

Table 7: Studies used in the meta-analysis

Authors	Country	Years	Data	Level	Presence	Response	Result (5%)
Caves (1974)	Australia	1966	cs	industry	empl	prod	+
Globerman (1979)	Canada	1972	cs	industry	output	prod	?
Blomström and Persson (1983)	Mexico	1970	cs	industry	empl	prod	+
Blomström (1986)	Mexico	1970/75	cs	industry	empl	other	+
Haddad and Harrison (1993)	Morocco	1985-90	panel	secum	assets	prod, growth	-
Blomström and Wolf (1994)	Mexico	1970/75	cs	industry	empl	growth	+
Kokko (1994)	Mexico	1970	cs	industry	empl	prod	+
Kokko (1996)	Mexico	1970	cs	industry	empl	prod	+
Kokko et al. (1996)	Uruguay	1970	cs	firm	output	prod	?
Aitken and Harrison (1999)	Venezuela	1976-89	panel	firm	assets	growth	-
Blomström and Sjöholm (1999)	Indonesia	1991	cs	secum	output	prod	+
Chuang and Lin (1999)	Taiwan	1991	cs	firm	assets	growth	+
Imbriani and Reganati (1999)	Italy	1992	cs	industry	empl	prod	+
Sjöholm (1999b)	Indonesia	1980-91	cs	firm	output	prod, growth	+
Sjöholm (1999a)	Indonesia	1980-91	cs	firm	output	growth	+
Aslanoglu (2000)	Turkey	1993	cs	industry	sales	prod	?
Barrios (2000)	Spain	1990-94	panel	firm	output	prod	?
Djankov and Hoekman (2000)	Czech Republic	1993-96	panel	firm	assets	growth	-
Flores et al. (2000)	Portugal	1992-95	panel	firm	output	prod	?
Kathuria (2000)	India	1976-89	panel	firm	sales	other	-
Kinoshita (2000)	Czech Republic	1995-98	panel	secum	empl	growth	?
Konings (2000)	Trans. countries	1993-97	panel	firm	sales	growth	?
Liu et al. (2000)	UK	1991-95	panel	industry	empl	prod	+
Yudaeva et al. (2003)	Russia	1993-97	panel	secum	output	prod	?
Bosco (2001)	Hungary	1993-97	panel	firm	sales	sales	?
Damijan et al. (2003)	Trans. countries	1994-98	panel	secum	sales	growth	?

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Table 7: Studies used in the meta-analysis (continued)

Authors	Country	Years	Data	Level	Presence	Response	Result (5%)
Driffield (2001)	UK	1989-92	cs	industry	sales	growth	?
Girma et al. (2001)	UK	1991-96	panel	firm	empl	prod, growth	?
Liu et al. (2001)	China	1996-97	cs	industry	assets	prod	?
Sgard (2001)	Hungary	1992-99	panel	firm	assets	prod	?
Zemplinerová and Jarolím (2001)	Czech Republic	1994-98	panel	secum	assets	growth	?
Barrios et al (2002)	Greece, Ireland, Spain	1992, 97	cs	firm	empl	prod	?
Buckley et al. (2002)	China	1995	cs	industry	assets, empl	prod	+
Kathuria (2002)	India	1990-96	panel	firm	sales	growth	-
Liu (2002)	China	1993-98	panel	secum	assets	prod	?
Schoors and Tol (2002)	Hungary	1997-98	cs	firm	sales	prod	+
Bouoiyour (2004)	Morocco	1987-96	panel	industry	assets	prod	?
Khawar (2003)	Mexico	1990	cs	firm	assets	prod	?
Keller and Yeaple (2003)	USA	1987-96	panel	secum	empl	growth	+
Liu and Wang (2003)	China	1995	cs	industry	assets	prod	+
Ruane & Ugur (2003)	Ireland	1991-98	panel	secum	empl	growth	+
Wei and Liu (2003)	China	2000	cs	industry	assets	prod	+
Görg and Strobl (2004)	Ireland	1973-95	panel	firm	empl	growth	-
Haskel et al (2004)	UK	1973-92	panel	firm	empl	growth	+
Javorcik (2004)	Lithuania	1996-00	panel	firm	assets	prod	+
Lutz and Talavera (2004)	Ukraine	1998-99	cs	secum	assets	prod	?
Marin and Bell (2004)	Argentina	1992-96	panel	firm	empl	growth	?
Sinani and Meyer (2004)	Estonia	1994-99	panel	secum	empl, sales, assets	growth	+
Torlak (2004)	Trans. countries	1993-00	panel	secum	output	prod	?
Vahter (2004)	Estonia, Slovenia	1994-01	panel	secum	assets	prod	?
Blalock and Gertler (2005)	Indonesia	1988-96	panel	firm	output	prod	?
Jordaan (2005)	Mexico	1993	cs	firm	empl	prod	?
Narula and Marin (2005)	Argentina	92-96, 98-01	panel	secum	empl	growth	?

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Table 7: Studies used in the meta-analysis (continued)

Authors	Country	Years	Data	Level	Presence	Response	Result (5%)
Takii (2005)	Indonesia	1990-95	panel	firm	empl	prod	?
Thuy (2005)	Vietnam	1995-02	panel	industry	empl	prod	?
Bwalya (2006)	Zambia	1993-95	panel	firm	empl	growth	?
Kohpaiboon (2006)	Thailand	1996	cs	firm	output	prod	-
Merlevede & Schoors (2006)	Romania	1996-01	panel	firm	output	growth	?
Peri and Urban (2006)	Germany, Italy	1993-99	panel	secдум	empl	prod	+
Ran <i>et al.</i> (2006)	China	2001-03	panel	industry	assets	prod	?
Buckley <i>et al.</i> (2007)	China	2001	cs	industry	assets	prod	+
Girma and Wakelin (2007)	UK	1980-92	panel	firm	empl	prod	?
Murakami (2007)	Japan	1994-98	panel	secдум	empl	growth	?
Sasidharan & Ramanathan (2007)	India	1994-02	panel	secдум	output	growth	?
Javorcik and Spatareanu (2008)	Romania	1998-03	panel	firm	output	growth	?
Liu (2008)	China	1995-99	panel	secдум	assets	prod	-
Nguyen (2008)	Vietnam	2000-05	panel	secдум	output	prod	?

Note: The column “Result” does not necessarily report researchers' conclusion; the significance of spillover effect is based on simple average of specifications which were included to our analysis from the particular paper.

Legend: Country (data for which country), Years (data for which time periods), Data (cross-sectional or panel), Level (level of aggregation), Presence (proxy for foreign presence), Response (response variable used in the model), Result (result at the 5% level of significance). Other variables explained in Table 8.

Table 8: Characteristics of the variables

Variable	Definition	Summary stat.
Response Variable		
tstat	papers' t-statistics for foreign presence; meta-response variable	1.576 (5.65)
growth	= 1 if growth is response variable used in literature, = 0 if labor productivity	39
Foreign Presence Measures		
empl	= 1 if MNC presence measured in employment, = 0 if otherwise (as output, assets, sales)	32
output	= 1 if MNC presence measured in output, = 0 if otherwise (as employment, assets, sales)	21
assets	= 1 if MNC presence measured in assets, = 0 if otherwise (as employment, output, sales)	25
Data Specification		
cs	= 1 if data are cross-section, = 0 if panel data	32
industry	= 1 if data are industry-level, =0 if firm-level	22
sec dum	= 1 if industry dummies are used, = 0 if otherwise	35
trans	= 1 if data are for transition country, = 0 if otherwise (developing, advanced)	34
devg	= 1 if data are for developing country, = 0 if otherwise (transition, advanced)	41
avgyr	Average year of study period	1992.286 (7.835)
ldf	Logarithm of degrees of freedom	7.377 (2.356)

Note: For tstat, avgyr and ldf, the summary statistics is the mean with st. deviation in parenthesis, for all others it is the number of observations for which dummy variable equals 1.

Table 9: Linear and non-linear relationships

Variable	Linear	Polynomial
Logarithm of degrees of freedom	0.457	0.497
Average year of study period	0.322	0.389
Dummy = 1 if data are for developing country	0.532	0.618
Dummy = 1 if data are for transition country	0.665	0.755
Dummy = 1 if data are cross-section	0.455	0.487
Dummy = 1 if response variable is output growth	0.279	0.33
Dummy = 1 if data are industry-level	0.547	0.699
Dummy = 1 if industry dummies are used	0.308	0.355
Dummy = 1 if MNC presence measured in employment	0.656	0.687
Dummy = 1 if MNC presence measured in assets	0.548	0.57
Dummy = 1 if MNC presence measured in output	0.562	0.595

Table 10: Table of correlation coefficients

	ldf	avgyr	devg	trans	cs	growth	industry	secdum	empl	assets	output
ldf	1										
avgyr	0.289	1									
devg	-0.235	-0.245	1								
trans	0.153	0.383	-0.629	1							
cs	-0.423	-0.431	0.376	-0.424	1						
growth	0.185	0.093	-0.276	0.279	-0.352	1					
industry	-0.602	-0.31	0.384	-0.398	0.51	-0.344	1				
secdum	0.272	0.33	-0.295	0.438	-0.436	0.216	-0.407	1			
empl	-0.0665	-0.274	-0.0233	-0.424	0.0673	0.006	0.196	-0.162	1		
assets	-0.0259	0.207	0.212	0.0117	0.0377	-0.147	0.131	-0.001	-0.413	1	
output	0.223	-0.045	0.0569	0.0335	0.0571	-0.176	-0.225	0.0742	-0.369	-0.31	1

Table 11: Standard meta-regression, all studies

	OLS, including outliers				OLS, excluding outliers			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ldf	0.34 (1.26)	0.317 (1.28)			0.0969 (0.69)	0.00201 (0.02)		
avggyr	0.0635 (1.29)	0.0457 (0.98)			-0.0119 (-0.40)	-0.0301 (-0.93)		
devg	-1.323 (-0.65)	-1.972 (-1.26)			-0.124 (-0.23)	-0.461 (-0.74)		
trans	1.08 (0.40)	0.338 (0.21)		2.173 (1.17)	0.805 (0.99)	-0.0612 (-0.10)		0.824 (1.35)
cs	6.106** (3.06)	5.185** (3.01)		4.901** (2.80)	2.023** (3.16)	2.118** (2.90)		1.910** (3.59)
growth	1.995 (1.44)		1.376 (0.93)	1.682 (1.32)	0.973 [†] (1.91)		0.839 (1.56)	0.923* (2.01)
industry	1.153 (0.83)		1.704 (1.61)	-0.535 (-0.33)	1.851** (2.85)		2.333** (4.19)	1.547* (2.63)
secdum	1.627 (1.46)		0.902 (0.57)		0.237 (0.38)		0.0251 (0.04)	
empl	2.376 (0.87)		1.878 (0.98)	1.988 (1.04)	1.510* (2.23)		1.276* (2.34)	1.365* (2.45)
assets	1.118 (0.55)		1.016 (0.46)		0.329 (0.47)		0.165 (0.23)	
output	1.019 (0.55)		1.563 (0.86)	0.501 (0.37)	1.159 (1.39)		1.390 [†] (1.95)	1.076 [†] (1.69)
Constant	-132.1 (-1.35)	-92.86 (-1.00)	-0.909 (-0.49)	-2.122 (-1.49)	20.85 (0.35)	59.93 (0.93)	-1.191 [†] (-1.82)	-1.846** (-2.70)
Observations	97	97	97	97	87	87	87	87
R ²	0.185	0.131	0.031	0.133	0.342	0.222	0.232	0.331

Note: *ldf* is a logarithm of degrees of freedom, *avggyr* the average year of study period, *devg* equals 1 if data are for developing country, *trans* equals 1 if data are for transition country, *cs* equals 1 if data are cross-sectional, *growth* equals 1 if response variable is output growth, *industry* equals 1 if data are industry-level, *secdum* equals 1 if industry dummies are used, *empl* equals 1 if MNC presence is measured in employment, *assets* for foreign presence measured in assets and *output* for foreign presence measured in output. Heteroscedasticity robust (Huber-White sandwich est.) *t* statistics in parentheses, response variable: *t* statistic; [†] $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

Table 12: Robust meta-regression, all studies

	OLS, including outliers				OLS, excluding outliers			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ldf	0.137 (1.06)	0.0387 (0.35)			0.100 (0.78)	0.110 (1.13)		
avggyr	-0.0216 (-0.62)	-0.0356 (-1.05)			-0.0239 (-0.71)	-0.0250 (-0.84)		
devg	0.0353 (0.05)	-0.0384 (-0.06)			-0.0411 (-0.07)	-0.183 (-0.34)		
trans	0.833 (1.03)	0.0195 (0.03)		0.784 (1.33)	1.068 (1.37)	-0.0503 (-0.09)		1.000 [†] (1.67)
cs	1.876 ^{**} (2.91)	1.965 ^{**} (3.25)		1.821 ^{**} (3.09)	2.363 ^{**} (3.70)	2.835 ^{**} (5.21)		2.579 ^{**} (4.34)
growth	0.880 (1.64)		0.757 (1.38)	0.849 (1.66)	0.839 (1.57)		0.160 (0.27)	0.360 (0.68)
industry	1.884 [*] (2.37)		2.299 ^{**} (3.45)	1.552 [*] (2.28)	0.770 (1.03)		2.120 ^{**} (2.95)	0.481 (0.70)
sec dum	0.344 (0.61)		0.126 (0.23)		0.468 (0.84)		0.457 (0.80)	
empl	1.436 [†] (1.77)		1.282 [†] (1.85)	1.216 [*] (2.14)	2.216 ^{**} (2.94)		1.240 [†] (1.67)	1.593 ^{**} (2.78)
assets	0.553 (0.73)		0.442 (0.60)		1.036 (1.42)		0.483 (0.61)	
output	1.148 (1.40)		2.334 [†] (1.71)	1.097 [†] (1.76)	1.856 [*] (2.25)		1.280 (1.55)	1.553 [*] (2.44)
Constant	39.86 (0.57)	70.61 (1.05)	-1.165 (-1.61)	-1.679 ^{**} (-2.81)	44.44 (0.66)	49.06 (0.83)	-0.940 (-1.21)	-1.553 [*] (-2.56)
Observations	97	97	97	97	97	97	97	97
R ²	0.258	0.183	0.173	0.248	0.128	0.091	0.073	0.102

Note: *ldf* is a logarithm of degrees of freedom, *avggyr* the average year of study period, *devg* equals 1 if data are for developing country, *trans* equals 1 if data are for transition country, *cs* equals 1 if data are cross-sectional, *growth* equals 1 if response variable is output growth, *industry* equals 1 if data are industry-level, *sec dum* equals 1 if industry dummies are used, *empl* equals 1 if MNC presence is measured in employment, *assets* for foreign presence measured in assets and output for foreign presence measured in output.

t statistics in parentheses, response variable: [†] *t* statistic; [†] *p* < 0.10, * *p* < 0.05, ** *p* < 0.01

Table 13: Panel meta-regression, all studies

	Random effects, including outliers				Random effects, excluding outliers			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ldf	0.351 (1.29)	0.298 (1.17)			0.0828 (0.60)	0.0141 (0.12)		
avgyr	0.122* (2.02)	0.0754 (1.49)			-0.00560 (-0.18)	-0.0202 (-0.60)		
devg	-1.752 (-0.80)	-2.493 (-1.50)			-0.247 (-0.47)	-0.662 (-1.06)		
trans	0.619 (0.20)	-0.243 (-0.13)		2.345 (1.12)	0.727 (0.89)	-0.296 (-0.43)		0.874 (1.31)
cs	6.330** (2.68)	5.452** (2.59)		4.859* (2.46)	1.993** (3.10)	2.182** (2.89)		1.819** (3.47)
growth	0.837 (0.57)		0.284 (0.18)	1.000 (0.69)	1.756 (1.47)		0.582 (1.04)	0.651 (1.34)
industry	0.898 (0.55)		1.552 (1.32)	-0.747 (-0.41)	1.787** (2.74)		2.313** (4.02)	1.467* (2.44)
sec dum	1.427 (1.16)		1.111 (0.69)		0.353 (0.54)		0.230 (0.37)	
empl	2.066 (0.58)		1.446 (0.51)	2.226 (1.03)	1.808* (2.42)		1.680* (2.42)	1.492** (2.61)
assets	-0.459 (-0.16)		-0.255 (-0.08)		0.577 (0.74)		0.537 (0.62)	
output	0.0349 (0.01)		0.596 (0.23)	0.378 (0.22)	1.505 (1.60)		1.829* (2.13)	1.215† (1.77)
Constant	-246.2* (-2.04)	-151.5 (-1.50)	0.189 (0.07)	-1.871 (-1.21)	8.379 (0.13)	40.39 (0.60)	-1.426† (-1.77)	-1.691** (-2.39)
Observations	97	97	97	97	87	87	87	87
R ²	0.166	0.129	0.021	0.130	0.335	0.220	0.222	0.327

Note: *ldf* is a logarithm of degrees of freedom, *avgyr* the average year of study period, *devg* equals 1 if data are for developing country, *trans* equals 1 if data are for transition country, *cs* equals 1 if data are cross-sectional, *growth* equals 1 if response variable is output growth, *industry* equals 1 if data are industry-level, *sec dum* equals 1 if industry dummies are used, *empl* equals 1 if MNC presence is measured in employment, *assets* for foreign presence measured in assets and output for foreign presence measured in output. Heteroscedasticity robust (Huber-White sandwich est.) *t* statistics in parentheses, response variable: *t* statistic; † *p* < 0.10, * *p* < 0.05, ** *p* < 0.01

Table 14: Probability meta-regression, all studies

	Probit—POSIT, all observations				Probit—SIGNIF, all observations			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ldf	0.0666 (0.79)	0.00737 (0.11)			0.260** (2.78)	0.144* (2.13)		0.146* (2.15)
avgyr	-0.0195 (-0.54)	-0.00244 (-0.10)			-0.0640* (-2.51)	-0.0498* (-2.34)		-0.0561* (-2.62)
devg	0.264 (0.53)	-0.0107 (-0.03)			0.427 (0.95)	0.261 (0.74)		
trans	0.635 (1.08)	-0.290 (-0.74)		0.397 (1.01)	0.413 (0.74)	0.153 (0.40)		
cs	1.123* (2.46)	1.100** (2.72)		0.982* (2.35)	0.873* (2.10)	0.680† (1.87)		0.630† (1.75)
growth	0.162 (0.46)		0.0380 (0.12)	0.202 (0.59)	0.378 (1.12)		0.317 (1.04)	
industry	1.602* (2.27)		1.528** (2.77)	1.311* (2.13)	0.667 (1.30)		0.366 (0.99)	
sec dum	0.297 (0.86)		0.0868 (0.28)		0.0283 (0.08)		-3.10 (-1.03)	-0.0592 (-0.19)
empl	1.441* (2.45)		1.114** (2.63)	1.344** (2.60)	0.0173 (0.03)		0.293 (0.76)	
assets	0.695 (1.42)		0.611 (1.41)	0.785† (1.65)	0.197 (0.44)		0.423 (1.03)	0.485 (1.53)
output	0.841 (1.62)		0.900* (1.97)	0.959† (1.93)	-0.738 (-1.41)		0.651 (0.15)	
Constant	37.03 (0.51)	5.059 (0.10)	-558 (-1.31)	-1.088* (-1.97)	124.6* (2.47)	97.63* (2.31)	-0.467 (-1.16)	110.3** (2.59)
Observations	97	97	97	97	97	97	97	97
R ²	0.238	0.126	0.176	0.224	0.190	0.123	0.044	0.137

Note: POSIT equals 1 if model reports positive spillovers and zero otherwise. SIGNIF equals 1 if model reports significant spillovers and zero otherwise. *ldf* is a logarithm of degrees of freedom, *avgyr* the average year of study period, *devg* equals 1 if data are for developing country, *trans* equals 1 if data are for transition country, *cs* equals 1 if data are cross-sectional, *growth* equals 1 if response variable is output growth, *industry* equals 1 if data are industry-level, *sec dum* equals 1 if industry dummies are used, *empl* equals 1 if MNC presence is measured in employment, *assets* for foreign presence measured in assets and *output* for foreign presence measured in output.

t statistics in parentheses; response variable: dummy = 1 if *t* stat is positive (columns 1-4), dummy = 1 if *t* stat is significant (columns 5-8). † *p* < 0.10, * *p* < 0.05, ** *p* < 0.01