
	(.198)	(.196)	(.151)**	(.051)***	(.050)***	(.042)***
Common borders	-.336	-.335	-.044	.031	.021	.263
	(.392)	(.388)	(.299)	(.097)	(.094)	(.079)***
Common language	-.416	-.418	.315	.007	-.006	.150
	(.372)	(.367)	(.283)	(.096)	(.093)	(.079)*
Const.	-9.043	-8.683	-8.179	2.952	2.734	1.592
	(1.937)***	(1.915)***	(1.477)***	(.488)***	(.474)***	(.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 product 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 46) and in column 3 from a destination fixed effects regression controlling for scope and firm fixed effects (see column 3 in Table 46). 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 49: Correlates of Product Effects on Product Scale and Exporter Scope

	Product Eff. on Product 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 product 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 27). 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 50: Conditional Product Scale and Exporter Scope Correlations

Log Exp./prod.	World			Mercosur	Oecd	non-Oecd
	(1)	(2)	(3)	(4)	(5)	(6)
Log # Products	.293	.633	.320	-.146	.349	.028
	(.091)***	(.059)***	(.070)***	(.178)	(.171)**	(.080)
Squared Log # Products	.384	-.240	-.243	.060	.154	-.147
	(.145)***	(.067)***	(.068)***	(.180)	(.196)	(.073)**
Cubic Log # Products	-.340	.018	.014	-.058	-.169	.019
	(.077)***	(.024)	(.024)	(.066)	(.076)**	(.025)
Quartic Log # Products	.082	.003	.003	.010	.023	.001
	(.016)***	(.003)	(.003)	(.007)	(.009)***	(.003)
Pentic Log # Products	-.006					
	(.001)***					
Log # Prd. × Log ww. # Dest.			.072	.179	.018	.076
			(.017)***	(.047)***	(.043)	(.020)***
Log # Prd. × Log Empl.			.030	-.017	.067	.021
			(.007)***	(.018)	(.016)***	(.007)***
Log # Prd. × Coll. ed. wf.			-.123	.271	-.279	.007
			(.063)*	(.161)*	(.154)*	(.073)
Obs.	56,883	56,883	55,037	12,026	17,411	36,861
R^2	.125	.124	.128	.315	.151	.132
Corr. Firm FE, $X'\beta$	-.161	-.161	-.096	-.096	-.157	-.136
Residual degrees of freedom	42029	42030	41172	4089	10581	25734
F statistic: Zero Firm FE	3.835***	3.833***	3.665***	2.918***	2.985***	3.596***

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 46). Worldwide number of products at the Harmonized-System 6-digit level. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 51: Individual Product Sales Regressions

Log Sales	OLS	Dest. FE	Dest. & Ind. FE	Dest. & Firm FE
	(1)	(2)	(3)	(4)
Log # Products	1.142	1.169	1.313	1.502
	(.006)***	(.006)***	(.006)***	(.007)***
Log Product Rank	-2.321	-2.349	-2.428	-2.477
	(.006)***	(.006)***	(.006)***	(.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.

6 All Products and Firms

Table 52: 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	169,174	16,510	26,865
# of Destinations (N)	173	3	23	143	1	1
Regional share in Tot. exports	1.000	.143	.599	.401	.243	.115
			Firms			
# of Firms (M)	15,907	8,691	8,204	12,326	4,702	5,890
Median Total exports (T_{md})	.073	.045	.098	.055	.088	.056
Median Exporter scope (G_{md})	2	2	2	2	1	2
Median Avg. prod scale (z_{md})	.029	.018	.052	.022	.049	.026
Mean Total exports ($\bar{t}_d$)	3.402	.890	3.949	1.743	2.802	1.058
Mean Exporter scope ($\bar{G}_d$)	5.936	5.850	3.774	6.179	3.511	4.561
Mean Avg. prod. scale (z_d)	.573	.152	1.046	.282	.798	.232
Shares in Total exports						
Single-prod. firms	.112	.093	.163	.083	.157	.107
Multi-prod. firms' top product	.586	.542	.605	.564	.635	.543
Multi-prod. firms' other prod.	.302	.365	.232	.353	.208	.351
			Varieties			
# of Varieties (MH)	94,419	50,842	30,965	76,162	16,510	26,865
Median Variety sales	.004	.003	.007	.003	.007	.006
Mean Variety sales	.573	.152	1.046	.282	.798	.232

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. Exports in US$ million fob. Mean Average product scale (z_d) is the scope-weighted arithmetic mean of exporters' average product scales.

Table 53: Top 25 Export Products

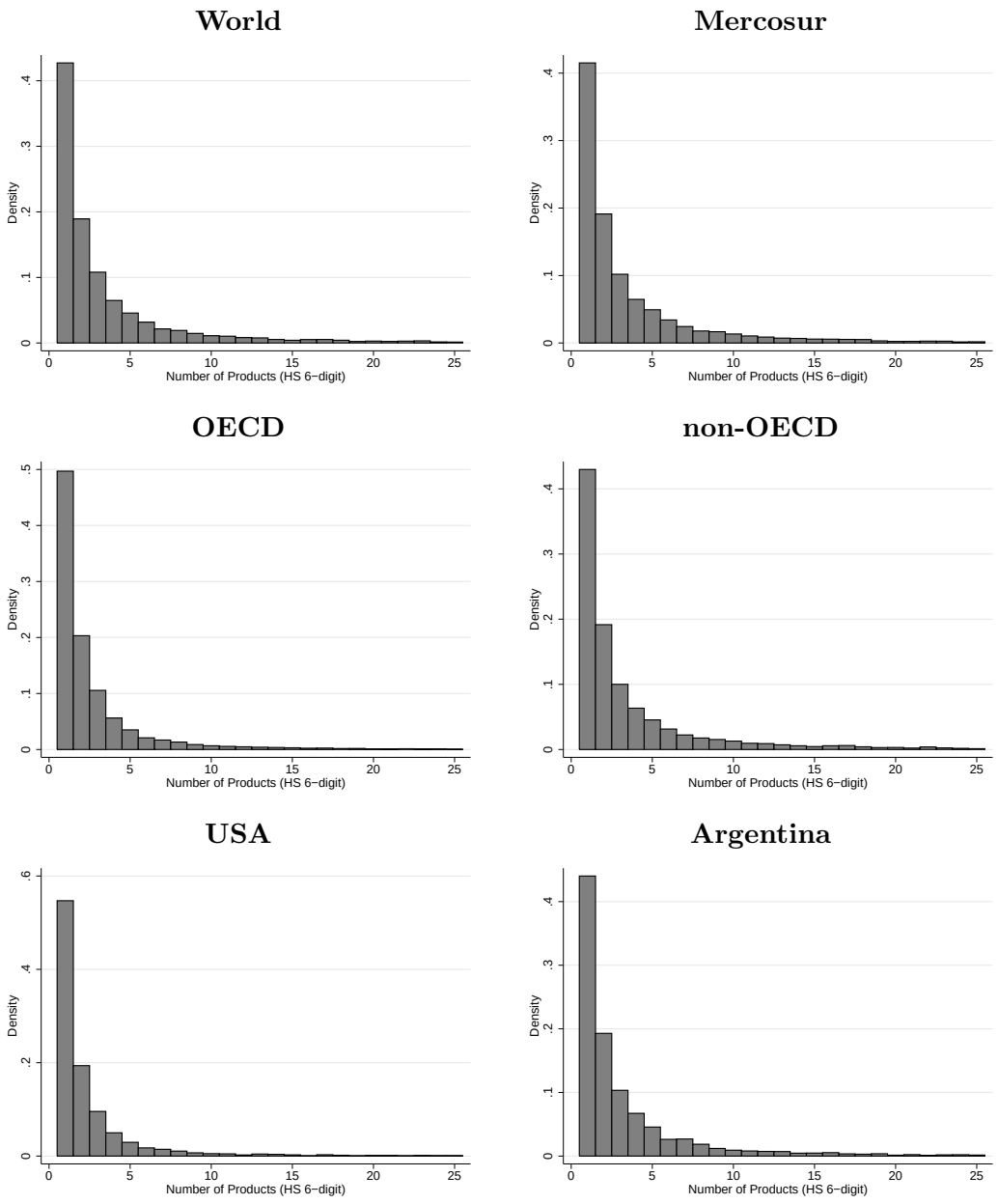
Rank	Product	Exports (US$ mill.)	Share in tot. exports (%)	# of Dest.
1.	Airplane & a/c unladen wght > 2t, nov 15t	2,785	5.1	18
2.	Soybeans, whether or not broken	2,187	4.0	36
3.	Iron ore concen nesoi & non-agglomerated iron ores	1,853	3.4	38
4.	Soybean oilcake & oth solid residue, wh/not ground	1,651	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 54: Top 25 Export Destinations

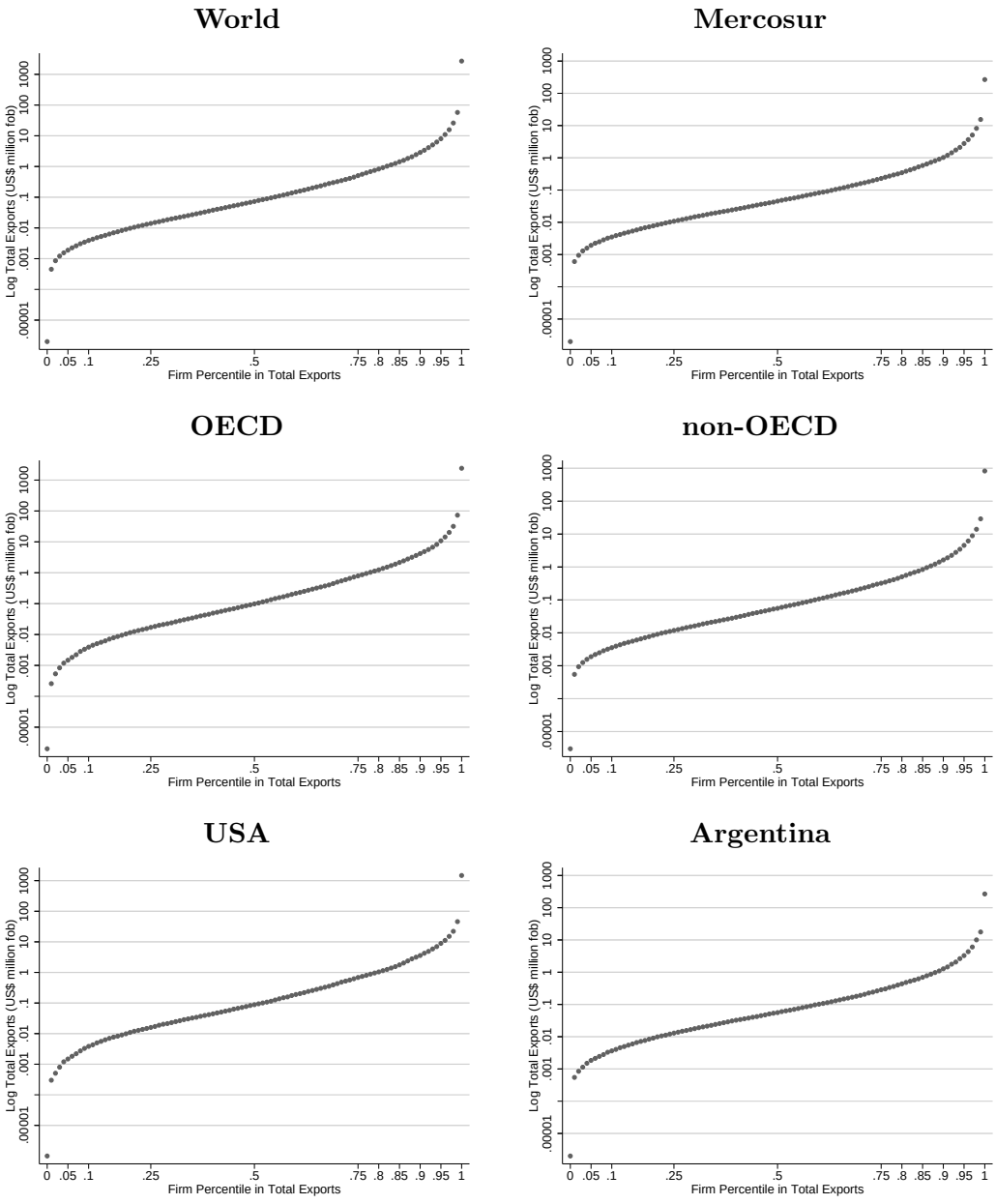
Rank	Destination	Exports (US$ mill.)	Share in tot. exports (%)	# of Products
1.	USA	13,173	24.3	2,661
2.	Argentina	6,232	11.5	3,121
3.	Netherlands	2,792	5.2	798
4.	Germany	2,523	4.7	1,441
5.	Japan	2,472	4.6	1,027
6.	Italy	2,145	4.0	1,152
7.	Belgium-Luxembourg	1,867	3.4	696
8.	France, Monaco	1,731	3.2	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.



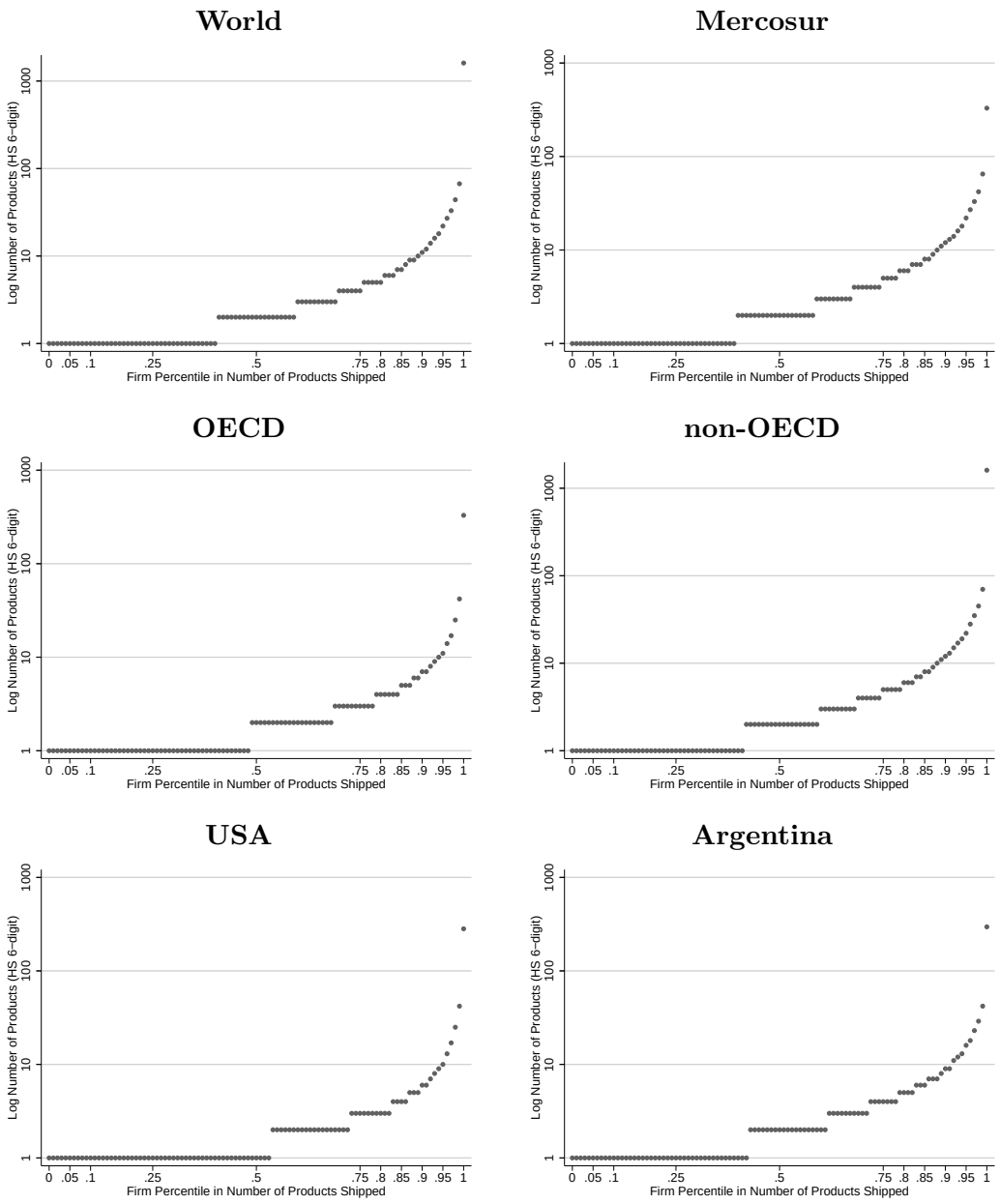
Source: *SECEX* 2000, all products and firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.

Figure 30: **Exporter Scope Distribution for Up to 25 Products**



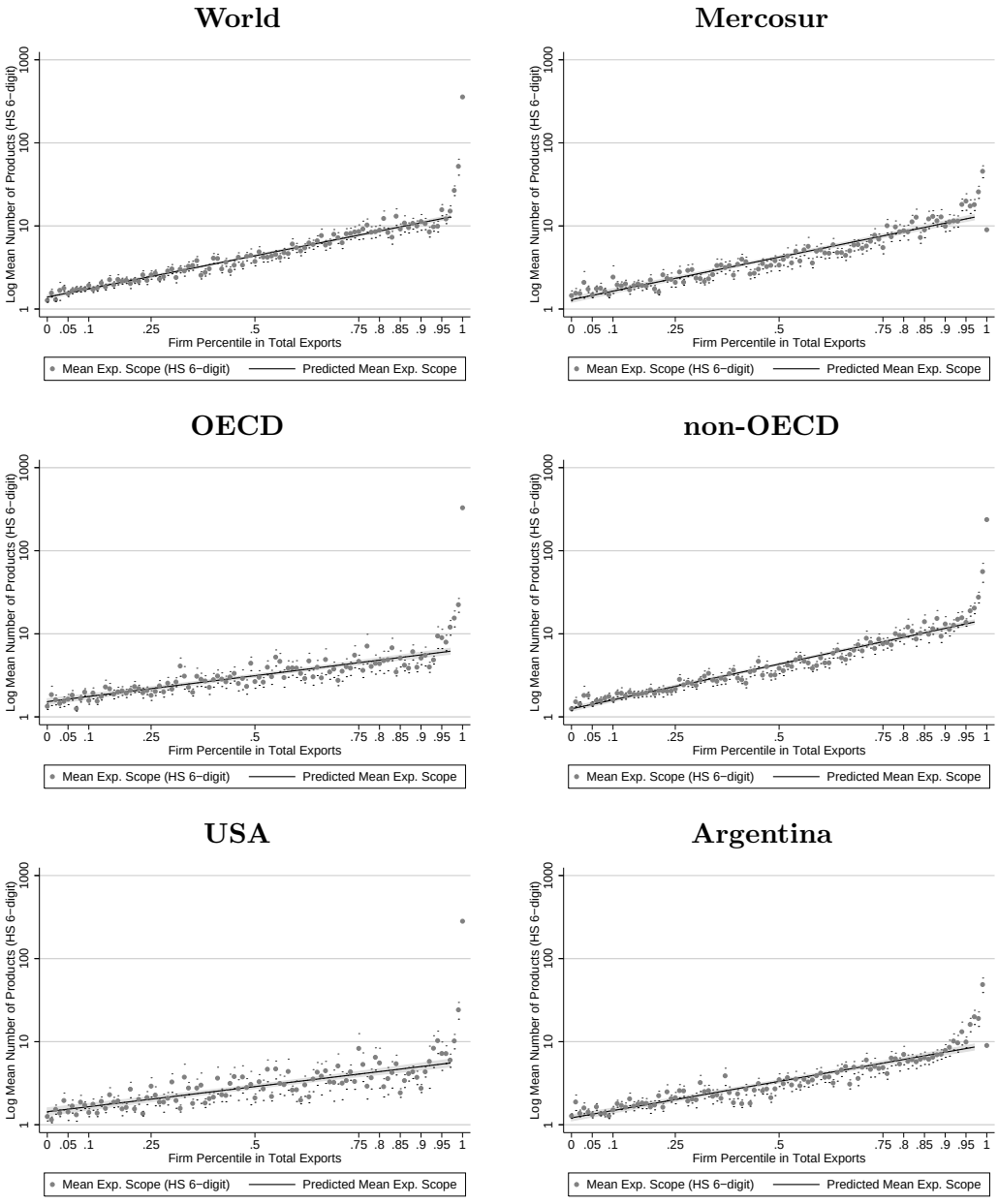
Source: *SECEX* 2000, all products and firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.

Figure 31: **Total Sales Distribution**



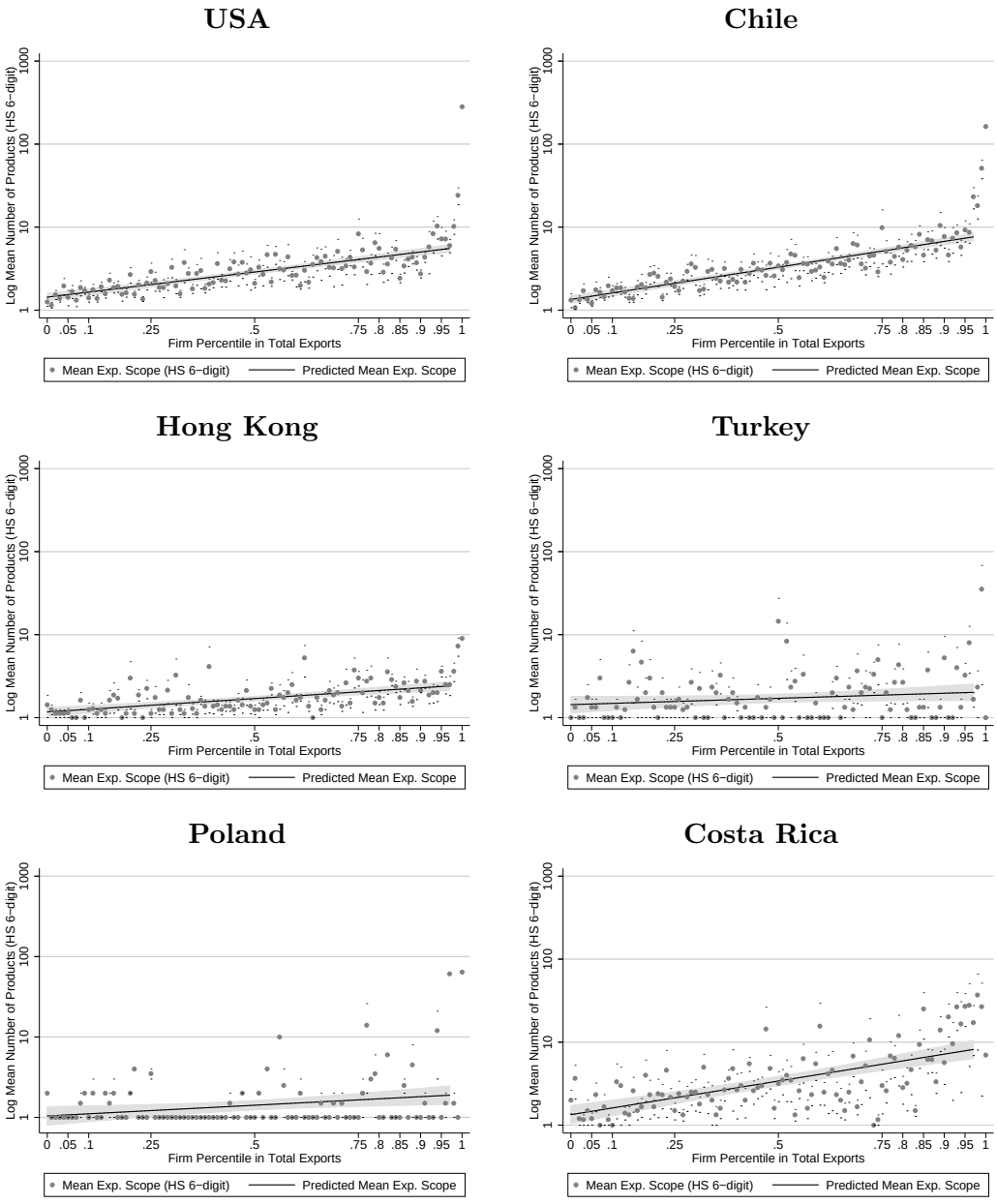
Source: *SECEX* 2000, all products and firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.

Figure 32: **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 33: **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 34: **Exporter Scope and Total Exports Distribution by Country**

Table 55: 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.	98,543	98,543	98,543	98,543	98,543
# 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 56: Exporter Scope and Local Total-Exports Percentile Correlations

Log # Products	OLS	Firm FE	Dest. FE	Dest. & Firm FE
	(1)	(2)	(3)	(4)
Local total-exp. percentile	1.660	2.00e-23	1.623	2.26e-23
	(.016)***	(7.10e-14)	(.016)***	(7.58e-14)
Const.	1.299	2.190	.926	2.190
	(.010)***	(4.08e-14)***	(.019)***	(7.93e-14)***
Obs.	94,098	94,098	94,098	94,098
Panels		15,869		15,869
R^2	.099	0	.168	0

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 57: Correlates of Destination Effects on Exporter Scope

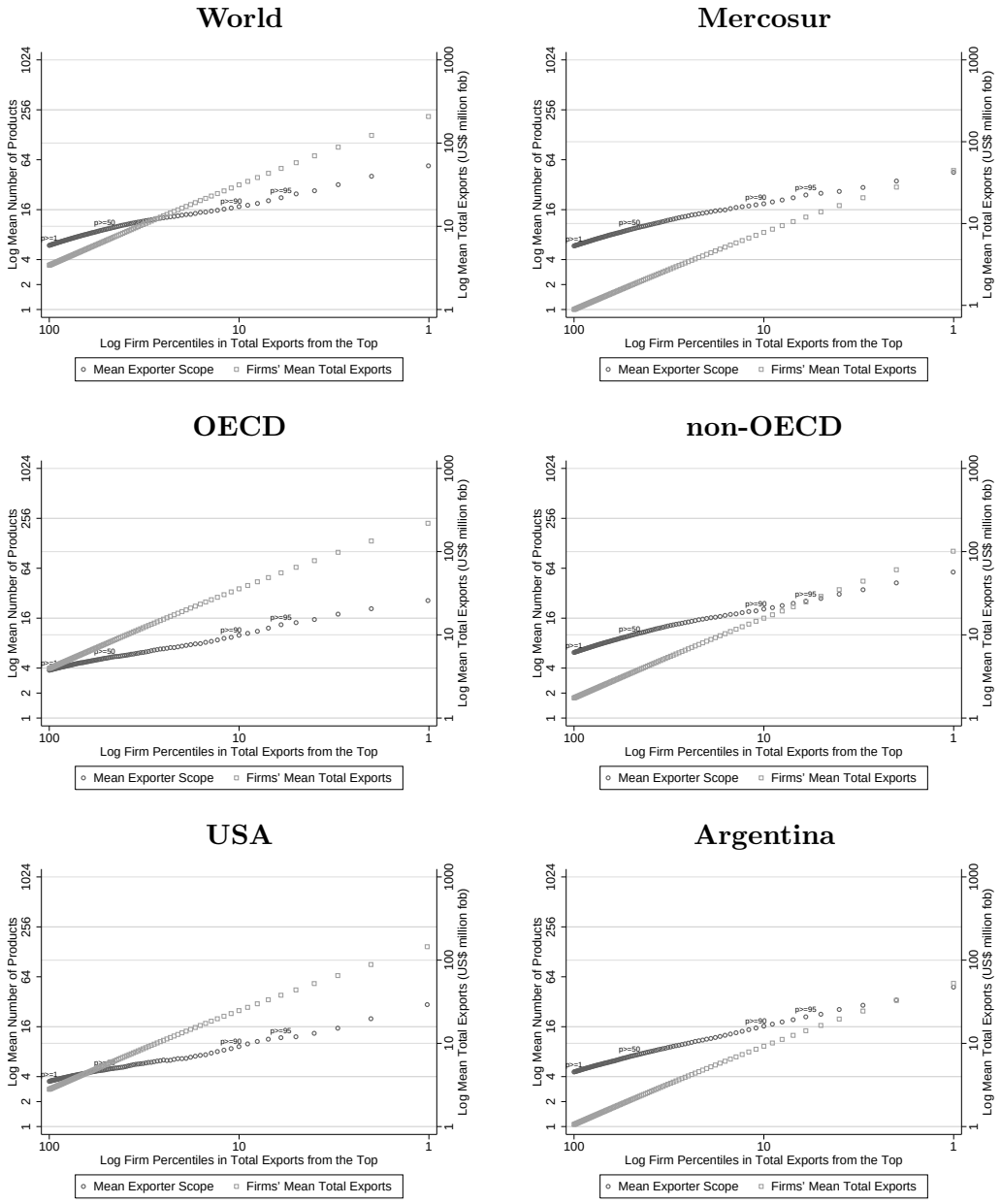
	OLS		
	(1)	(2)	(3)
Mean Log Market size			-.026
			(.035)
Log Population		.010	-.037
		(.031)	(.055)
Log GDP per cap.		-.187	-.188
		(.033)***	(.050)***
Log GDP	-.081		
	(.028)***		
Log Distance	.036	.021	-.208
	(.151)	(.140)	(.152)
Common borders	.0007	.004	-.404
	(.303)	(.280)	(.299)
Common language	-.767	-.767	-.304
	(.313)**	(.289)***	(.317)
Obs.	153	153	94
R^2	.086	.226	.303

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 scope are from a destination fixed effects regression controlling for the firm's local total-exports percentile (column 3 in Table 56). 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 58: Exporter Scope Distribution by Destination

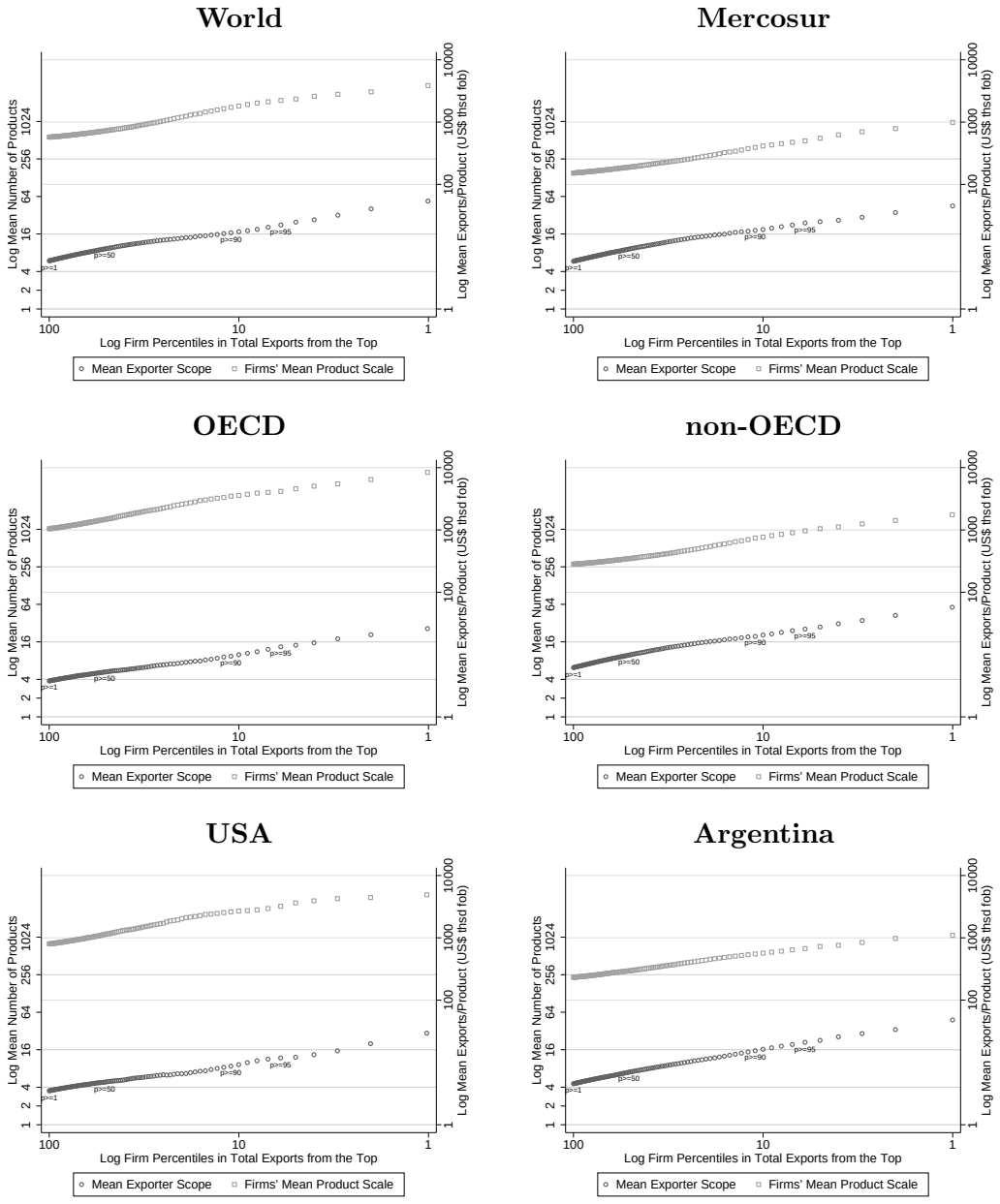
	World	Mercosur	OECD	non-OECD	USA	Argentina
Percentile	(1)	(2)	(3)	(4)	(5)	(6)
00	1	1	1	1	1	1
05	1	1	1	1	1	1
10	1	1	1	1	1	1
25	1	1	1	1	1	1
50	2	2	2	2	1	2
75	4	5	3	5	3	4
80	5	6	4	6	3	5
85	7	8	5	8	4	6
90	11	12	7	12	6	9
95	22	22	11	22	10	16
99	67	65	42	70	42	42
100	1,608	329	329	1,608	282	296

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.



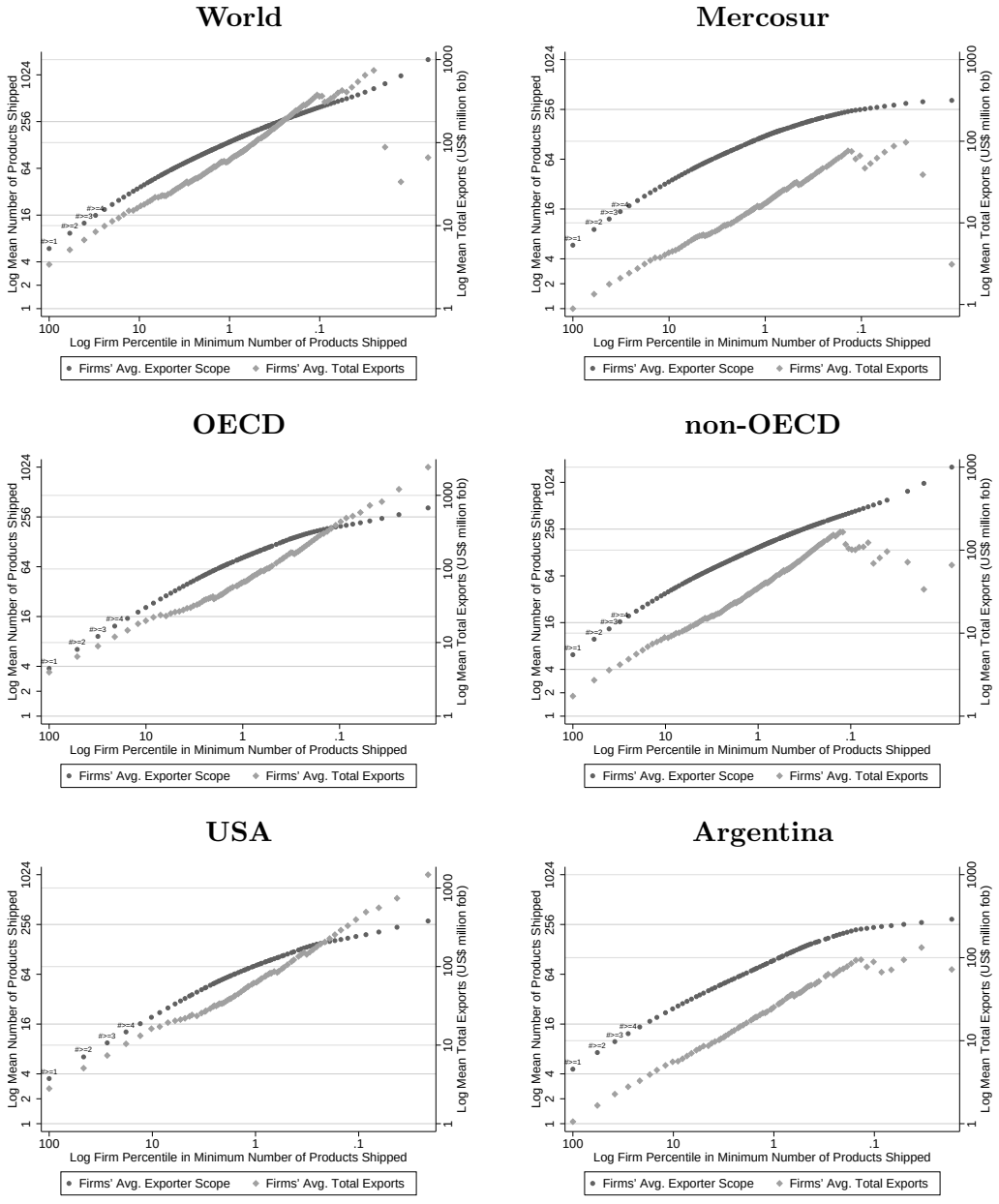
Source: *SECEX* 2000, all products and firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least one product 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 35: **Average Scope, Total Exports and the Total Exports Distribution**



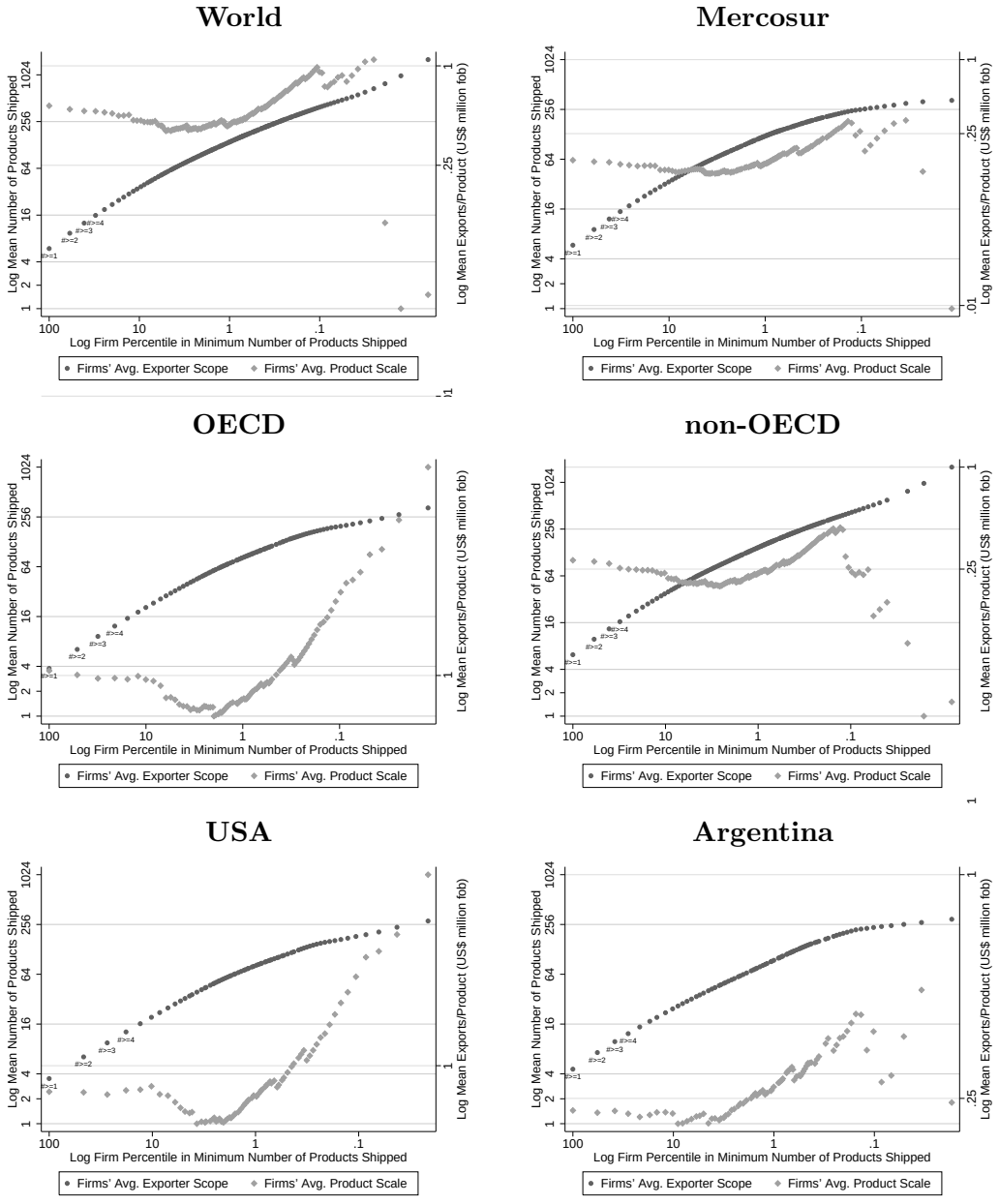
Source: *SECEX* 2000, all products and firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least one product 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 36: **Average Scope, Average Scale and the Total Exports Distribution**



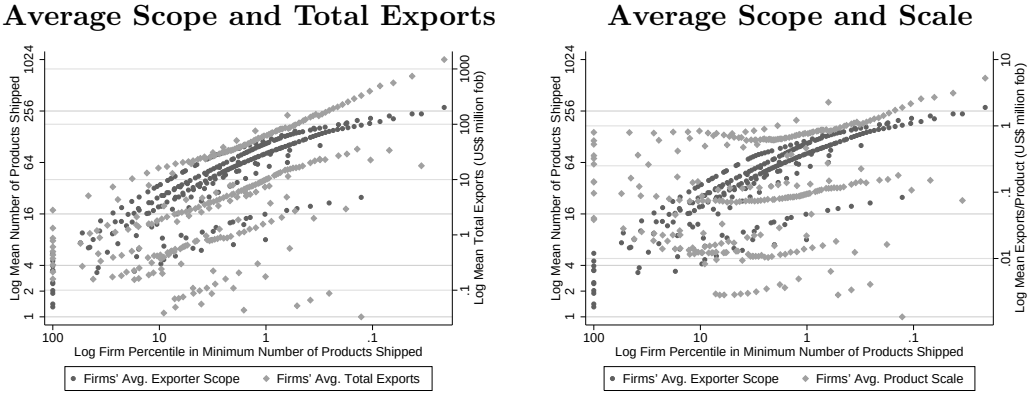
Source: *SECEX* 2000, all products and firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least one product 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 37: **Average Scope, Total Exports and the Exporter Scope Distribution**



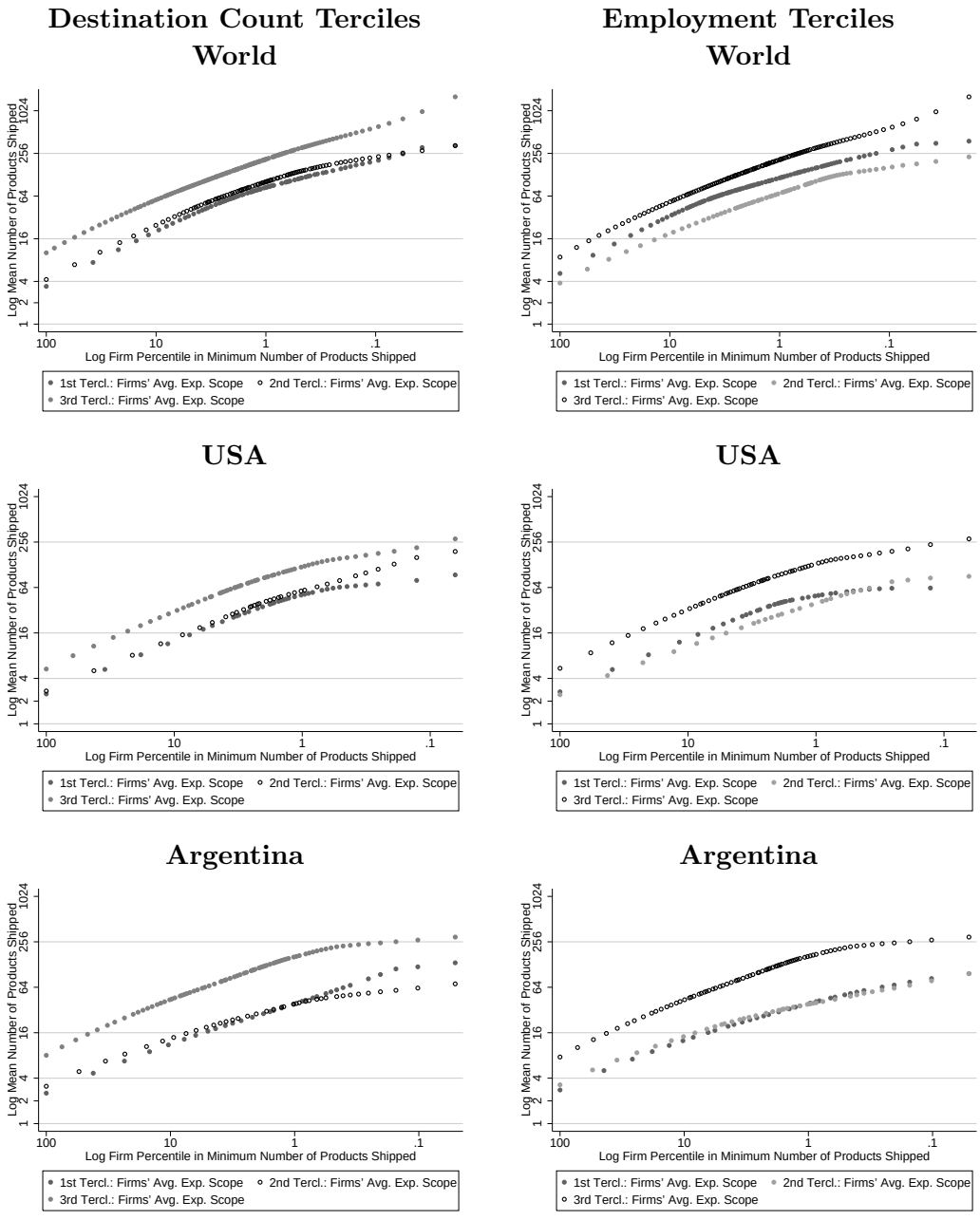
Source: *SECEX* 2000, all products and firms.
Note: Mercosur includes Argentina, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. Left-most observations are all exporters, shipping at least one product 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 38: **Average Scope, Average Scale and the Exporter Scope Distribution**



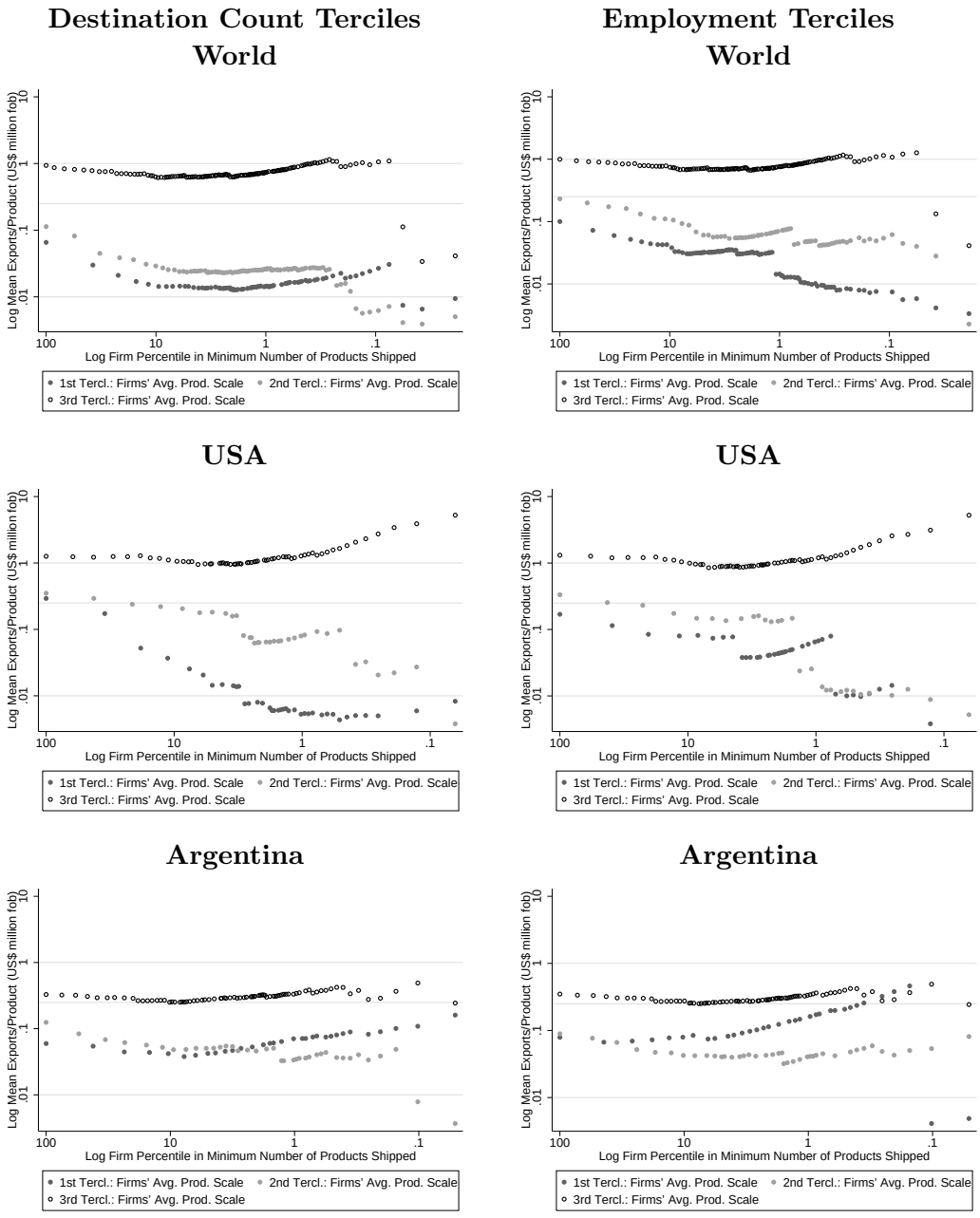
Source: *SECEX* 2000, all products and firms.
Note: Selection of the eleven countries at the first and every tenth percentile among Brazil's top 100 export destinations (Lithuania, Jordan, Bulgaria, Bangladesh, Netherlands Antilles, Costa Rica, Poland, Turkey, Hong Kong, Chile, USA). Products at the 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 39: **Average Scope, Scale and Exporter Distributions Across Countries**



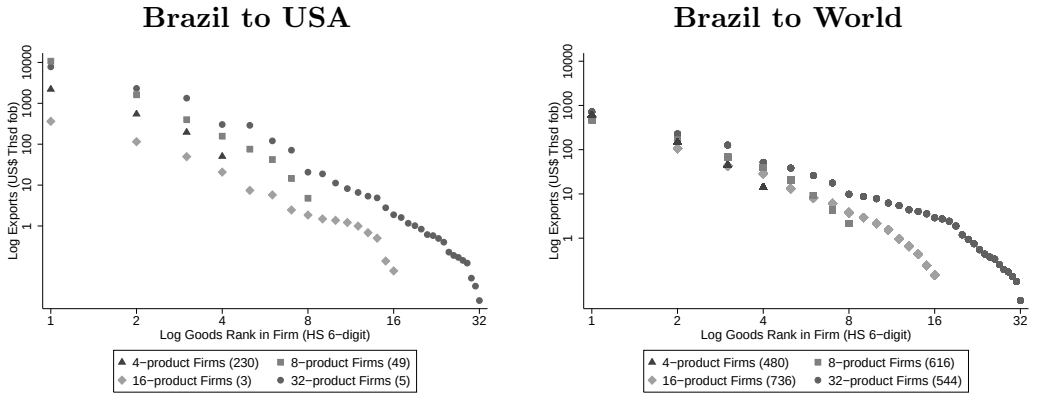
Sources: *RAIS* and *SECEX* 2000, all products and firms.
Note: Products at the Harmonized-System 6-digit level. Left panel: firms by tercile of worldwide number of destinations; right panel: firms by tercile of domestic employment. Left-most observations are all exporters, shipping at least one product 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 40: **Average Scope and the Exporter Distribution by Firm Type**



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 41: **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 42: **Within-firm Sales Distribution**

Table 59: 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-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 60: 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-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 61: 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	.324								
	(.448)	(.084)								
3 products	2.121	.610	.105							
	(.325)	(.195)	(.023)							
4 products	3.342	.716	.237	.056						
	(.628)	(.145)	(.065)	(.015)						
5 products	2.149	.532	.204	.063	.020					
	(.319)	(.087)	(.040)	(.011)	(.006)					
6 products	6.312	2.377	.327	.143	.040	.010				
	(3.025)	(1.660)	(.077)	(.041)	(.010)	(.002)				
7 products	5.490	1.746	.753	.217	.085	.030	.012			
	(1.419)	(.490)	(.309)	(.074)	(.032)	(.011)	(.008)			
8 products	8.396	2.735	1.366	.510	.258	.095	.040	.010		
	(1.793)	(.797)	(.401)	(.145)	(.075)	(.030)	(.014)	(.003)		
9 products	18.919	4.601	3.347	1.317	.158	.045	.016	.007	.002	
	(10.019)	(2.425)	(2.050)	(.778)	(.052)	(.012)	(.004)	(.002)	(.0006)	
10 products	5.408	1.219	.237	.093	.038	.022	.011	.004	.002	.0007
	(2.451)	(.591)	(.081)	(.031)	(.011)	(.008)	(.004)	(.002)	(.0008)	(.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-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 62: 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	.229								
	(.287)	(.040)								
3 products	1.344	.226	.058							
	(.177)	(.028)	(.011)							
4 products	2.209	.546	.196	.050						
	(.356)	(.147)	(.067)	(.018)						
5 products	1.808	.443	.141	.036	.012					
	(.315)	(.104)	(.035)	(.008)	(.003)					
6 products	7.244	2.898	.536	.333	.075	.005				
	(3.520)	(1.773)	(.183)	(.125)	(.032)	(.001)				
7 products	4.290	1.310	.760	.148	.072	.035	.009			
	(1.290)	(.599)	(.429)	(.049)	(.029)	(.017)	(.006)			
8 products	10.710	1.618	.397	.157	.076	.042	.015	.005		
	(3.828)	(.463)	(.089)	(.041)	(.022)	(.011)	(.004)	(.001)		
9 products	10.121	3.527	.985	.136	.068	.027	.011	.005	.001	
	(5.005)	(2.248)	(.456)	(.044)	(.025)	(.013)	(.004)	(.002)	(.0005)	
10 products	7.326	4.070	1.473	.392	.265	.138	.104	.024	.005	.001
	(2.897)	(2.140)	(.888)	(.178)	(.160)	(.097)	(.085)	(.017)	(.003)	(.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-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 63: 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	.042								
	(.050)	(.005)								
3 products	.652	.152	.025							
	(.167)	(.040)	(.005)							
4 products	.921	.146	.049	.015						
	(.228)	(.023)	(.009)	(.005)						
5 products	.644	.190	.058	.029	.007					
	(.094)	(.034)	(.011)	(.008)	(.001)					
6 products	.576	.210	.101	.042	.017	.005				
	(.143)	(.041)	(.032)	(.014)	(.005)	(.001)				
7 products	.921	.397	.163	.062	.031	.015	.003			
	(.212)	(.147)	(.057)	(.021)	(.011)	(.007)	(.0006)			
8 products	1.151	.411	.244	.141	.073	.032	.016	.007		
	(.401)	(.120)	(.093)	(.052)	(.024)	(.010)	(.006)	(.004)		
9 products	4.583	.148	.069	.033	.021	.014	.007	.003	.001	
	(3.866)	(.033)	(.017)	(.010)	(.006)	(.005)	(.003)	(.001)	(.0004)	
10 products	1.157	.405	.189	.115	.053	.032	.022	.014	.008	.004
	(.348)	(.123)	(.079)	(.053)	(.023)	(.017)	(.013)	(.009)	(.006)	(.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-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 64: Total Exports Decompositions at the Firm Level

OLS	Log # Products	Log Exports/product #≥ 1	#≥ 2	#≥ 3	#≥ 10	#≥ 25	#≥ 100
				World			
Log Total exports	.182	.818	.863	.884	.908	.915	.930
	(.003)***	(.003)***	(.004)***	(.004)***	(.007)***	(.009)***	(.019)***
Const.	1.362	-1.362	-1.783	-2.090	-3.141	-3.855	-4.961
	(.010)***	(.010)***	(.011)***	(.012)***	(.016)***	(.022)***	(.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	.761	.815	.843	.888	.913	.950
	(.004)***	(.004)***	(.005)***	(.006)***	(.010)***	(.013)***	(.025)***
Const.	1.651	-1.651	-1.987	-2.248	-3.165	-3.852	-4.934
	(.016)***	(.016)***	(.017)***	(.017)***	(.021)***	(.027)***	(.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	.882	.923	.941	.939	.931	.936
	(.003)***	(.003)***	(.005)***	(.006)***	(.010)***	(.014)***	(.025)***
Const.	.945	-.945	-1.439	-1.801	-3.050	-3.830	-4.819
	(.012)***	(.012)***	(.013)***	(.016)***	(.030)***	(.040)***	(.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	.782	.827	.852	.896	.899	.928
	(.004)***	(.004)***	(.004)***	(.005)***	(.008)***	(.011)***	(.023)***
Const.	1.525	-1.525	-1.920	-2.210	-3.164	-3.875	-4.998
	(.013)***	(.013)***	(.013)***	(.014)***	(.018)***	(.024)***	(.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: $G_d(\omega)\, z_d(\omega)$, 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 $z_d(\omega)$ 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 65: Product Scale and Exporter Scope Correlations

Log Exp./prod.	Firm data[a]	Firm-destination data[b]			Firm-destination-product data[c]		
	OLS	OLS	Dest. FE	Firm & dest. FE	Firm & dest. FE	Prod. & dest. FE	Firm, prod. & dest. FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
				World			
Log # Products	.097	-.248	-.130	.244	1.088	.301	.916
	(.017)***	(.010)***	(.010)***	(.012)***	(.011)***	(.012)***	(.012)***
Obs.	15,907	62,842	62,842	62,842	107,296	107,296	107,296
R^2	.002	.010	.086	.120	.122	.254	.208
Corr. Firm FE, $X'\beta$				-.158	-.183		-.124
				Mercosur			
Log # Products	.069	-.018	-.004	.185	1.229	.488	1.133
	(.020)***	(.016)***	(.016)***	(.029)***	(.020)***	(.021)***	(.021)***
Obs.	8,691	12,956	12,956	12,956	27,917	27,917	27,917
R^2	.001	.0001	.047	.295	.189	.170	.258
Corr. Firm FE, $X'\beta$				-.131	-.222		-.174
				OECD			
Log # Products	.146	-.041	-.053	.491	1.195	.347	1.005
	(.032)***	(.023)***	(.023)***	(.026)***	(.027)***	(.028)***	(.027)***
Obs.	8,204	21,674	21,674	21,674	30,926	30,926	30,926
R^2	.003	.0002	.023	.138	.103	.253	.216
Corr. Firm FE, $X'\beta$				-.239	-.283		-.206
				non-OECD			
Log # Products	.093	-.239	-.153	.163	1.107	.289	.936
	(.018)***	(.011)***	(.011)***	(.013)***	(.012)***	(.013)***	(.013)***
Obs.	12,326	40,354	40,354	40,354	75,329	75,329	75,329
R^2	.002	.012	.085	.122	.138	.226	.224
Corr. Firm FE, $X'\beta$				-.195	-.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. 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 66: Correlates of Firm Effects on Product Scale and Exporter Scope

	Firm Eff. on Product 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	-.117	-.010	.729	.720	.721
	(.006)***	(.006)***	(.007)	(.003)***	(.004)***	(.004)***
Log ww. Exp./prod.	.904	.895	.873	.026	-.027	-.003
	(.004)***	(.004)***	(.005)***	(.002)***	(.002)***	(.002)
Log ww. # Dest.	-.969	-.847	-.625	-.333	-.276	-.195
	(.007)***	(.008)***	(.009)***	(.004)***	(.004)***	(.005)***
No OECD exp.	-.004	-.040	.553	.099	.099	.004
	(.016)	(.018)**	(.021)***	(.010)***	(.010)***	(.011)
Log OECD Exp.[a]	.004	.005	-.002	-.003	-.003	-.005
	(.003)	(.004)	(.004)	(.002)	(.002)	(.002)**
No Mercosur exp.	-.052	-.062	.089	.027	.030	.331
	(.016)***	(.018)***	(.021)***	(.010)***	(.010)***	(.011)***
Log Mercosur Exp.[a]	.014	.014	.022	.002	.001	-.004
	(.003)***	(.004)***	(.004)***	(.002)	(.002)	(.002)
Log # dom. Plants	-.014	-.018	-.0003	.010	.011	.015
	(.008)*	(.009)**	(.010)	(.005)**	(.005)**	(.005)***
Log # dom. Loc.	.035	.045	.032	-.028	-.030	-.029
	(.008)***	(.009)***	(.011)***	(.005)***	(.005)***	(.006)***
Log Employment	-.006	-.00003	-.0005	-.016	-.016	-.019
	(.003)**	(.003)	(.004)	(.002)***	(.002)***	(.002)***
High sch. educ. wf.	-.075	-.066	-.101	-.025	-.021	-.024
	(.018)***	(.019)***	(.023)***	(.011)**	(.011)*	(.012)**
College educ. wf.	.051	.126	-.005	-.204	-.207	-.216
	(.025)**	(.028)***	(.032)	(.015)***	(.016)***	(.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 65). 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 67: Correlates of Destination Effects on Product Scale and Exporter Scope

	Destination Eff. on Product 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	.088	.022	-.024	-.021	.008
	(.050)*	(.050)*	(.033)	(.015)*	(.014)	(.012)
Log Population	.217	.213	.329	.018	.020	.019
	(.072)***	(.071)***	(.047)***	(.018)	(.018)	(.015)
Log GDP per cap.	.146	.138	.295	-.013	-.012	.026
	(.073)**	(.072)*	(.048)***	(.019)	(.019)	(.016)
Log Distance	.003	-.031	-.537	-.181	-.182	-.231
	(.206)	(.203)	(.134)***	(.053)***	(.052)***	(.045)***
Common borders	-.548	-.547	-.328	.073	.065	.213
	(.389)	(.385)	(.253)	(.100)	(.098)	(.084)**
Common language	-.603	-.602	.240	.111	.096	.092
	(.367)	(.363)*	(.238)	(.107)	(.105)	(.090)
Const.	-10.002	-9.556	-7.570	2.429	2.237	1.870
	(1.899)***	(1.877)***	(1.232)***	(.507)***	(.495)***	(.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 product 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 65) and in column 3 from a destination fixed effects regression controlling for scope and firm fixed effects (see column 3 in Table 65). 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 68: Correlates of Product Effects on Product Scale and Exporter Scope

	Product Eff. on Product 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 product 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 27). 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 69: Conditional Product Scale and Exporter Scope Correlations

Log Exp./prod.	World			Mercosur	Oecd	non-Oecd
	(1)	(2)	(3)	(4)	(5)	(6)
Log # Products	.439	.741	.412	-.007	.486	.092
	(.088)***	(.057)***	(.068)***	(.177)	(.156)***	(.079)
Squared Log # Products	.224	-.332	-.332	-.009	.054	-.219
	(.139)	(.065)***	(.065)***	(.180)	(.182)	(.071)***
Cubic Log # Products	-.274	.044	.038	-.038	-.148	.039
	(.074)***	(.023)*	(.023)	(.066)	(.071)**	(.024)
Quartic Log # Products	.070	.0004	.001	.009	.022	-.0008
	(.016)***	(.002)	(.002)	(.007)	(.008)***	(.003)
Pentic Log # Products	-.005					
	(.001)***					
Log # Prd. × Log ww. # Dest.			.086	.156	.035	.085
			(.017)***	(.046)***	(.040)	(.020)***
Log # Prd. × Log Empl.			.025	-.017	.054	.020
			(.006)***	(.018)	(.015)***	(.007)***
Log # Prd. × Coll. ed. wf.			-.097	.219	-.211	.015
			(.062)	(.161)	(.140)	(.072)
Obs.	62,842	62,842	60,529	12,469	20,650	39,090
R^2	.124	.124	.128	.304	.149	.127
Corr. Firm FE, $X'\beta$	-.151	-.151	-.088	-.097	-.175	-.124
F statistic: Zero Firm FE	4.318***	4.316***	4.143***	2.916***	3.633***	3.811***

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 65). Worldwide number of products at the Harmonized-System 6-digit level. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 70: Individual Product Sales Regressions

Log Sales	OLS	Dest. FE	Dest. & Ind. FE	Dest. & Firm FE
	(1)	(2)	(3)	(4)
Log # Products	1.100	1.142	1.295	1.486
	(.006)***	(.006)***	(.006)***	(.007)***
Log Product Rank	-2.309	-2.342	-2.429	-2.478
	(.006)***	(.006)***	(.006)***	(.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.

7 Chilean Manufacturing Firms and Products

Table 71: 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	28,178	3,488	4,999
# of Destinations (N)	140	3	23	115	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. prod. scale (z_{md})	.014	.013	.022	.013	.022	.015
Mean Total exports ($\bar{t}_d$)	2.779	.393	3.428	1.552	1.559	.404
Mean Exporter scope ($\bar{G}_d$)	5.454	3.941	3.288	5.471	3.068	3.695
Mean Avg. prod. scale (z_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	.639	.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: 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 product scale (z_d) is the scope-weighted arithmetic mean of exporters' average product scales.

Table 72: Top 25 Export Products

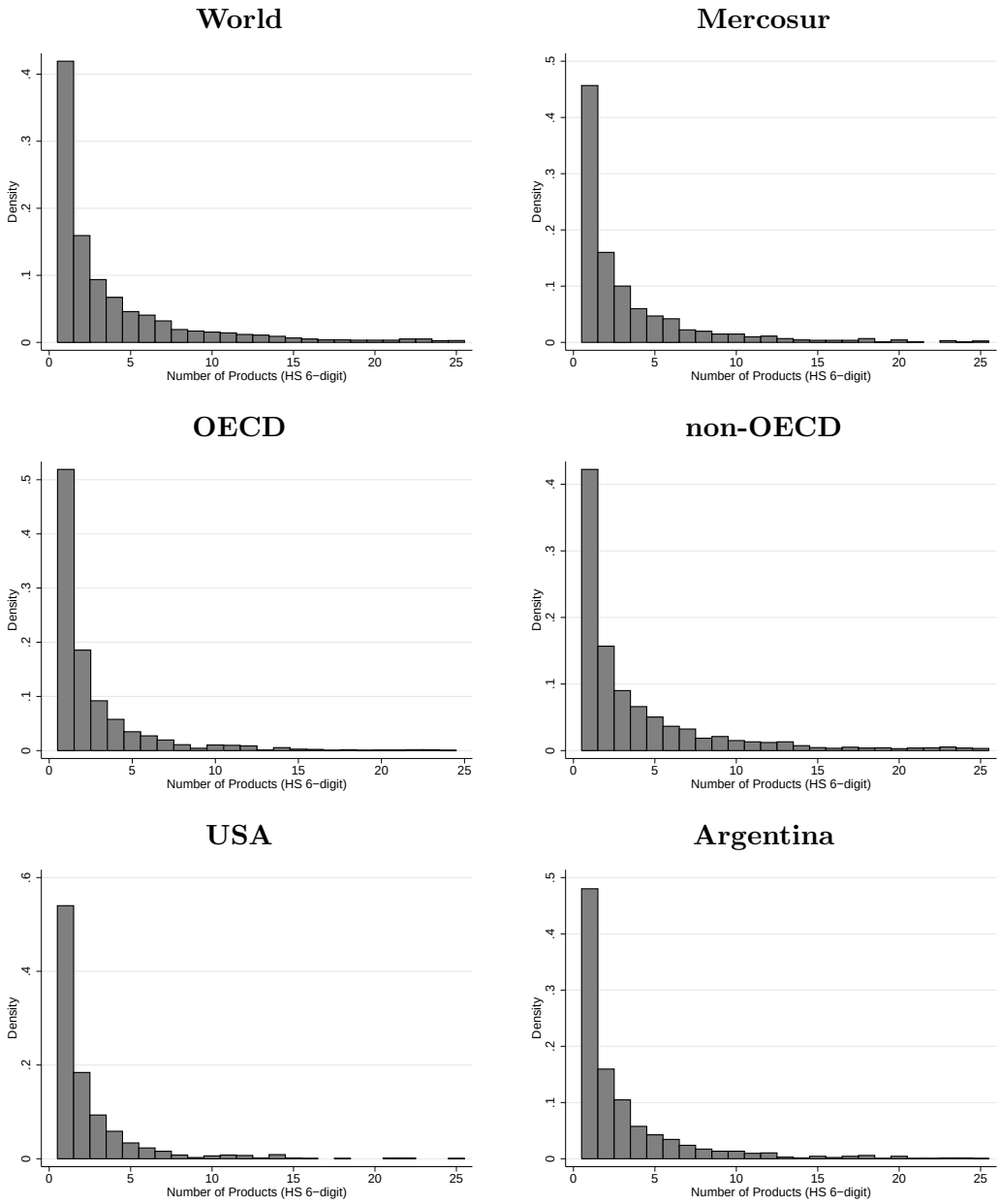
Rank	Product	Exports (US$ mill.)	Share in tot. exports (%)	# of Dest.
1.	Refined copper cathodes and sections of cathodes	3,688	32.4	33
2.	Chemical woodpulp, soda etc. n dis s bl & bl conif	685	6.0	32
3.	Wine, fr grape nesoi & gr must w alc, nov 2 liters	497	4.4	83
4.	Copper ores and concentrates	347	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 73: Top 25 Export Destinations

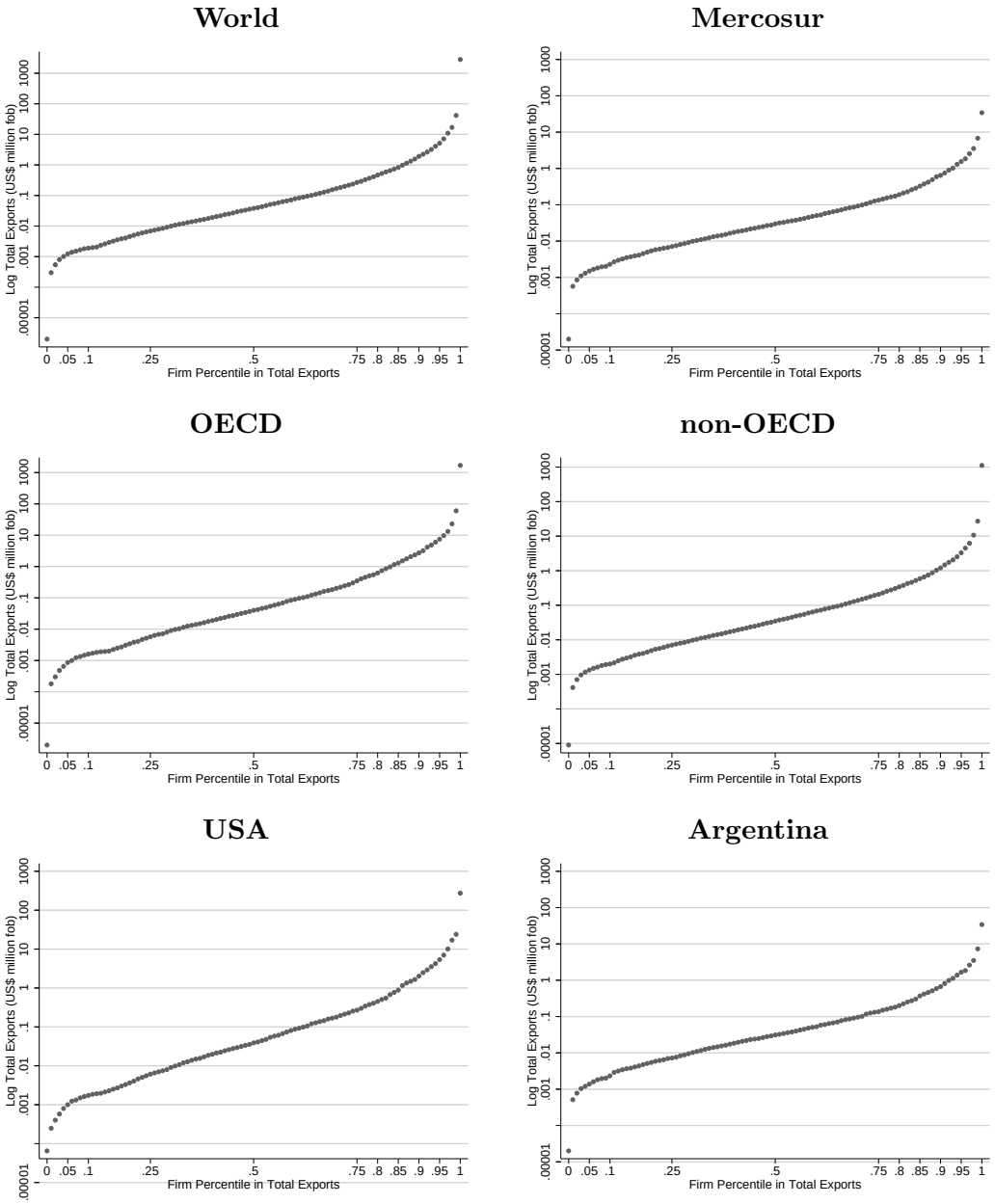
Rank	Destination	Exports (US$ mill.)	Share in tot. exports (%)	# of Products
1.	USA	1,772	15.6	1,211
2.	UK	947	8.3	201
3.	Japan	770	6.8	205
4.	Italy	711	6.2	281
5.	China	710	6.2	94
6.	Brazil	706	6.2	740
7.	Mexico	669	5.9	741
8.	Argentina	547	4.8	1,677
9.	Korea Rep.	536	4.7	81
10.	France Monaco	524	4.6	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.



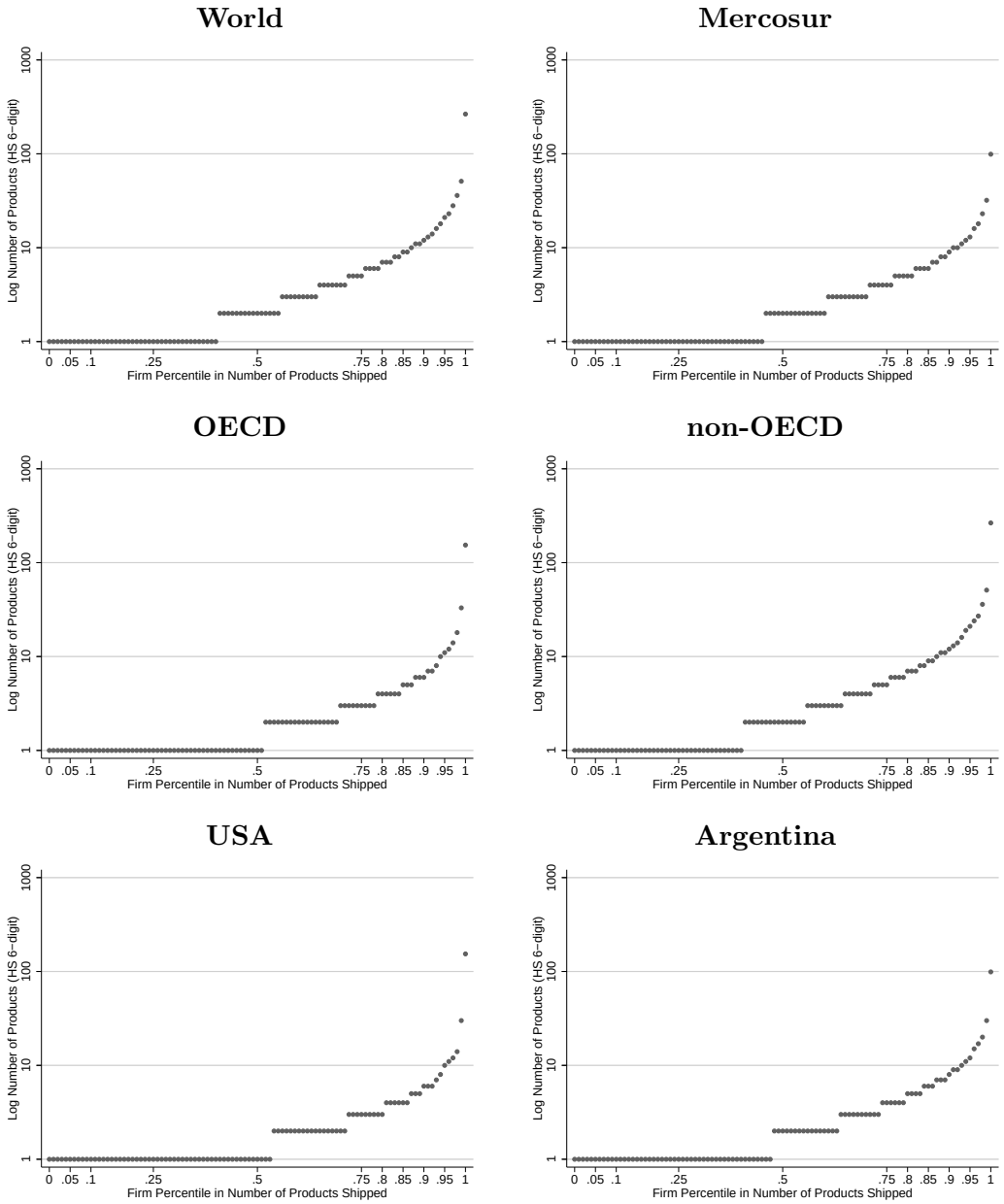
Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members of the OECD in 1990. Products at the Harmonized-System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

Figure 43: **Exporter Scope Distribution for Up to 25 Products**



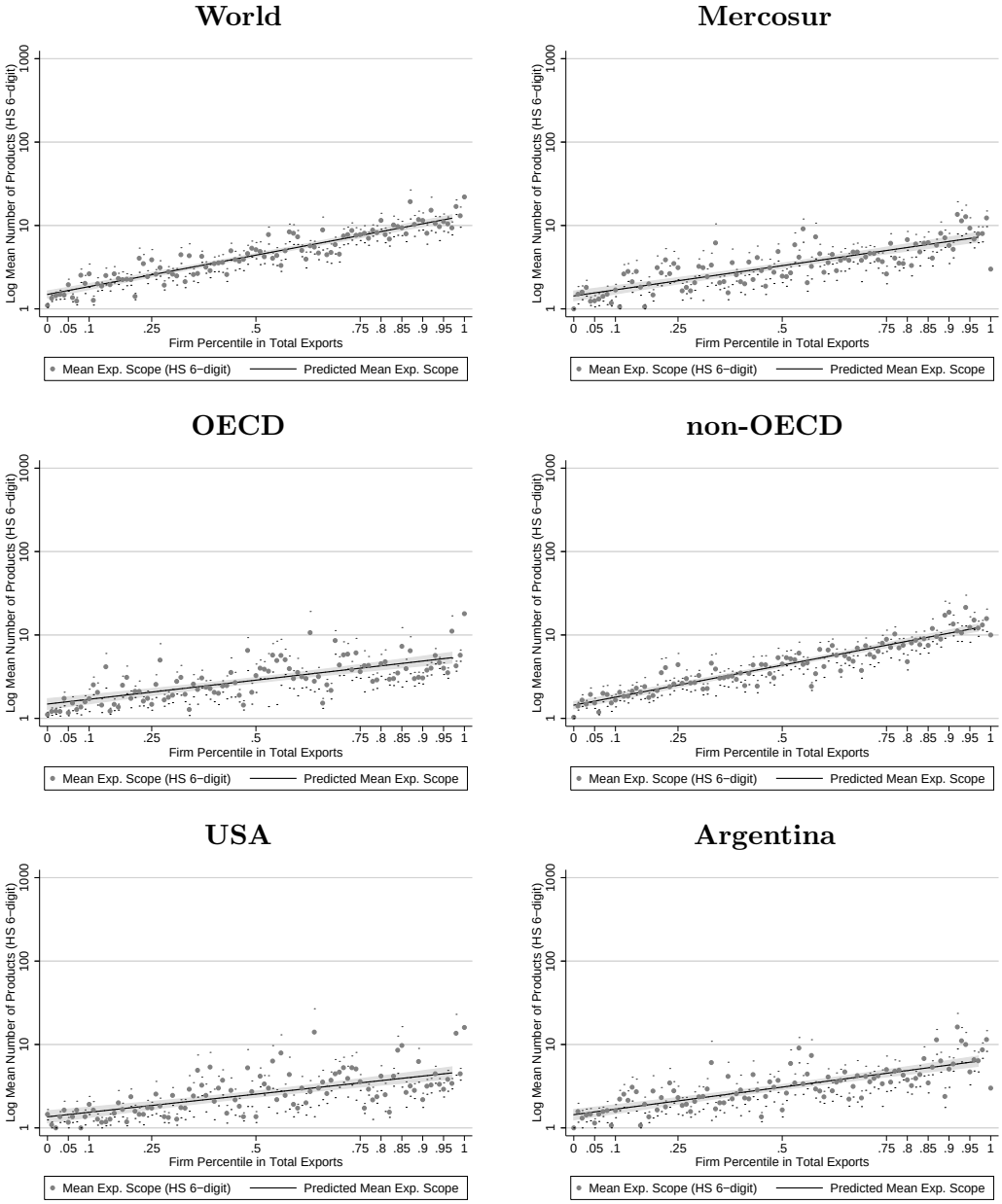
Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.

Figure 44: **Total Saless Distribution**



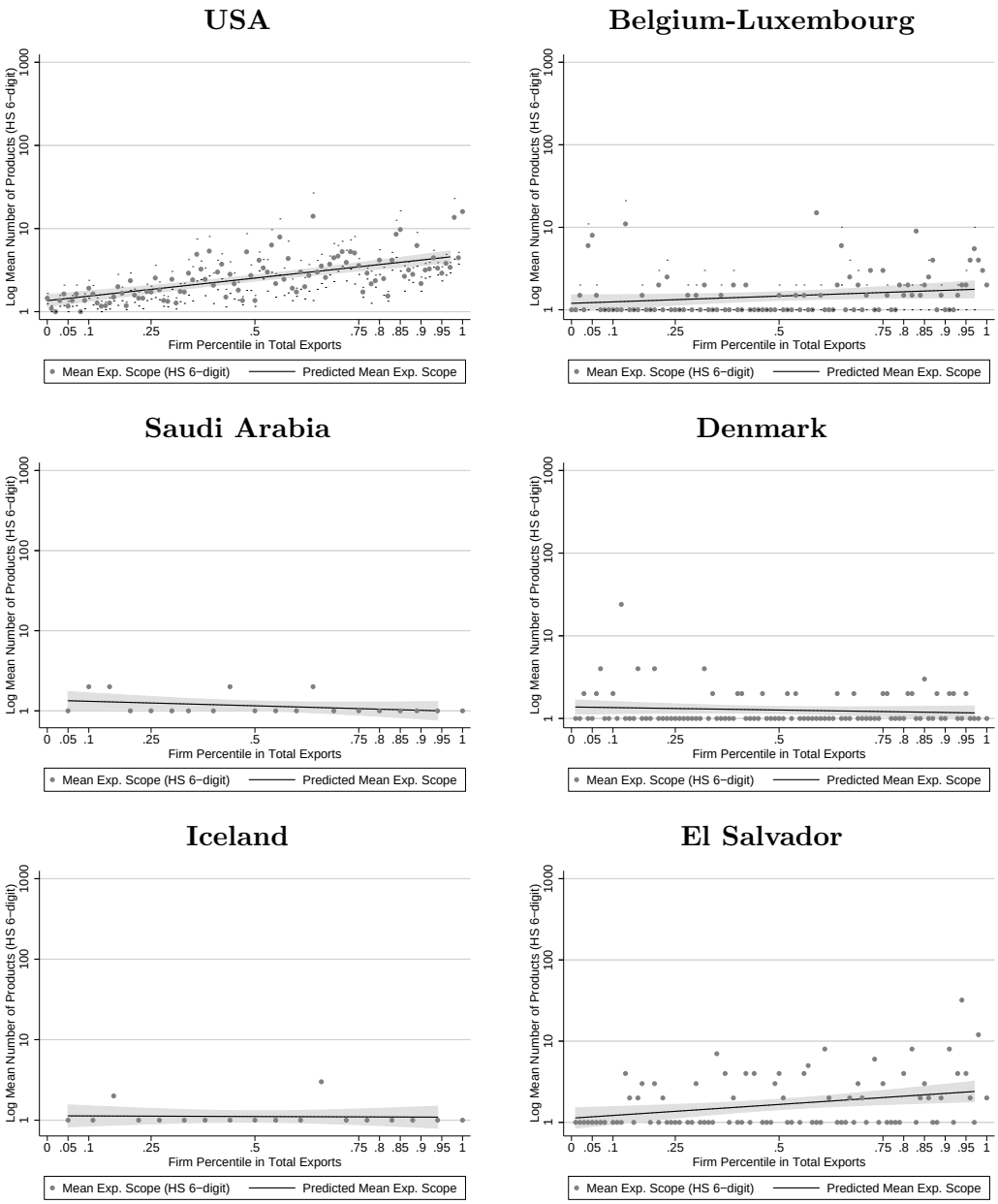
Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level.

Figure 45: **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 46: **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 47: **Exporter Scope and Total Exports Distribution by Country**

Table 74: 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	.602	.596	.648	.752	.715
p value[a]	0	0	0	0	0
Obs.	12,781	12,781	12,781	12,781	12,781
# 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 75: 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	.247	-1.67e-26	.244	-2.32e-26
	(.011)***	(3.20e-15)	(.011)***	(3.36e-15)
Constant	1.763	1.523	1.430	1.523
	(.014)***	(3.65e-15)***	(.034)***	(8.82e-15)***
Observations	12,423	12,423	12,423	12,423
Panels		4,091		4,091
R^2 (R^2 within)[a]	.040	0	.085	0

[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 76: Correlates of Destination Effects on Exporter Scope

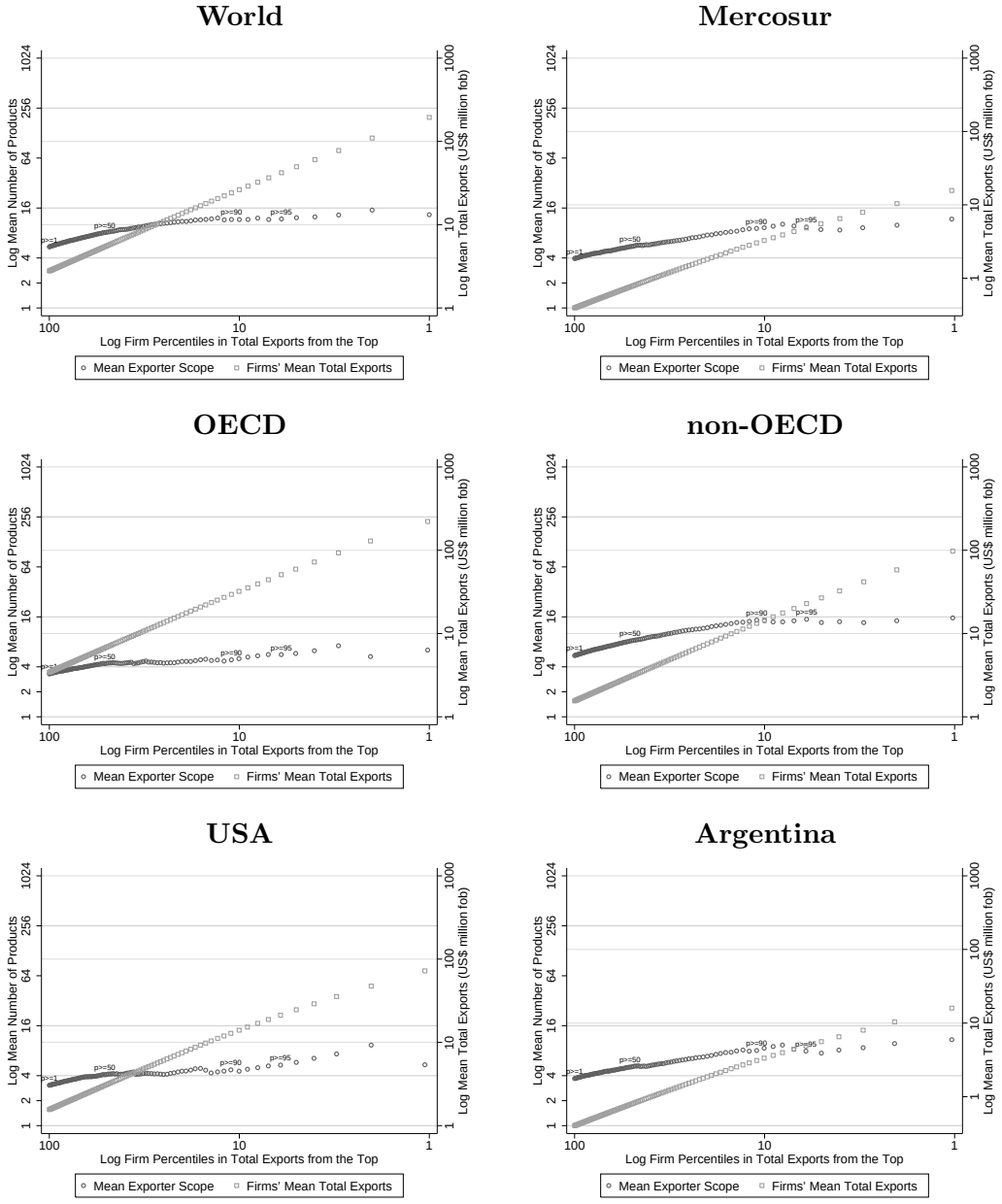
	OLS		
	(1)	(2)	(3)
Mean Log Market size			-.011
			(.026)
Log Population		-.051	-.045
		(.021)**	(.039)
Log GDP per cap.		-.053	-.091
		(.025)**	(.043)**
Log GDP	-.052		
	(.017)***		
Log Distance	-.184	-.184	.023
	(.110)*	(.110)*	(.123)
Common borders	-.386	-.387	-.211
	(.303)	(.305)	(.289)
Common language	-.036	-.036	.164
	(.152)	(.153)	(.168)
Obs.	133	133	93
R^2	.116	.116	.175

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 scope are from a destination fixed effects regression controlling for the firm's local total-exports percentile (column 3 in Table 75). 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 77: Exporter Scope Distribution by Destination

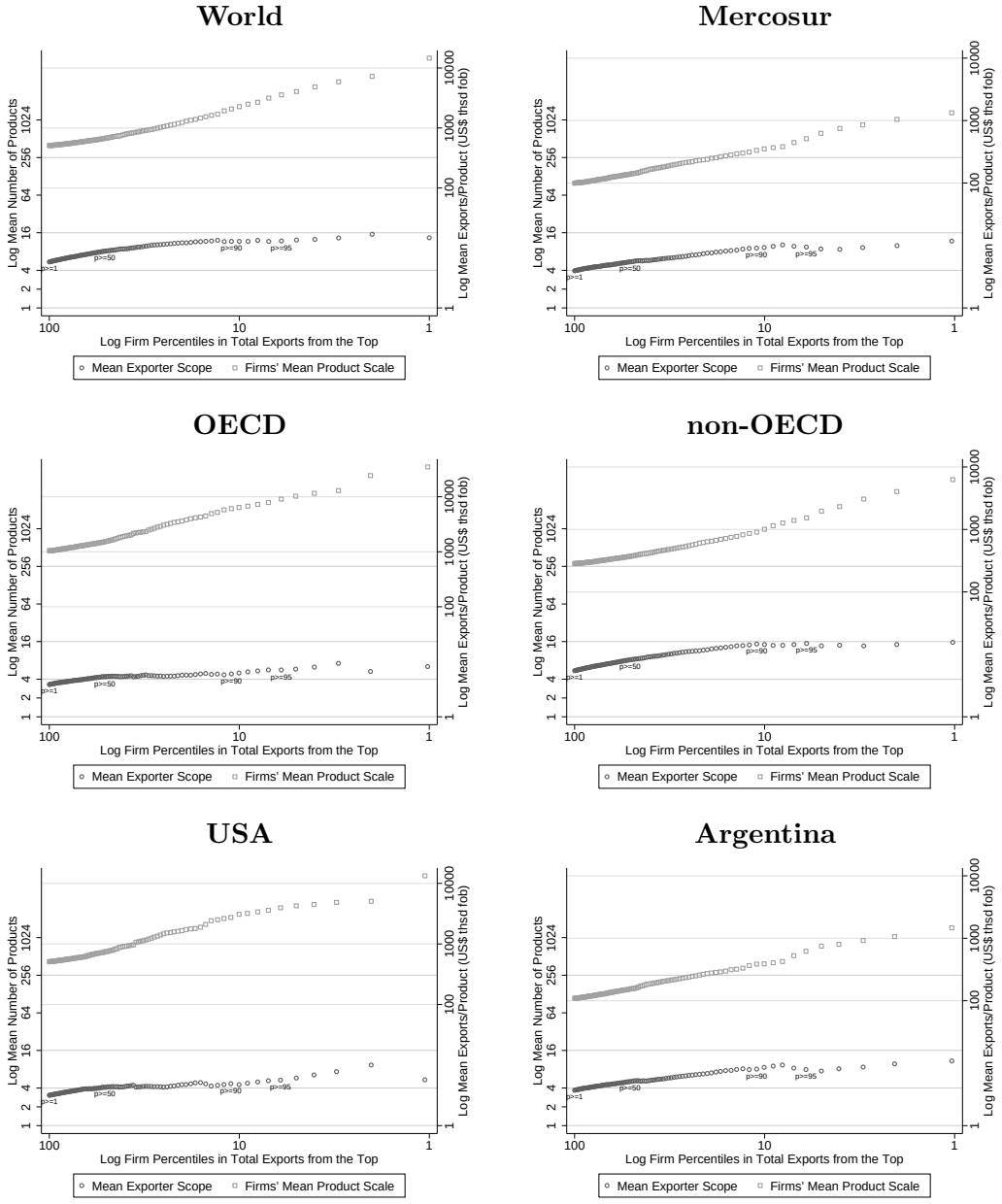
	World	Mercosur	OECD	non-OECD	USA	Argentina
Percentile	(1)	(2)	(3)	(4)	(5)	(6)
00	1	1	1	1	1	1
05	1	1	1	1	1	1
10	1	1	1	1	1	1
25	1	1	1	1	1	1
50	2	2	1	2	1	2
75	5	4	3	5	3	4
80	7	5	4	7	3	5
85	9	6	5	9	4	6
90	12	9	6	12	6	8
95	21	13	11	21	10	12
99	51	32	33	51	30	30
100	265	99	154	265	154	99

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.



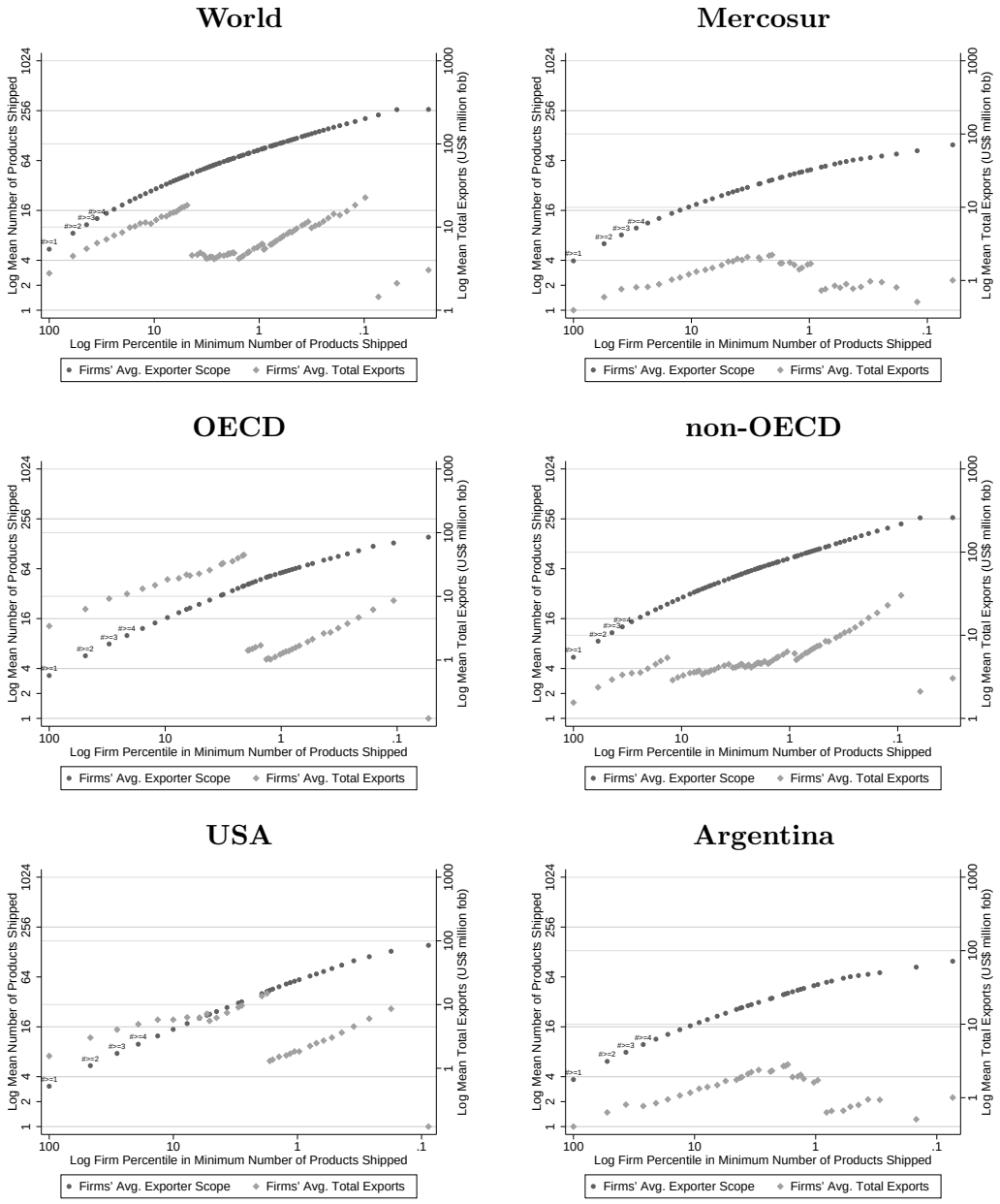
Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. 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 48: **Average Scope, Total Exports and the Total Exports Distribution**



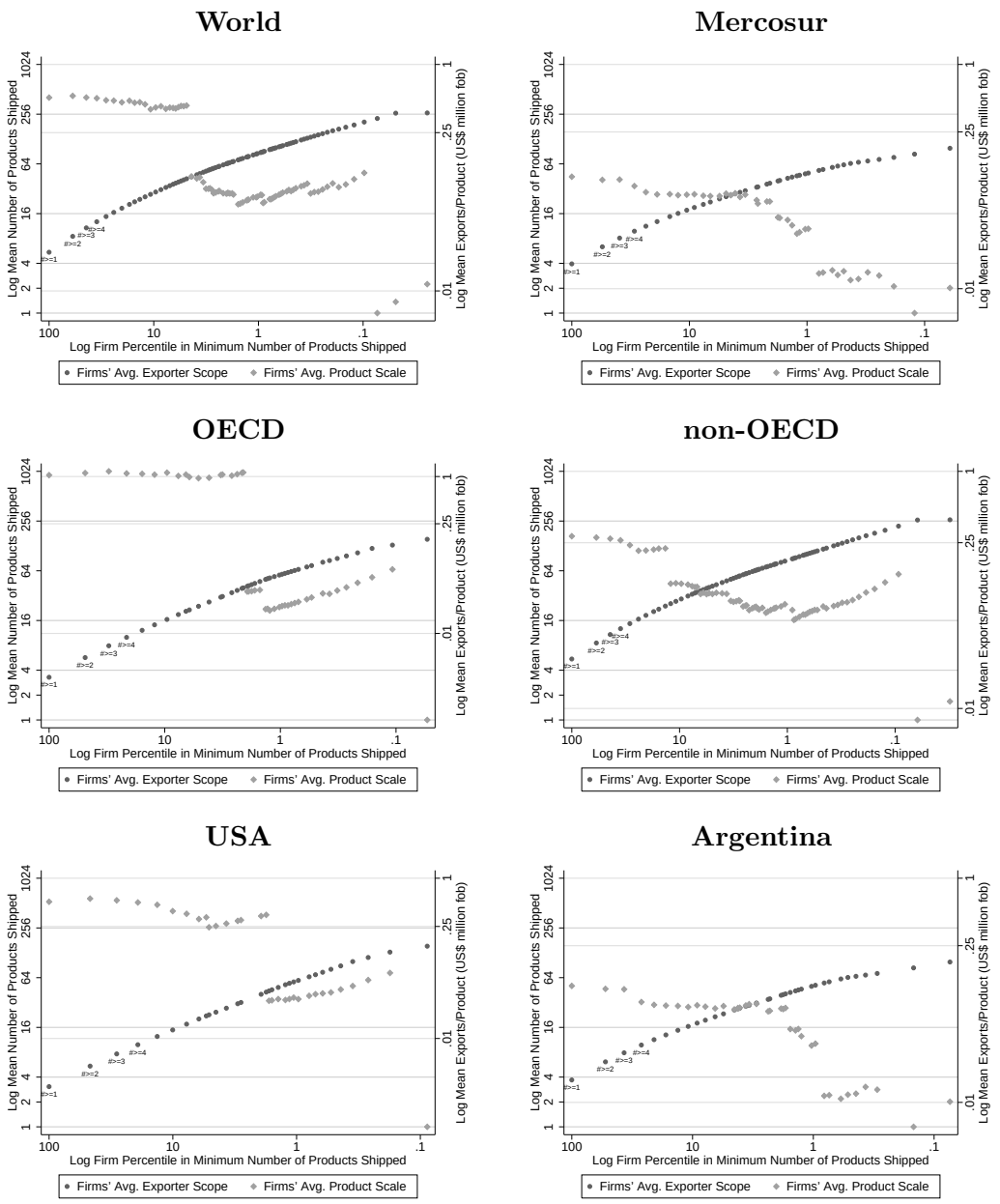
Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. 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 49: **Average Scope, Average Scale and the Total Exports Distribution**



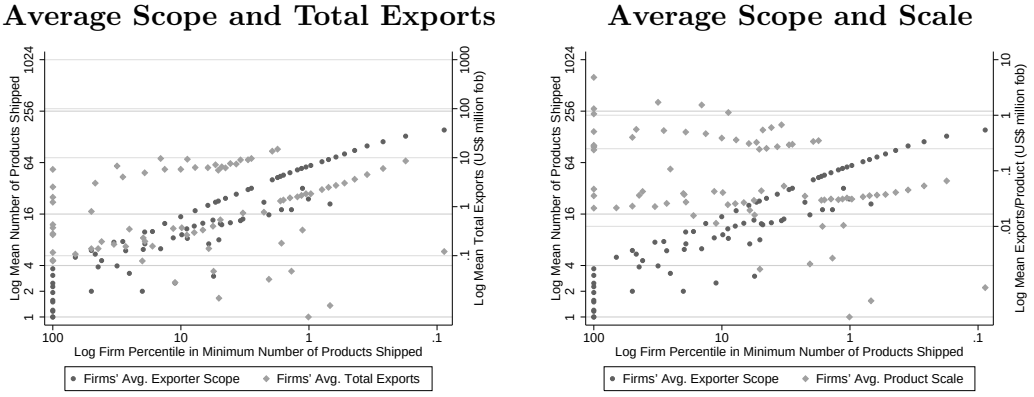
Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. 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 50: **Average Scope, Total Exports and the Exporter Scope Distribution**



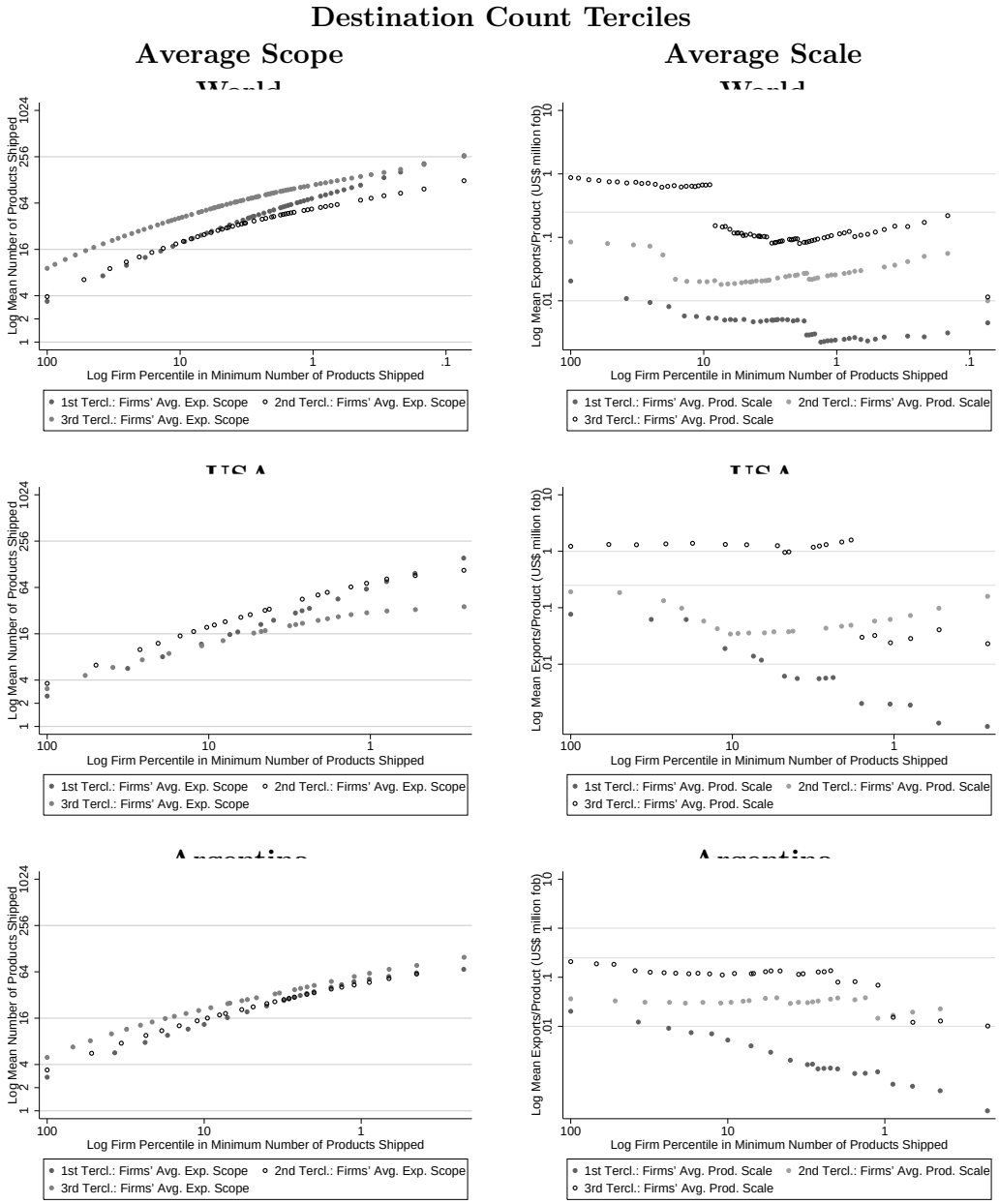
Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Mercosur includes Argentina, Brazil, Paraguay, Uruguay; OECD includes all OECD members in 1990; non-OECD includes all non-members in 1990. Products at the Harmonized-System 6-digit level. 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 51: **Average Scope, Total Exports and the Exporter Scope Distribution**



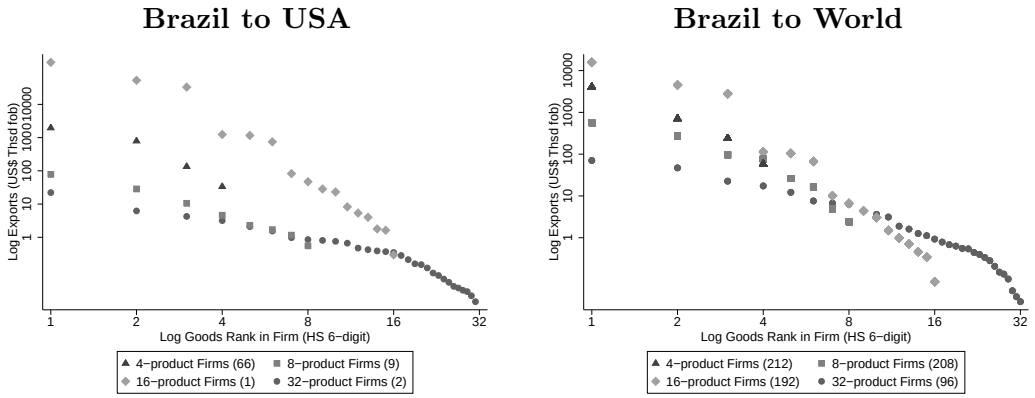
Source: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: Selection of the eleven countries at the first and every tenth percentile among Chile's top 100 export destinations (Armenia, Suriname, Zimbabwe, Bangladesh, Nicaragua, El Salvador, Iceland, 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 52: **Average Scope, Scale and Exporter Distributions Across Countries**



Sources: Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products.
Note: 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 53: **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 54: **Within-firm Sales Distribution**

Table 78: 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-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 79: 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-product 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 80: 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-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 81: 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-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 82: 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-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 83: Total Exports Decompositions at the Firm Level

OLS	Log # Products	Log Exports/product #≥ 1	#≥ 2	#≥ 3	#≥ 10	#≥ 25
			World			
Log Total exports	.180 (.006)***	.820 (.006)***	.896 (.007)***	.921 (.007)***	.959 (.010)***	.966 (.017)***
Const.	1.520 (.022)***	-1.520 (.022)***	-1.859 (.022)***	-2.109 (.022)***	-2.990 (.027)***	-3.770 (.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 (.010)***	.805 (.010)***	.888 (.012)***	.926 (.013)***	.967 (.019)***	1.007 (.034)***
Const.	1.476 (.039)***	-1.476 (.039)***	-1.779 (.040)***	-1.979 (.039)***	-2.852 (.050)***	-3.622 (.076)***
Obs.	1,642	1,642	903	644	149	28
R^2	.199	.810	.858	.894	.945	.970
			OECD			
Log Total exports	.105 (.006)***	.895 (.006)***	.965 (.009)***	1.003 (.010)***	1.004 (.020)***	.924 (.044)***
Const.	.967 (.026)***	-.967 (.026)***	-1.403 (.029)***	-1.721 (.032)***	-2.829 (.066)***	-3.982 (.120)***
Obs.	1862	1862	908	567	114	24
R^2	.129	.915	.934	.944	.956	.951
			non-OECD			
Log Total exports	.199 (.007)***	.801 (.007)***	.870 (.008)***	.890 (.008)***	.939 (.012)***	.958 (.020)***
Const.	1.602 (.027)***	-1.602 (.027)***	-1.951 (.027)***	-2.201 (.026)***	-3.021 (.031)***	-3.757 (.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: $G_d(\omega)\, z_d(\omega)$, 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 $z_d(\omega)$ 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 84: Product Scale and Exporter Scope Correlations

Log Exp./prod.	Firm data[a]	Firm-destination data[b]			Firm-destination-product data[c]		
	OLS	OLS	Dest. FE	Firm & dest. FE	Firm & dest. FE	Prod. & dest. FE	Firm, prod. & dest. FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
				World			
Log # Products	.135	-.303	-.111	.226	.840	.338	.792
	(.035)***	(.024)***	(.025)***	(.027)***	(.028)***	(.030)***	(.028)***
Obs.	4,099	12,777	12,777	12,777	21,142	21,142	21,142
R^2	.004	.012	.102	.124	.082	.294	.176
Corr. Firm FE, $X'\beta$				-.203	-.113		-.094
				Mercosur			
Log # Products	.024	-.072	-.082	.168	1.104	.273	1.075
	(.051)***	(.046)***	(.045)***	(.082)***	(.068)***	(.065)***	(.070)***
Obs.	1,642	2,193	2,193	2,193	4,158	4,158	4,158
R^2	.0001	.001	.016	.241	.108	.146	.215
Corr. Firm FE, $X'\beta$				-.198	-.255		-.255
				OECD			
Log # Products	.226	-.238	-.174	.440	.892	.213	.752
	(.074)***	(.058)***	(.058)***	(.071)***	(.068)***	(.063)***	(.063)***
Obs.	1,862	4,046	4,046	4,046	5,679	5,679	5,679
R^2	.005	.004	.044	.135	.070	.432	.312
Corr. Firm FE, $X'\beta$				-.280	-.217		-.210
				non-OECD			
Log # Products	.078	-.260	-.091	.172	.886	.371	.835
	(.036)***	(.026)***	(.026)***	(.031)***	(.032)***	(.033)***	(.032)***
Obs.	3,226	8,725	8,725	8,725	15,457	15,457	15,457
R^2	.001	.011	.111	.140	.094	.244	.171
Corr. Firm FE, $X'\beta$				-.185	-.118		-.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. 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 85: Correlates of Firm Effects on Product Scale and Exporter Scope

	Firm Eff. on Product 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	-.138	-.057	.763	.757	.736
	(.008)***	(.009)***	(.010)***	(.005)***	(.006)***	(.006)***
Log ww. Exp./prod.	.917	.914	.896	.009	-.038	-.017
	(.005)***	(.006)***	(.007)***	(.003)**	(.004)***	(.004)***
Log ww. # Dest.	-.912	-.773	-.610	-.420	-.374	-.326
	(.013)***	(.014)***	(.017)***	(.009)***	(.009)***	(.010)***
No OECD exp.	-.066	-.077	.288	.035	.038	-.118
	(.027)**	(.029)***	(.034)***	(.017)**	(.018)**	(.020)***
Log OECD Exp.[a]	.010	.005	.005	.018	.017	.019
	(.005)**	(.006)	(.007)	(.003)***	(.004)***	(.004)***
No Mercosur exp.	-.175	-.213	-.048	.116	.125	.233
	(.029)***	(.032)***	(.037)	(.019)***	(.020)***	(.022)***
Log Mercosur Exp.[a]	.019	.021	.030	-.004	-.005	-.008
	(.006)***	(.007)***	(.008)***	(.004)	(.004)	(.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 × 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 product 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 84). 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 86: Correlates of Destination Effects on Product Scale and Exporter Scope

	Destination Eff. on Product 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 product 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 84) and in column 3 from a destination fixed effects regression controlling for scope and firm fixed effects (see column 3 in Table 84). 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 87: Correlates of Product Effects on Product Scale and Exporter Scope

	Product Eff. on Product 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 × 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 product 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 84). 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 88: Conditional Product Scale and Exporter Scope Correlations

Log Exp./prod.	World			Mercosur	Oecd	non-Oecd
	(1)	(2)	(3)	(4)	(5)	(6)
Log # Products	.666	.483	.113	-1.181	.500	-.283
	(.295)**	(.166)***	(.184)	(.603)*	(.472)	(.206)
Squared Log # Products	-.429	-.029	-.051	1.322	.019	.343
	(.579)	(.227)	(.226)	(.764)*	(.622)	(.244)
Cubic Log # Products	.193	-.086	-.070	-.648	-.181	-.185
	(.384)	(.096)	(.096)	(.329)**	(.287)	(.101)*
Quartic Log # Products	-.058	.018	.016	.091	.034	.027
	(.102)	(.012)	(.012)	(.043)**	(.039)	(.013)**
Pentic Log # Products	.007					
	(.009)					
Log # Prd. × Log ww. # Dest.			.162	.272	.117	.133
			(.035)***	(.117)**	(.093)	(.041)***
Obs.	12,777	12,777	12,777	2,193	4,046	8,725
R^2	.126	.126	.129	.255	.143	.143
Corr. Firm FE, $X'\beta$	-.191	-.190	-.085	-.052	-.178	-.082
F statistic: Zero Firm FE	3.954***	3.955***	3.532***	2.130***	3.756***	3.277***

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 84). Worldwide number of products at the Harmonized-System 6-digit level. Standard errors in parentheses: * significance at ten, ** five, *** one percent.

Table 89: Individual Product Sales Regressions

Log Sales	OLS	Dest. FE	Dest. & Firm FE
	(1)	(2)	(3)
Log # Products	.826	.929	1.177
	(.017)***	(.017)***	(.017)***
Log Product Rank	-2.239	-2.258	-2.349
	(.017)***	(.017)***	(.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.

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Table 90: Sample Characteristics by Source and Destination

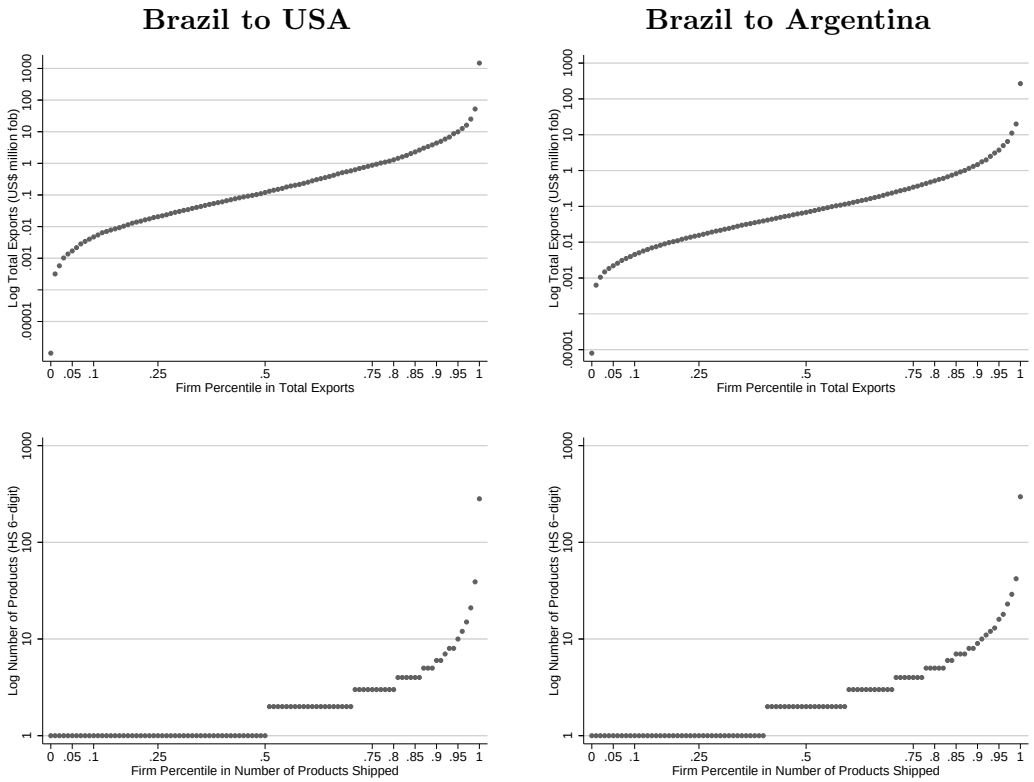
From source s	Brazil Manufacturers				Chile Manf.	Brazil Intm.
to destination d	USA	Argentina	OECD	World	World	World
	(1)	(2)	(3)	(4)	(5)	(6)
# of Firms (M)	3,083	4,590	5,041	10,215	4,099	2,627
# of Destinations (N)	1	1	23	170	140	132
# of HS-6 goods (G)	2,144	2,814	2,772	3,535	3,199	2,777
# of Observations	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. prod. scale ($z_d(m)$)	.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. prod. scale ($\bar{z}_d$)	.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 et al. 2007) for manufacturing firms.
Note: Aggregate regions (world, OECD) treated as single destinations, collapsing product shipments to different countries into single product shipment. 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' mean product scale (z_d in US$ million fob) is the scope-weighted arithmetic mean of exporters' average product scales.

Table 91: Log Exporter Scope and Local Total-Exports Percentile Correlations

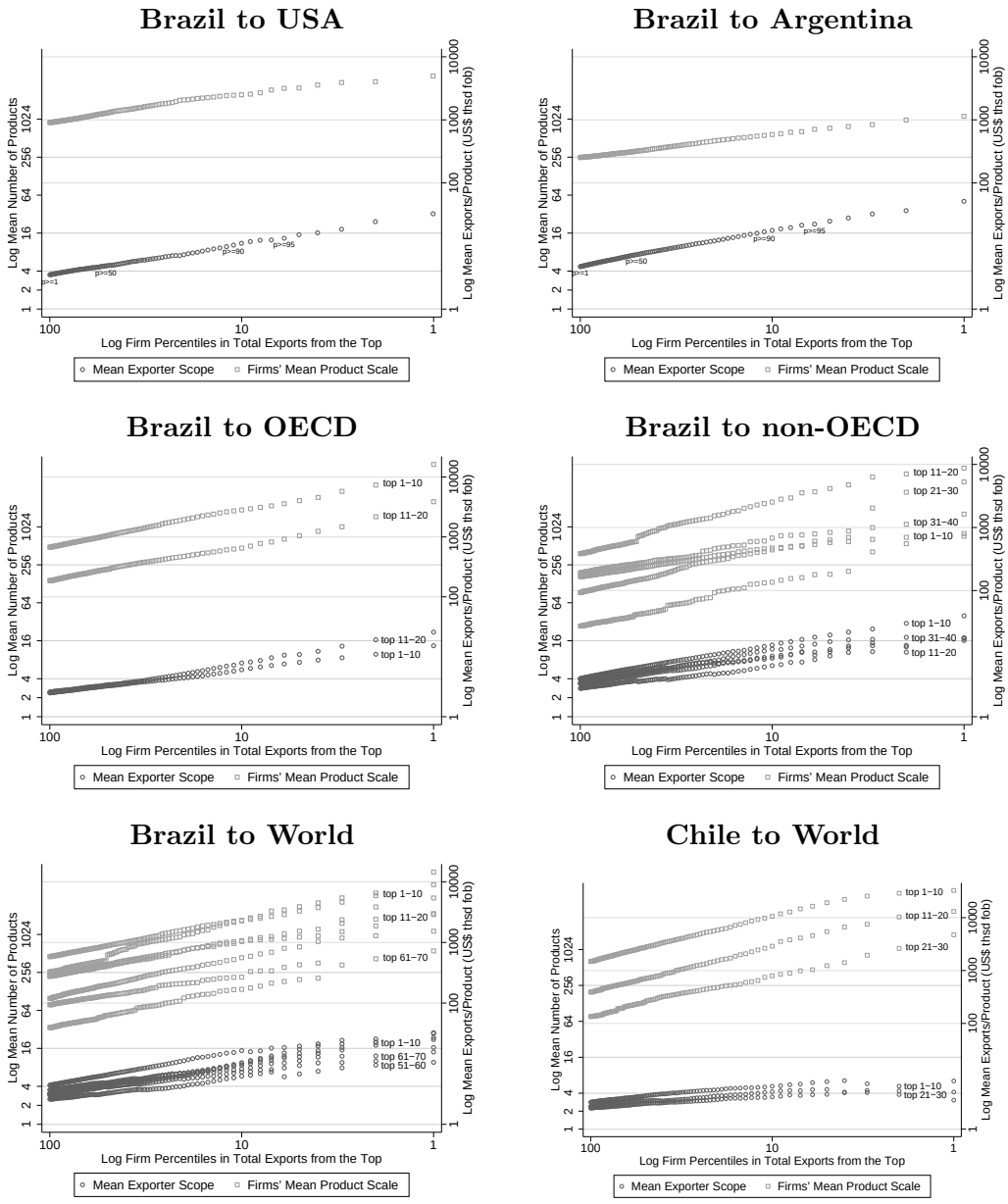
Log # Products	Brazil			Chile		
estimator	OLS	OLS	Firm FE	OLS	OLS	Firm FE
controls		Dest eff.	Dest. eff.		Dest eff.	Dest. eff.
	(1)	(2)	(3)	(4)	(5)	(6)
Log Local total-exp. percentile	.393	.394	5.11e-25	.247	.244	-2.32e-26
	(.006)	(.006)	(9.00e-15)	(.011)	(.011)	(3.36e-15)
Observations	68,055	68,055	68,055	12,423	12,423	12,423
Firm panels			10,209			4,091
R^2 (within for FE)	.054	.118	0	.040	.085	0

Sources: Brazilian *SECEX* 2000 and 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. R^2 is within fit for FE regressions in columns 3 and 6. Standard errors in parentheses.



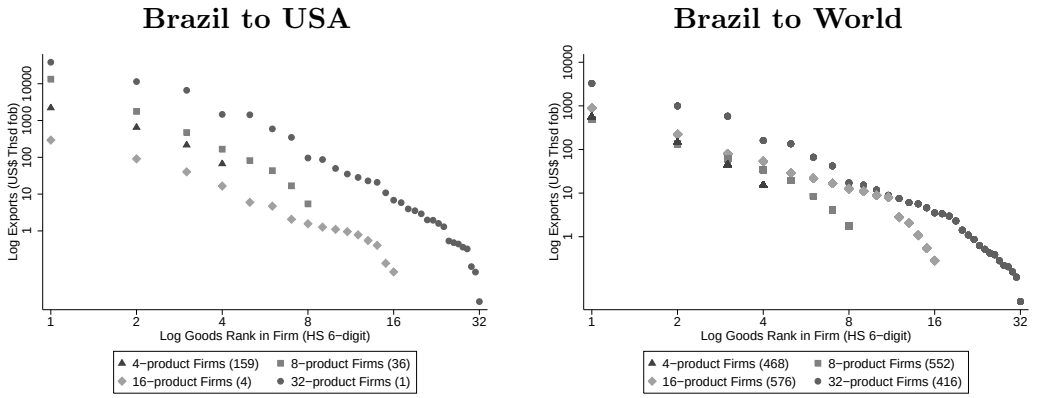
Source: *SECEX* 2000, manufacturing firms and their manufactured products.
Note: Products at the Harmonized-System 6-digit level.

Figure 55: **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.

Figure 56: **Scope, Average Scale and the Total Exports Distribution**



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 57: **Within-firm Sales Distribution**

Table 92: 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 $(1-\text{Pr})$	-.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 $(1-\text{Pr})$	-.422	-.357	-.469	-.733	-.594	-.752
	(.006)	(.002)	(.013)	(.009)	(.004)	(.027)
R^2	.979	.996	.165	.985	.996	.223
Implied scope elasticity of total entry cost $(\delta+\bar{\alpha})$	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 product scale (the scope-weighted arithmetic mean of exporters' average product scales $\bar{z}_d$ in US$ thousand fob) at given percentile or above on log percentile $\ln(1-\text{Pr})$ and a constant, using one hundred percentile observations per destination (Figure **??**). 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 93: Decomposition of Product Scale and Exporter Scope Correlations

Log Exp./prd.	Firms[a]	Firm-destination data[b]				Firm-destination-product data[c]		
estimator	OLS	OLS	OLS	Ind. FE	Firm FE	Firm FE	OLS	Firm FE
controls			Dest.	Dest.	Dest.	Dest.	Dest., prd.	Dest., prd.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Brazilian Producers exporting Manufactures								
Log # Prod.	.341	-.160	-.068	.072	.260	1.180	.336	.977
	(.022)	(.011)	(.011)	(.011)	(.013)	(.014)	(.014)	(.014)
Obs.	10,215	46,208	46,208	46,208	46,208	76,964	76,964	76,964
Panels				259	10,215	10,,215		10,215
R^2 (within)	.023	.004	.091	.074	.131	.133	.237	.229
Corr. coeff. Firm FE, Log # Prod.					-.234	-.309		-.279
Scope elasticity of total entry cost $(\delta + \bar{\alpha})$					1.260			
Chilean Producers exporting Manufactures								
Log # Prod.	.135	-.303	-.111		.226	.840	.338	.792
	(.035)	(.024)	(.025)		(.027)	(.028)	(.030)	(.028)
Obs.	4,099	12,777	12,777		12,777	21,142	21,142	21,142
Panels					4,099	4,099		4,099
R^2 (within)	.004	.012	.102		.124	.082	.294	.176
Corr. coeff. Firm FE, Log # Prod.					-.235	-.218		-.182
Scope elasticity of total entry cost $(\delta + \bar{\alpha})$					1.226			
Brazilian Commercial Intermediaries exporting Manufactures								
Log # Prod.	-.109	-.419	-.301	-.184	.055	.845	.344	.757
	(.032)	(.024)	(.025)	(.025)	(.034)	(.024)	(.027)	(.025)
Obs.	2,627	6,265	6,265	6,265	6,265	14,781	14,781	14,781
Panels				70	2,627	2,627		2,627
R^2 (within)	.004	.045	.146	.097	.100	.121	.267	.196
Corr. coeff. Firm FE, Log # Prod.					-.250	-.256		-.244
Scope elasticity of total entry cost $(\delta + \bar{\alpha})$					1.055			

[a]Aggreg.: Firm ($\ln z_{\cdot\phi} = \ln(\sigma\,\bar{\gamma}\gamma_{\cdot}\,w_{\cdot}/\bar{\sigma}\bar{\alpha}) + (\delta+\bar{\alpha}-1)\ln G_{\cdot\phi} + \epsilon_{\cdot\phi}$).
[b]Aggreg.: Firm and destination ($\ln z_{d\phi} = \ln(\sigma\,\gamma_i\gamma_d\,w_d/\bar{\sigma}\bar{\alpha}) - \ln\mu_\phi + (\delta+\bar{\alpha}-1)\ln G_{d\phi} + \epsilon_{d\phi}$).
[c]Aggreg.: Firm, dest. and prod. group ($\ln z_{dh\phi} = \ln(\sigma\,\gamma_h\gamma_d\,w_d/\bar{\sigma}\bar{\alpha}) - \ln\mu_\phi + (\delta+\bar{\alpha}-1)\ln G_{dh\phi} + \epsilon_{dh\phi}$).

Sources: Brazilian *SECEX* 2000 and Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms as well as commercial intermediaries shipping 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. Constant, destination fixed and product fixed effects not reported. R^2 is within fit for FE regressions (columns 4, 5, 6 and 8). Correlation coefficient between firm fixed effects and log number of products. Standard errors in parentheses.

Table 94: Individual Product Sales Regressions

Log Exp.	Firm-destination-product data[a]			
estimator	OLS	OLS	Ind. FE	Firm FE
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 total entry cost $(\delta + \bar{\alpha})$				1.557
Scope elast. of market-entry cost (δ)				-.067
Scope elast. of product-entry cost $(\bar{\alpha})$				1.624
Chilean Producers exporting Manufactures				
Log # Products	.826	.929		1.177
	(.017)	(.017)		(.017)
Log Product Rank	-2.239	-2.258		-2.349
	(.017)	(.017)		(.017)
Obs.	37,172	37,172		37,172
Panels				4,099
R^2 (within)	.418	.450		.543
Scope elast. of total entry cost $(\delta + \bar{\alpha})$				1.177
Scope elast. of market-entry cost (δ)				-.172
Scope elast. of product-entry cost $(\bar{\alpha})$				1.349
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 total entry cost $(\delta + \bar{\alpha})$				1.311
Scope elast. of market-entry cost (δ)				.221
Scope elast. of product-entry cost $(\bar{\alpha})$				1.090

[a]Agg.: Firm, dest. and prod. $(\ln p_{d\phi g} x_{d\phi g} = \ln \sigma \gamma_i \gamma_d w_d / \bar{\sigma} - \ln \mu_\phi + (\delta + \bar{\alpha}) \ln G_{d\phi} - (1 + \bar{\alpha}) \ln g + \epsilon_{d\phi g})$.

Sources: Brazilian *SECEX* 2000 and Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms as well as commercial intermediaries shipping manufactured products.
Note: Products at the Harmonized-System 6-digit level. Industry fixed effects at the *CNAE* two-digit level for Brazil. Constant and destination fixed effects not reported. R^2 is within fit for FE regressions (columns 3 and 4). Standard errors in parentheses.

Table 95: Correlates of Destination Effects on Product Scale and Exporter Scope

	Destination Eff. on Prod. Scale from Log Exp./prod. regressions		Destination Eff. on Exp. Scope from Log # Products regressions	
	(1)	(2)	(3)	(4)
	Brazil	Chile	Brazil	Chile
	Firm & dest. FE, & scope	Firm & dest. FE, & scope	Firm & dest. FE, & scale	Firm & dest. FE, & scale
Mean Log Market size	-.042	-.002	.043	-.003
	(.031)	(.010)	(.058)	(.013)
Log Population	.348	.032	.287	.033
	(.048)	(.014)	(.085)	(.018)
Log GDP per cap.	.287	.028	.291	.005
	(.044)	(.014)	(.086)	(.019)
Log Distance	-.331	-.236	-.462	-.155
	(.138)	(.044)	(.304)	(.057)
Common borders	-.171	.227	-.282	.255
	(.276)	(.081)	(.630)	(.138)
Common language	-.078	.048	.007	.099
	(.300)	(.092)	(.380)	(.085)
Const.	-8.354	1.907	-8.124	1.278
	(1.302)	(.434)	(2.980)	(.562)
Obs.	106	102	94	94
R^2	.56	.574	.401	.396

Sources: Brazilian *SECEX* 2000 and Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products, linked to *Cepii* distance data (Mayer and Zignago 2006) and *Unido* Industrial Statistics (UNIDO 2005).
Note: Aggregation to exports by firm and destination. Regressions of destination fixed effects on destination-level predictors, where destination fixed effects on product scale are from a destination fixed effects regression controlling for scope and firm fixed effects (see column 3 in Table 93). Destination fixed effects on exporter scope are 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.

Table 96: Correlates of Product Effects on Product Scale and Exporter Scope

	Destination Eff. on Prod. Scale from Log Exp./prod. regressions		Destination Eff. on Exp. Scope from Log # Products regressions	
	(1)	(2)	(3)	(4)
	Brazil	Chile	Brazil	Chile
	Firm, dest. & prd. FE, & scope	Firm, dest. & prd. FE, & scope	Firm, dest. & prd. FE, & scale	Firm, dest. & prd. FE, & scale
Comparative adv.	.186	.010	.012	.004
	(.119)	(.020)	(.037)	(.006)
Reference priced	-2.964	.062	-1.594	.072
	(.881)	(.151)	(.833)	(.142)
Differentiated	-2.031	.125	-1.858	-.007
	(.813)	(.139)	(.761)	(.130)
Log ww. # Dest.	-1.765	.253	-.883	.212
	(.856)	(.147)	(.899)	(.153)
No OECD imp.	21.525	3.034	-6.657	-.991
	(47.204)	(8.093)	(11.326)	(1.929)
Log OECD Imp.[a]	.544	.012	.234	.108
	(.254)	(.044)	(.228)	(.039)
No Mercosur imp.	-1.661	-.109	1.180	.132
	(2.090)	(.358)	(2.204)	(.376)
Log Mercos. Imp.[a]	.083	.013	-.042	-.009
	(.213)	(.037)	(.216)	(.037)
Const.	5.304	-.644	-1.826	-.822
	(4.546)	(.779)	(4.824)	(.822)
Obs.	91	91	94	94
R^2	.202	.25	.167	.37

[a]Log of nonzero imports × indicator.

Sources: Brazilian *SECEX* 2000 and Chilean customs data 2000 (Álvarez et al. 2007), manufacturing firms and their manufactured products, linked to *WTF* (Feenstra et al. 2005) and *Unido* Industrial Statistics (UNIDO 2005).

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 product scale are from a product fixed effects regression controlling for scope as well as destination and firm fixed effects (see column 6 in Table 93). Product fixed effects on exporter scope are 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.

Table 97: 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 (HS 6-digit level)			
Log GDP	.98	.57	.60	-.19
	(.05)***	(.04)***	(.04)***	(.04)***
Log Distance	-2.01	-1.93	-2.36	2.28
	(.26)***	(.18)***	(.20)***	(.21)***
Obs.	175	175	175	175
R^2	.67	.63	.64	.42
	Chilean Exports 2000 (HS 6-digit level)			
Log GDP	.86	.52	.55	-.21
	(.08)***	(.05)***	(.05)***	(.05)***
Log Distance	-1.02	-1.21	-1.57	1.76
	(.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 Harmonized-System 6-digit level for Brazil; at the Harmonized-System 6-digit level for Chile. Total exports T_{sd} are decomposed into $T_{sd} = M_{sd} G_{sd} \bar{\bar{z}}_{sd}$, 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 $\bar{\bar{z}}_{sd} \equiv \bar{t}_{sd}/G_{sd}$ 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.

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 goods 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 not provide information on sales or factor uses other than

[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

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 goods 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 4 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 4. To compare our Brazilian

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 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).

data to sector-level product-market information by destination country, we map the Harmonized System six-digit codes to *ISIC revision 2* 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 2 and 4), *SECEX* covers 81.7 of *WTF* manufactures trade. Firm-based data selection of manufacturing activity in Section 4 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 5 offers the most comprehensive coverage of manufacturing export activity: *SECEX* data for manufactured merchandize sold by firms from any sector, including commercial intermediaries (Section 5), covers 95.9 percent of *WTF*. The complete *SECEX* data across all sectors (Section 6) 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

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

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

Goods data. We calculate Balassa (1965) comparative-advantage measures for Brazilian and Chilean goods from UN Comtrade trade data for the year 2000 at the *ISIC rev. 2* four-digit level. Good 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 goods in the Brazilian data.

We use the Rauch (1999) classification of goods 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 goods in the Brazilian data.

We reuse the *WTF* data for the year 2000 (Feenstra et al. 2005) to obtain goods-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 goods 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 goods. 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 goods.

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

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

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