Appendix to *Learning to Export from Neighbors* (not for publication)

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Abstract

This appendix presents additional results that are referred to but not reported in the main text.

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Appendix Tables

Table A1: Summary Statistics of Exporting Firms' Entry and Exit

Year	Num. Exporters	Continuing	Exit	Successful Entrants	One-timers
			% of total		
2001	52434	0.607	0.156	0.189	0.048
2002	61180	0.590	0.134	0.225	0.051
2003	73651	0.610	0.110	0.224	0.056
2004	95544	0.580	0.106	0.243	0.070
2005	123647	0.574	0.116	0.187	0.122
Avg		0.592	0.124	0.214	0.070

Source: Authors' calculation based on China's Customs transaction-level trade data (2001-2005).

Table A2: Summary Statistics of Key Regressors

Variable	10%	25%	50%	75%	90%	Mean	Std Dev.	Nb. of Obs.
$\triangle \ln(x_{cmt})$	-0.807	-0.254	0.192	0.651	1.214	0.200	0.838	68008
$\triangle \ln(x_{c(-m)t})$	-0.016	0.106	0.210	0.319	0.423	0.205	0.210	68008
$\ln(x_{cmt})$	9.617	10.519	11.476	12.375	13.205	11.440	1.449	68008
$\ln(x_{c(-m)t})$	13.346	13.641	13.950	14.359	14.911	14.034	0.662	67777
$\ln(n_{cm,t-1}/Area_c)$	-9.561	-8.943	-7.810	-6.533	-5.227	-7.604	1.697	68008
$\ln(n_{c(-m),t-1}/Area_c)$	-6.641	-5.545	-4.165	-2.812	-1.738	-4.188	1.930	67777
$\ln(n_{cm,t-1}/Area_c) \times \triangle \ln(x_{cmt})$	-9.939	-4.840	-1.236	1.857	6.608	-1.508	7.046	68008
$\ln(n_{c(-m),t-1}/Area_c) \times \triangle \ln(x_{c(-m)t})$	-2.167	-1.227	-0.699	-0.291	0.080	-0.845	1.277	67777
$\ln(n_{cm,t-1})$	0.00	0.00	0.69	1.95	3.00	1.15	1.26	68008
$\ln(n_{c(-m),t-1})$	2.64	3.50	4.61	5.71	6.54	4.59	1.53	67777
New entry Rate (cmt)	0.000	0.002	0.024	0.063	0.112	0.044	0.060	68008
Survival Rate (cmt)	0.000	0.000	0.308	0.500	0.750	0.324	0.301	51579
(ln) Initial Exp Sales (cmt)	8.485	9.204	9.840	10.503	11.252	9.840	1.230	51579
Post-entry Growth ($cmt, t+1$)	-0.68	-0.05	0.46	0.97	1.60	0.46	1.08	40565

Source: Authors' calculation based on China's transaction-level trade data (2001-2005). All variables are city-country-year specific. Definition of new entry = 0 for all markets that were served by some firms in China. Subscript m denotes same market and $(-m)$ other markets.

Table A3: Correlations between Key Regressors

	$\triangle \ln(x_{cmt})$	$\triangle \ln(x_{c(-m)t})$	$\ln(x_{cmt})$	$\ln(x_{c(-m)t})$	$\ln(n_{cm,t-1}/Area_c)$	$\ln(n_{c(-m),t-1}/Area_c)$
$\triangle \ln(x_{cmt})$	1					
$\triangle \ln(x_{c(-m)t})$	0.187	1				
$\ln(x_{cmt})$	0.045	0.019	1			
$\ln(x_{c(-m)t})$	0.001	0.034	0.150	1		
$\ln(n_{cm,t-1}/Area_c)$	0.010	0.043	0.258	0.214	1	
$\ln(n_{c(-m),t-1}/Area_c)$	-0.001	0.036	-0.053	0.286	0.666	1

Source: Authors' calculation based on China's Customs transaction-level trade data (2001-2005).

Table A4: Using the Number of Neighboring Firms as the Prevalence Measure

Dependent Variable	Entry		Initial Sales		Survival		Post-entry Growth	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\ln(n_{cm,t-1}) \times \triangle \ln(x_{cmt})$	0.108***	0.102***	0.0295***	0.0297***	0.326**	0.391**	-0.0403***	-0.0401***
	(8.40)	(8.21)	(4.80)	(4.78)	(2.15)	(2.55)	(-4.03)	(-3.97)
$\triangle \ln(x_{cmt})$ [signal]	-0.0503***	-0.0466***	0.00812	0.00787	-0.314	-0.408	-0.0887***	-0.0888***
	(-5.19)	(-4.93)	(0.71)	(0.68)	(-1.06)	(-1.37)	(-4.45)	(-4.42)
$\ln(n_{cm,t-1})$	0.0509***	-0.00536	0.00597	-0.000288	-4.99***	-4.56***	-0.0411**	-0.0111
	(2.87)	(-0.24)	(0.48)	(-0.02)	(-14.58)	(-11.54)	(-1.96)	(-0.47)
Controls		yes		yes		yes		yes
Firm-year Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes
City-country Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes
Nb of Obs.	14,756,513	14,756,442	513,433	513,402	513,433	513,402	248,424	248,411
R-squared	.102	.102	.546	.546	.588	.588	.512	.512

See eq. (12) for the estimation specification. Coefficients in the Entry and Survival regressions (columns (1), (2), (5), (6)) are multiplied by 100 for clearer reporting. The sample excludes outliers (in terms of signal) and transactions to Hong Kong. The source of spillover in the same city-market is measured by ln(number exporters). All columns include firm-year and city-country fixed effects. Even-numbered columns include spillover from neighbors exporting to other countries as additional controls. See notes to Tables 3, 6, 7 and 8 for more details. t statistics, based on standard errors clustered at the city-country level, are reported in parentheses. * p<0.10; ** p<0.05; *** p<0.01.

Table A5: Using the Signal Measure from year t-1

Dependent Variable	Entry		Initial Sales		Survival		Post-entry growth	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\ln(n_{cm,t-2}/Area_c) \times \triangle \ln(x_{cm,t-1})$	0.0271***	0.0307***	0.0133***	0.0142***	0.140	0.162	-0.0216***	-0.0204***
	(3.22)	(3.68)	(2.82)	(2.99)	(1.18)	(1.37)	(-2.80)	(-2.62)
$\triangle \ln(x_{cm,t-1})$ [signal]	0.240***	0.269***	0.137***	0.143***	1.23	1.39	-0.243***	-0.235***
	(3.39)	(3.82)	(3.82)	(3.98)	(1.38)	(1.56)	(-4.28)	(-4.09)
$\ln(n_{cm,t-2}/Area_c)$	-0.0675***	-0.0443*	-0.0131	-0.00516	-2.62***	-1.90***	-0.00270	0.0203
	(-3.27)	(-1.83)	(-0.97)	(-0.33)	(-7.19)	(-4.54)	(-0.13)	(0.82)
Controls		yes		yes		yes		yes
Firm-year Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes
City-country Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes
N	12054357	12054251	457563	457532	457563	457532	221725	221708
r2	.105	.105	.542	.542	.585	.585	.509	.509

See eq. (12) for the estimation specification. Coefficients in the Entry and Survival regressions (columns (1), (2), (5) and (6)) are multiplied by 100 for clearer reporting. The sample excludes outliers (in terms of signal_t) and transactions to Hong Kong. The source of spillover is measured by the (log) number of "same-market" neighboring exporters divided by the area of the city, $\ln(n_{cm,t-1}/Area_c)$, and the signal is measured by their average "same-market" sales. All columns include firm-year and city-country fixed effects. Even-numbered columns include spillover from neighbors exporting to other countries as additional controls. See notes to Tables 3, 6, 7 and 8 for more details. t statistics, based on standard errors clustered at the city-country level, are reported in parentheses. * p<0.10; ** p<0.05; *** p<0.01.

Table A6: Using Neighbors' Average Sales as the Signal

Dependent Variable	Entry		Initial Sales		Survival		Post-entry growth	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\ln(n_{cm,t-1}/Area_c) \times \ln(x_{cmt})$	0.0707***	0.0858***	-0.00242	-0.00127	-0.268***	-0.194*	-0.0105**	-0.0172**
	(9.67)	(10.12)	(-0.71)	(-0.27)	(-3.22)	(-1.66)	(-1.99)	(-2.17)
$\ln(x_{cmt})$ [signal]	0.585***	0.588***	-0.0481*	-0.0528**	-1.60***	-1.32**	-0.0847**	-0.0712*
	(9.83)	(9.61)	(-1.91)	(-2.02)	(-2.64)	(-2.11)	(-2.30)	(-1.88)
$\ln(n_{cm,t-1}/Area_c)$	-0.762***	-0.966***	0.0458	0.0243	-1.99**	-2.44*	0.0717	0.172*
	(-9.03)	(-10.16)	(1.15)	(0.47)	(-2.00)	(-1.85)	(1.14)	(1.93)
Controls		yes		yes		yes		yes
Firm-year Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes
City-country Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes
Nb of Obs.	14,596,820	14,596,749	513,433	513,402	513,433	513,402	248,424	248,411
R-squared	.102	.102	.546	.546	.588	.588	.511	.511
Using Lagged Signal	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
$\ln(n_{cm,t-1}/Area_c) \times \ln(x_{cm,t-1})$	0.0432***	0.0369***	-0.00306	-0.00688*	0.0163	-0.0574	-0.0112**	-0.00505
	(5.24)	(4.01)	(-0.90)	(-1.81)	(0.18)	(-0.59)	(-2.01)	(-0.81)
$\ln(x_{cm,t-1})$ [signal]	0.340***	0.280***	-0.0436*	-0.0748***	-0.625	-1.22*	-0.0787**	-0.0302
	(5.15)	(3.72)	(-1.79)	(-2.68)	(-0.96)	(-1.69)	(-2.02)	(-0.67)
$\ln(n_{cm,t-1}/Area_c)$	-0.571***	-0.460***	0.0118	0.0703	-3.29***	-1.54	0.127*	0.0779
	(-5.78)	(-4.03)	(0.27)	(1.46)	(-2.87)	(-1.24)	(1.78)	(0.98)
Controls		yes		yes		yes		yes
Firm-year Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes
City-country Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes
Nb of Obs.	11,970,262	11,970,153	457,563	457,529	457,563	457,529	221,725	221,706
R-squared	.105	.105	.542	.542	.585	.585	.509	.509

See eq. (12) for the estimation specification. Coefficients in the Entry and Survival regressions (columns (1), (2), (5), (6), (9), (10), (13), and (14)) are multiplied by 100 for clearer reporting. The sample excludes outliers (in terms of signal_t) and transactions to Hong Kong. The source of spillover is measured by the (log) number of "same-market" neighboring exporters divided by the area of the city, $\ln(n_{cm,t-1}/Area_c)$, and the signal is measured by their average "same-market" sales. All columns include firm-year and city-country fixed effects. Even-numbered columns include spillover from neighbors exporting to other countries as additional controls. See notes to Tables 3, 6, 7 and 8 for more details. t statistics, based on standard errors clustered at the city-country level, are reported in parentheses. * p<0.10; ** p<0.05; *** p<0.01.

Table A7: New Exporters' Performance and Learning (Textile Firms Only with 3-way Fixed Effects)

Dependent Variable	Entry	Initial Sales	Survival	Post-Entry Growth
	(1)	(2)	(3)	(4)
$\ln(n_{cm,t-1}/Area_c) \times \triangle \ln(x_{cmt})$	0.109***	0.0230**	0.268	-0.0622***
	(3.64)	(2.24)	(1.05)	(-2.98)
$\triangle \ln(x_{cmt})$ [signal]	0.914***	0.220***	2.29	-0.631***
	(3.75)	(2.92)	(1.21)	(-4.17)
$\ln(n_{cm,t-1}/Area_c)$	-0.00662	0.0211	-6.50***	0.0444
	(-0.08)	(0.56)	(-7.16)	(0.60)
$\ln(n_{c(-m),t-1}/Area_c) \times \triangle \ln(x_{c(-m)t})$	3.19	-0.573	1.99	-0.556
	(1.05)	(-0.93)	(0.13)	(-0.64)
$\triangle \ln(x_{c(-m)t})$	20.7	0.0933	-9.25	-1.099
	(0.31)	(0.00)	(-0.01)	(-0.01)
$\ln(n_{c(-m),t-1}/Area_c)$	2.76	0.295	1.01	0.446
	(1.48)	(0.84)	(0.12)	(0.73)
City-country Fixed Effects	yes	yes	yes	yes
Firm-year Fixed Effects	yes	yes	yes	yes
Country-year Fixed Effects	yes	yes	yes	yes
Nb Obs.	1,915,727	87,965	87,965	37,823
R-squared	.133	.623	.635	.583

All coefficients for the Entry and Survival regressions (cols (1) and (3)) are already multiplied by 100 for clearer reporting. The sample excludes outliers (in terms of signal) and transactions to Hong Kong. The source of spillover is measured by the (log) number of "same-market" neighboring exporters divided by the area of the city, $\ln(n_{cm,t-1}/Area_c)$; and the signal is measured by their "same-market" average sales. All columns include firm-year, city-country and country-year fixed effects. t statistics, based on standard errors clustered at the city-country level, are reported in parentheses. * p<0.10; ** p<0.05; *** p<0.01.

Table A8: Controlling for the Source of Spillover in the Same Province

Dependent Variable	Entry	Initial Sales	Survival	Post-Entry Growth
	(1)	(2)	(3)	(4)
$\ln(n_{cm,t-1}/Area_c) \times \triangle \ln(x_{cmt})$ (city)	0.0435***	0.0153***	0.180	-0.0254***
	(5.64)	(3.07)	(1.46)	(-3.15)
$\ln(n_{pm,t-1}/Area_p) \times \triangle \ln(x_{pmt})$ (province)	0.124***	0.0169**	0.455**	0.00753
	(10.15)	(2.22)	(2.17)	(0.63)
$\triangle \ln(x_{cmt})$ (city)	0.371***	0.161***	0.0147	-0.333***
	(5.77)	(4.40)	(1.63)	(-5.75)
$\triangle \ln(x_{pmt})$ (province)	1.35***	0.187**	4.99**	0.0864
	(10.61)	(2.53)	(2.48)	(0.76)
$\ln(n_{cm,t-1}/Area_c)$ (city)	0.0194	-0.00779	-5.12***	-0.00989
	(0.96)	(-0.52)	(-12.54)	(-0.39)
$\ln(n_{pm,t-1}/Area_p)$ (province)	-0.0376	0.0579**	3.56***	-0.0252
	(-1.46)	(2.31)	(5.32)	(-0.60)
Controls	yes	yes	yes	yes
Firm-year Fixed Effects	yes	yes	yes	yes
City-country Fixed Effects	yes	yes	yes	yes
Nb. of Obs.	14349889	508325	508325	246348
R-squared	.103	.546	.587	.511

All coefficients for the Entry and Survival regressions (cols (1) and (3)) are already multiplied by 100 for clearer reporting. The source of spillover is measured by the (log) number of "same-market" neighboring exporters divided by the area of the city, $\ln(n_{cm,t-1}/Area_c)$. Controls include the (ln) density of exporters serving other destinations in the same city, the (ln) density of exporters serving other destinations in the same province; and their interactions with the corresponding shocks. All columns include firm-year and city-country fixed effects. t statistics, based on standard errors clustered at the city-country level, are reported in parentheses. * p<0.10; ** p<0.05; *** p<0.01.

Table A9: Learning Effects to and from Different Ownership Types

Dependent Variable	Entry	Initial Sales	Survival	Post-Entry Growth	Entry	Initial Sales	Survival	Post-Entry Growth
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$\ln(n_{cm,t-1}/Area_c)_{(D)} \times \triangle \ln(x)_{cmt(D)}$	0.087***	0.0154***	0.073	-0.0113				
	(6.44)	(2.84)	(0.56)	(-1.39)				
$\ln(n_{cm,t-1}/Area_c)_{(F)} \times \triangle \ln(x)_{cmt(F)}$	0.033***	0.00839	0.033	-0.0243***				
	(2.77)	(1.51)	(0.25)	(-2.91)				
$\triangle \ln(x)_{cmt(D)}$	0.714***	0.141***	0.514	-0.160***	0.702***	0.140***	0.479	-0.159***
	(6.61)	(3.59)	(0.55)	(-2.73)	(6.64)	(3.59)	(0.52)	(-2.72)
$\triangle \ln(x)_{cmt(F)}$	0.276***	0.0830**	0.721	-0.239***	0.271***	0.0838**	0.693	-0.239***
	(2.84)	(2.01)	(0.74)	(-3.94)	(2.79)	(2.03)	(0.71)	(-3.93)
$\ln(n_{cm,t-1}/Area_c)_{(D)}$	0.00701	0.0245	-2.04***	-0.0266	0.00901	0.0269	-2.01***	-0.0274
	(0.22)	(1.50)	(-4.60)	(-1.03)	(0.29)	(1.64)	(-4.52)	(-1.05)
$\ln(n_{cm,t-1}/Area_c)_{(F)}$	-0.0239	0.0250	-2.07***	0.000502	-0.0232	0.0222	-2.10***	0.00157
	(-0.68)	(1.56)	(-4.96)	(0.02)	(-0.67)	(1.39)	(-5.04)	(0.06)
$Rec_D \times \ln(n_{cm,t-1}/Area_c)_{(D)} \times \triangle \ln(x)_{cmt(D)}$					0.0840***	0.0154***	0.0447	-0.0103
					(6.35)	(2.79)	(0.34)	(-1.24)
$Rec_F \times \ln(n_{cm,t-1}/Area_c)_{(D)} \times \triangle \ln(x)_{cmt(D)}$					0.0878***	0.0154***	0.0978	-0.0124
					(6.56)	(2.80)	(0.75)	(-1.49)
$Rec_D \times \ln(n_{cm,t-1}/Area_c)_{(F)} \times \triangle \ln(x)_{cmt(F)}$					0.0339***	0.00967*	0.0215	-0.0241***
					(2.81)	(1.70)	(0.16)	(-2.82)
$Rec_F \times \ln(n_{cm,t-1}/Area_c)_{(F)} \times \triangle \ln(x)_{cmt(F)}$					0.0312***	0.00788	0.0348	-0.0244***
					(2.63)	(1.41)	(0.26)	(-2.90)
Controls				yes				
Firm-year Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes
City-country Fixed Effects	yes	yes	yes	yes	yes	yes	yes	yes
Nb of Obs.	10012875	447282	447282	220475	10012875	447282	447282	220475
R-squared	.112	.553	.6	.518	.112	.553	.6	.518

All coefficients for the Entry and Survival regressions are already multiplied by 100 for clearer reporting. Controls include the (ln) density of domestic exporters serving other destinations, (ln) density of foreign-owned exporters serving other destinations, and their interactions with the corresponding signals. Subscripts D and F denote domestic and foreign firms, respectively. Rec denotes the recipients of spillover. t statistics, based on standard errors clustered at the city-country level, are reported in parentheses. * p<0.10; ** p<0.05; *** p<0.01.