



国际经济学

资本跨国流动：跨国公司理论

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提纲

- 1 Motivation
- 2 Definitions, Broad Facts on MNEs
- 3 Why Go Global?
 - Location
 - Internalization
 - offshoring outsourcing
- 4 The Economic Impact of MNEs



1 Motivation

2 Definitions, Broad Facts on MNEs

3 Why Go Global?

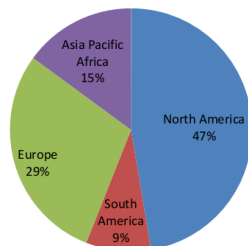
4 The Economic Impact of MNEs



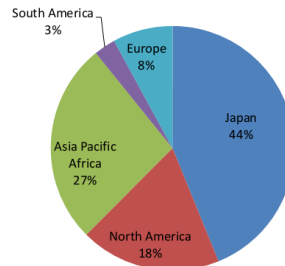
Motivation

- international trade is not the only channel via which foreign demand for cars is met
- Less than 50% of Ford's and Toyota's production occurs in their countries of origin

Share of Worldwide Production of **Ford**



Share of Worldwide Production of **Toyota**

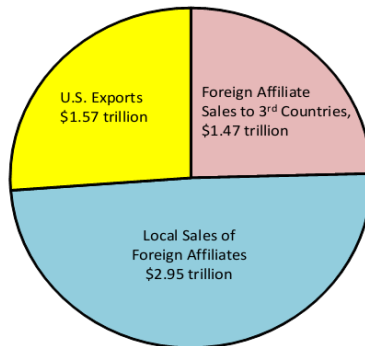




Motivation

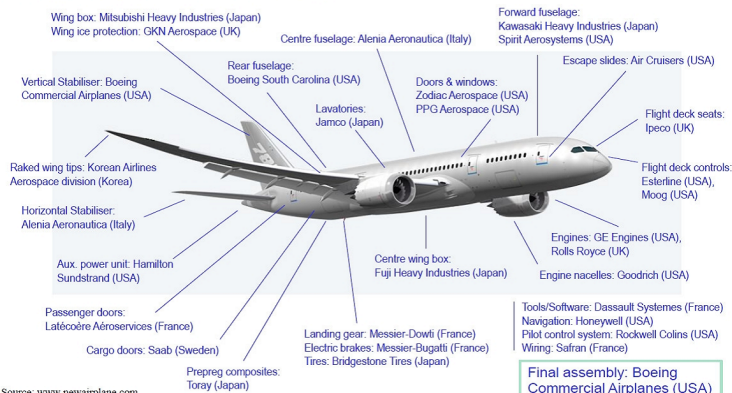
- U.S. firms serve foreign markets mostly (75%) via foreign affiliate sales

How American Firms Serve Foreign Markets, 2009



Back to Boeing vs. Airbus

Fragmentation of production: the example of the Boeing 787 Dreamliner



Source: www.newairplane.com



Importance of MNEs in U.S. Trade

- Even when focusing on trade flows, understanding the behavior of MNEs is important

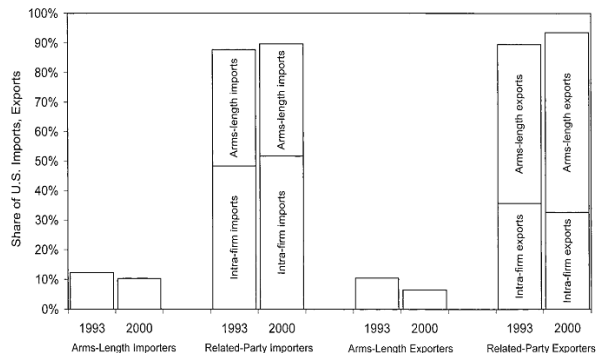


Fig. 14.1 The share of U.S. trade that flows through multinational firms



Some Questions

- Why do some firms “go global” and set up production abroad?
- Why do some firms opt out of that strategy?
- Why do some firms internalize (own/control) their production facilities abroad while others do not?
- What is the effect of MNEs in their host countries? Do they exploit labor?



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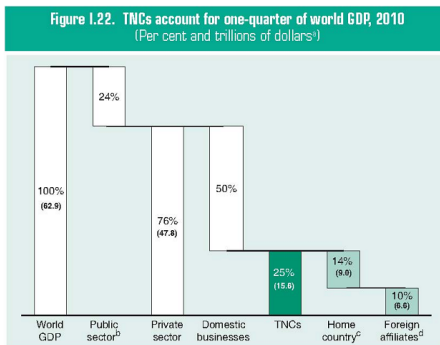


Definitions

- **A multinational firm** is “an enterprise that controls and manages production establishments (plants) located in at least two countries ” (Caves 1996, p. 1)
- Parent firm vs. affiliates or subsidiaries
- **Foreign direct investment (FDI)** flows are made up of equity capital, reinvested earnings, and other capital associated with an intercompany debt transaction (10% equity stake requirement)
- FDI flows might not be a good proxy for MNE activity

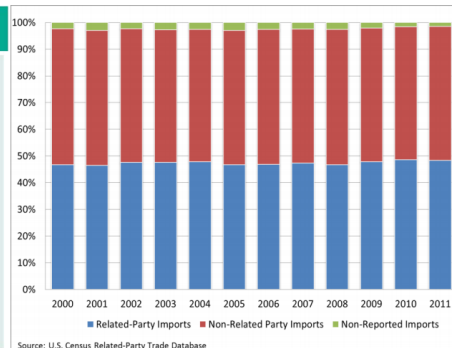


The Relevance of MNEs



Source: UNCTAD.

□ MNEs' large share of World GDP



□ MNEs' large share of U.S. trade



Largest MNEs Are Very International

Table I.6. Internationalization statistics of the 100 largest non-financial TNCs worldwide and from developing and transition economies
(Billions of dollars, thousands of employees and per cent)

Variable	100 largest TNCs worldwide					100 largest TNCs from developing and transition economies		
	2008	2009	2008–2009 % change	2010 ^b	2009–2010 % change	2008	2009	% change
Assets								
Foreign	6 161	7 147	16.0	7 512	5.1	899	997	10.9
Total	10 790	11 543	7.0	12 075	4.6	2 673	3 152	17.9
Foreign as % of total	57	62	4.8 ^a	62	0.3 ^a	34	32	-2.0 ^a
Sales								
Foreign	5 168	4 602	-10.9	5 005	8.8	989	911	-7.9
Total	8 406	6 979	-17.0	7 847	12.4	2 234	1 914	-14.3
Foreign as % of total	61	66	4.5 ^a	64	-2.2 ^a	44	48	3.3 ^a
Employment								
Foreign	9 008	8 568	-4.9	8 726	1.8	2 651	3 399	28.2
Total	15 729	15 144	-3.7	15 489	2.3	6 778	8 259	21.9
Foreign as % of total	57	57	-0.7 ^a	56	-0.2 ^a	39	41	2.0



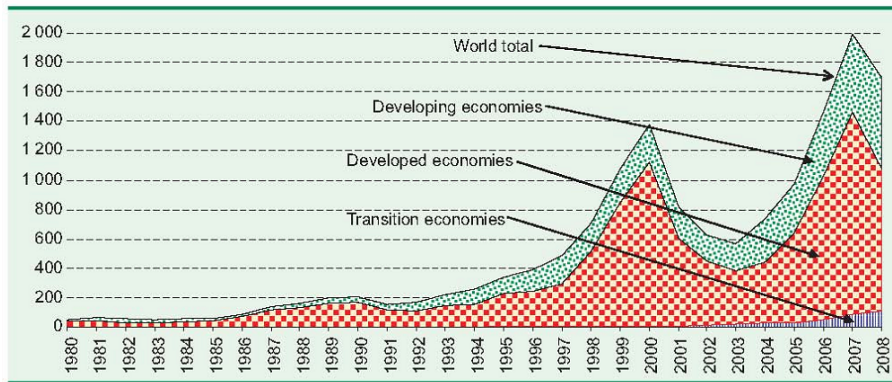
Some Stylized Facts about MNEs

■ Some “Macro” Facts

- 1 FDI and affiliate activity grew rapidly throughout the world, especially in late 1980s, late 1990s and mid 2000s (but fell in recent crisis)
- 2 Multinational activity is primarily concentrated in developed countries where it is mostly two - way
- 3 Developing countries are more likely to be the destination of multinational activity than the source
- 4 Political risk and instability deter inward FDI

Thirty Years of FDI Flows

Figure I.1. FDI inflows, global and by groups of economies, 1980–2008
(Billions of dollars)



Source: UNCTAD FDI/TNC database (www.unctad.org/fdistatistics) and UNCTAD Secretariat estimates.



Some Stylized Facts about MNEs

■ Firm and Industry Characteristics Common to MNEs

- 1 High levels of R&D expenditures over sales
- 2 Employment of a large number of nonproduction (skilled) workers
- 3 Production of new and/or complex goods
- 4 High levels of product differentiation and advertising



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Why Do Multinational Firms Exist?

- Based on the starting definition this is due to the fact that a firm decides to:
 - Locate part of the production process in a foreign country 地理位置
 - Take a “controlling” equity stake in the foreign production facility 所有权结构
- 1 **Location** : why is a good produced in at least two countries rather than in just one country?
- 2 **Internalization** : why is production in different locations done by one firm rather than by separate firms?
- 3 **Non-Internalization** : why is production in different locations done by a third firm, say **Offshoring Outsourcing**?



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The Location Decision

- Two main reasons for MNE activity to be profit-maximizing
- 1 **Horizontal FDI**: When **exporting is costly**, replication of the production process in a foreign market may be profit-maximizing (Nestlé, Toyota)
- 2 **Vertical FDI**: In the presence of **factor price (cost) differences** across countries, a producer may find it optimal to fragment production and undertake different parts/processes in different countries



Horizontal FDI: Model Setup

- Consider the situation of a firm that is trying to decide how to best service a foreign market
- One options:
 - to increase production from the currently existing plant and export this additional amount
 - to set up an affiliate in the foreign market and avoid transportation costs
- What is the cost of FDI? Suppose it entails additional **fixed costs** associated with creating a new plant
- Exporting will also be costly, but most of the costs will be **variable** in nature



Horizontal FDI: Predictions

- Horizontal FDI will tend to dominate exporting in industries in which:
 - costs of transporting the goods internationally are high
 - plant- level fixed costs are low relative to firm - level fixed costs 工厂层固定成本 V.S. 公司层固定成本
 - manmade tariff is high enough
- Furthermore, **a larger demand** or **productivity level** (i.e., larger sales) will make horizontal FDI more attractive relative to exporting
 - Easier to amortize the fixed cost of the new plant
 - Firms facing low demand or featuring low productivity will opt out of becoming multinationals
- Why positive effect of firm- level fixed costs?



Horizontal FDI: Evidence

- Brainard (1997) found strong supportive evidence for the model (PSCALE 工厂层规模经济, CSCALE 公司层规模经济)
- Helpman, Melitz and Yeaple (2004) confirmed the results and also showed a negative effect of productivity on the ratio EXP/FDI

TABLE 1—EXPORT SHARES (DEPENDENT VARIABLE = EXSH)

Independent variable	OLS (i)	Country random effects (ii)	Industry random effects (iii)	OLS (iv)	Country random effects (v)	Industry random effects (vi)
FREIGHT	-0.2451 (-5.429)	-0.2009 (-3.996)	-0.1264 (-2.672)	-0.2717 (-4.578)	-0.2852 (-4.813)	-0.1228 (-1.767)
TARIFF	-0.274 (-6.239)	-0.2814 (-5.666)	-0.0872 (-2.038)	-0.3707 (-7.447)	-0.3895 (-7.259)	-0.1644 (-3.412)
PWGDP	0.330 (4.272)	0.3231 (2.371)	0.1922 (2.909)	0.2958 (3.747)	0.3050 (2.677)	0.1461 (2.122)
TAX	-1.335 (-4.882)	-1.3566 (-2.809)	-0.9853 (-4.258)	-0.5695 (-1.795)	-0.5787 (-1.223)	-0.2150 (-0.792)
TRADE	1.9114 (7.416)	1.9395 (4.149)	2.1306 (9.887)	1.6558 (6.305)	1.5841 (4.035)	1.8477 (8.262)
FDI	-2.6163 (-9.264)	-2.6302 (-5.077)	-2.8126 (-11.944)	-0.8343 (-1.810)	-0.8502 (-1.219)	-0.9120 (-2.334)
PSCALE				0.1345 (2.735)	0.1331 (2.728)	0.1087 (0.941)
CSCALE				-0.2726 (-4.656)	-0.2734 (-4.722)	-0.2291 (-1.587)
ADJ				-0.0313 (-0.156)	-0.0177 (-0.069)	-0.0367 (-0.188)
LANG				-0.1767 (-1.803)	-0.1459 (-0.998)	-0.2707 (-3.223)
EC				-0.8107 (-5.933)	-0.7808 (-3.823)	-0.8165 (-7.040)
COUP				0.6247 (2.624)	0.6486 (1.805)	0.5632 (2.788)
Constant	3.6903 (2.212)	3.9210 (1.281)	3.5633 (2.554)	-4.7336 (-2.042)	-4.4334 (-1.270)	-5.1163 (-2.535)
Number of observations	1,159	1,159	1,159	1,035	1,035	1,035
Adjusted R ²	0.118	0.040	0.080	0.233	0.140	0.180
χ ²		1.8446	23.425		4.8503	22.154
P		0.933	0.001		0.963	0.036

Notes: The table reports estimates of equation (3); *t* values are reported in parentheses. All variables are in logs. Sample-size differences reflect missing data.



Vertical FDI: Model Setup

- Consider the situation of a firm that is trying to decide how to produce a final good at minimum average cost
- The production process entails a skill - intensive process (R&D, product development...) and an unskilled - intensive process (assembly)
- One option is to concentrate both processes in the same plant or location
- An alternative is to set up an affiliate in a foreign market that focuses on the production of a given process



Vertical FDI: Model Setup (cted.)

■ What are the costs of FDI?

- Transportation costs involved in the cross - border exchange of inputs
- coordination costs; communication costs
- fixed costs

■ What are the benefits of FDI?

- Exploitation of cross- country differences in factor prices by shifting production processes (with different input requirements) to locations where they can be carried out more cheaply
- This is very much related to the concept of **comparative advantage** in Heckscher- Ohlin Model



Vertical FDI: Predictions

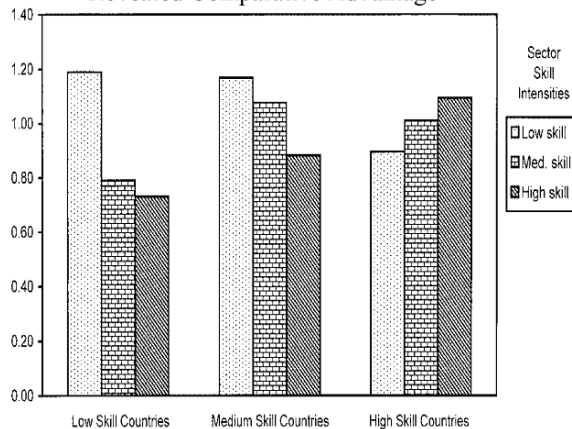
- The model predicts that the prevalence of MNEs and FDI should be:
 - Decreasing in transportation costs (as well as coordination costs)
 - Increasing in relative factor endowment differences across countries (which generate factor price differences)
 - Increasing in relative factor intensity differences across processes
- Notice also that while in Horizontal FDI models, trade and FDI are **substitutes ...**
- ... here, Vertical FDI and trade are **complements**



Vertical FDI: Evidence

- Yeaple (2003) shows that U.S. MNEs favor skilled - abundant countries over unskilled - abundant countries in skill intensive sectors
- But instead favor unskilled - abundant countries in unskilled - intensive industries

Revealed Comparative Advantage





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Internalization

- In developing their global sourcing strategies, firms not only decide on
 - **where** to locate the different stages of the value chain,
 - but also on **the extent of control** to exert over them
 - The issue of internalization or control is crucial for the existence of MNEs
- But theories of location shed little light on the issue of internalization
 - why will fragmentation occur **within firm boundaries** ?



Theories of Internalization

- **1. Costly technology transfer (转移理论)** : transfer of knowledge or technology may be easier within a single organization than through a market transaction (e.g., licensing)
 - Patent or property rights may be weak or non-existent
 - Knowledge may not be easily packaged and sold
 - Non -excludability
 - Helps explain decision of Intel to own all its plants



Theories of Internalization

- **2. Vertical integration** (契约理论) : consolidation of different stages of a production process
 - Intrafirm purchases may avoid or attenuate contractual difficulties 契约失灵
 - Integration may affect the relative bargaining power and incentives of producers and suppliers in a profit - enhancing way
- May explain why Toyota internalizes certain upstream production stages, while Nike doesn't



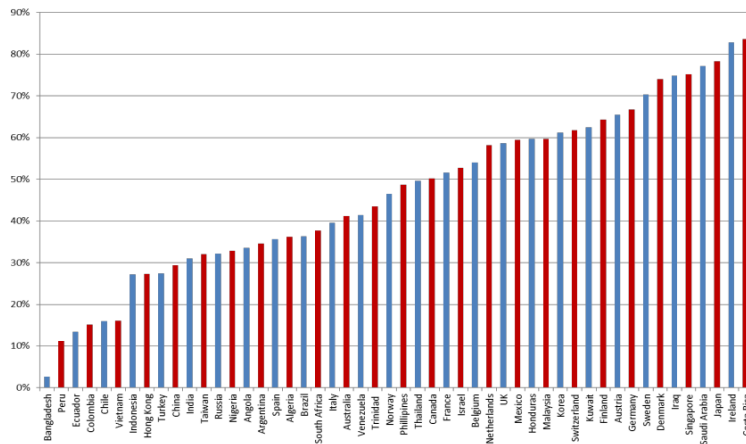
Empirical Evidence

- Tests of the internalization decision are harder to come by due to data limitations
- Some authors have used data on **licensing arrangements** to test the costly transfer theory 许可证手段
- Others have used **intrafirm trade data** to test contractual theories of vertical integration 企业内部贸易数据
- The latter is easily accessible (at least for the U.S.) and offers a broad picture of internalization patterns
 - As exemplified by the following few graphs



Variation in Intrafirm Trade

Share of U.S. Intrafirm Imports for Top 50 Exporters in 2010



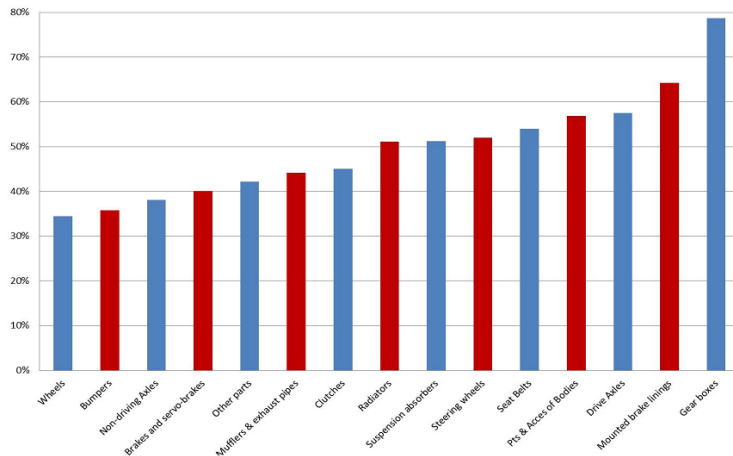
Source: U.S. Census

Aggregate Share of Intrafirm Trade: 48.57%



Variation in Intrafirm Trade

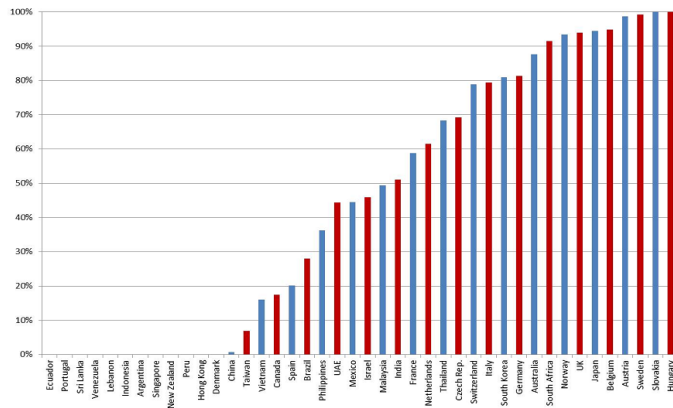
Variation in the Share of U.S. Intrafirm Imports within HS4 Sector 8708 (Auto Parts)





Variation in Intrafirm Trade

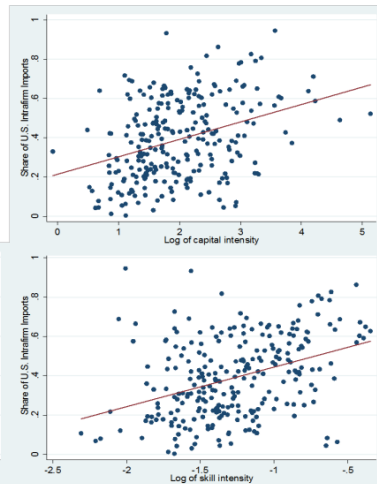
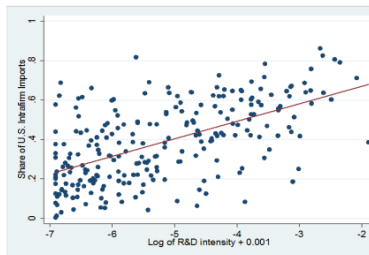
Variation in the Share of U.S. Intrafirm Imports within HS6 Sector 870810 (Bumpers)





Internalization: Some Evidence

- Positively correlation with alternative measures of “headquarter intensity”
- Robust to various controls and to country fixed effects in country/industry regressions





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何为外包

不断增长的服务贸易一方面是离岸外包业务量的上升。通过外包, 企业能够将劳动密集型服务产业的功能转移到其他国家.....当一种产品或服务在国外生产成本更低时, 进口该种产品或服务比在国内生产更为明智和有利。

—2004 年《总统经济报告》, 第 229 页

- 对垂直型 FDI 的一种替代, 是 Internalization 策略的一种反向操作
- 问题: 对于水平型 FDI 的替代形式是什么?
- 境外外包 (foreign outsourcing): 一项服务由一个国家提供并由另一个国家使用, 或者一件商品的各个部件在不同国家生产然后在另一国家完成装配的现象, 又称为外包 (outsourcing)



外包和垂直专业化之间的权衡

许多理论可以归结为不同的成本节约和转移部分生产程序到海外的固定成本之间的权衡

- 决定内部化的关键因素——所有者优势
- 外包的主要收益——节约成本，并获取规模优势



参与离岸外包的公司是否是出口公司

- 或者说进口商同时也是出口商吗？
- 美国 92% 的公司 (以就业来衡量) 既进口中间品又进行出口
- 中国的情况

表: 进口企业同时也是出口企业

出口类型	数量 (个)	比例 (%)	累积比例
既出口又进口	27,686	64.25	64.25
仅仅出口	14,375	33.36	97.6
仅仅进口	1,033	2.4	100



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Effects on the Labor Market

- Brown, Deardorff and Stern (2003): “the popular press is rife with anecdotes about foreign workers who labor for multinational firms for low wages and for excruciating long hours under horrific conditions in low - income countries” (p. 51). 跨国公司被诟病最多的是：低工资和血汗工厂
- It is common to refer to the practices of MNEs and their subcontractors as “unfair” (especially given the high ratio of retail prices to labor costs) 零售价格和劳动成本严重不成比例
- Is the solution to restrict MNE activity or out-sourcing?



What is the Counterfactual?

- **Key Question** : what would happen if workers in LDCs could only be employed by domestic firms?
- Evidence suggests that workers employed in MNEs in LDCs are paid wages that are on average higher than those paid by domestic firms
- Particular studies include Glewwe (2000) for Vietnam, Aitken et al. (1996) for Mexico, Lipsey and Sjöholm for Indonesia



Rough Evidence from Vietnam

- Average wages appear to be significantly higher in foreign - owned businesses (FOB)

Table 2. Distribution of employed people by occupational category in Vietnam in 1998

	<u>Percent of all responses</u>	<u>Wage (US dollar equivalent)</u>
Farmers (self-employed)	58.7	-
Self-employed non-agricultural work	20.4	-
Wage or salary workers—	20.9	0.23
—who are employed by		
government	4.2	0.24
state enterprise	3.4	0.27
small household enterprise	6.0	0.21
FOB	0.4	0.42
joint venture	1.1	0.19
other	3.6	0.19

Source: Glewwe (2000)



Not So Straightforward A Comparison

- Type of workers that MNEs hire may be different from type of workers that domestic firms hire
 - MNEs hire higher skilled workers
- This is problematic because the relevant “alternative wage” for MNE- employed workers might be higher than that of the average domestic worker
- How does one deal with this selection problem?
- **Ideal experiment:** take two twin brothers and randomly assign them to two comparable firms except for their countries of ownership
- In practice, control for firm or individual fixed effects



Refinement #1

- Control for average worker characteristics and firm characteristics
- Foreign-Owned wage premium remains but appears smaller

Table 5

The relation of average establishment wage to ownership, education and establishment characteristics (dependent variable—average wage per employee)

Variable	Regression 1 (blue collar)	Regression 2 (white collar)
Constant	5.96 (151.22)***	5.63 (105.83)***
Below primary	− 0.19 (7.06)***	− 0.30 (5.52)***
Junior high	0.15 (8.14)***	0.33 (11.49)***
Senior high	0.13 (7.15)***	0.51 (20.43)***
Tertiary	1.09 (9.44)***	0.95 (25.01)***
Government owner	0.06 (1.81)*	− 0.13 (3.22)***
Foreign owner	0.12 (5.68)***	0.22 (7.22)***
Energy per worker	0.05 (14.22)***	0.05 (9.97)***
Inputs per worker	0.12 (30.91)***	0.12 (24.84)***
Size	0.04 (8.94)***	0.14 (24.69)***
Female share	− 0.23 (14.40)***	− 0.17 (8.36)***
Industry dummies	estimated	estimated
Province dummies	estimated	estimated
Adjusted R^2	0.48	0.41
Number of observations	18,455	14,611

Source: Sjöholm and Lipsey (2004)



Refinement #2

- Use within-establishment comparison (i.e., takeovers). Again premium survives

TABLE 6

THE RELATION OF AVERAGE PLANT WAGE TO OWNERSHIP AND PLANT CHARACTERISTICS, 1975-99 (DEPENDENT VARIABLE: LOG AVERAGE WAGE PER EMPLOYEE)

	Blue Collar (1)	White Collar (2)	Blue Collar (3)	White Collar (4)	Blue Collar (5)	White Collar (6)
Constant	3.70*** (.01)	4.61*** (.03)	2.39*** (.02)	2.90*** (.02)	3.41*** (.03)	3.86*** (.03)
Foreign owner	.67*** (.03)	.92*** (.02)	.29*** (.01)	.43*** (.02)	.10*** (.01)	.21*** (.02)
Government owner	.42*** (.04)	.09*** (.02)	.27*** (.02)	-.16*** (.02)	.01*** (.01)	-.01*** (.02)
Energy per worker	...	...	.08*** (.00)	.06*** (.00)	.07*** (.01)	.06*** (.01)
Inputs per worker	...	...	.20*** (.00)	.18*** (.00)	.14*** (.01)	.13*** (.00)
Size	...	...	.01*** (.00)	.14*** (.03)	-.02*** (.00)	.07*** (.00)
Time dummies	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated
Industry dummies	Estimated	Estimated	Estimated	Estimated	...	...
Regional dummies	Estimated	Estimated	Estimated	Estimated	...	...
Establishment fixed effect	...	...	...	...	Estimated	Estimated
R ²	.64	.53	.72	.61	.66	.57
No. of plants	47,297	40,838	45,448	39,531	45,448	39,531
No. of observations	336,576	269,536	316,031	256,852	316,031	256,852

Note. Robust (cluster at plant level) standard errors are in parentheses.
 *** Significant at the 1% level.

Source: Sjöholm and Lipsey (2006)



Refinement #3

- Use individual worker data rather than firm averages (Swedish data)

Table 4
The effect of foreign ownership on wages

	1	2	3	4	5	6	7*
	vs. All	vs. All	vs. All	vs. Swe. MNEs	vs. Swe. Local	vs. All unrestricted	vs. All Firm aggregated
Foreign	0.043*** (0.001)	0.026*** (0.001)	0.025*** (0.000)	0.004*** (0.001)	0.049*** (0.001)	0.020*** (0.000)	0.074*** (0.006)
Female	—	-0.148*** (0.000)	-0.142*** (0.000)	-0.143*** (0.001)	-0.145*** (0.000)	-0.144*** (0.000)	-0.239*** (0.013)
Education dum.	—	Yes	Yes	Yes	Yes	Yes	—
Experience	—	0.016*** (0.000)	0.016*** (0.000)	0.018*** (0.000)	0.015*** (0.000)	0.019*** (0.000)	—
Experience ²	—	-2.5E- 04*** (0.000)	-2.5E- 04*** (0.000)	-2.8E- 04*** (0.000)	-2.3E- 04*** (0.000)	-3.1E- 04*** (0.000)	—
Blue-collar	—	-0.129*** (0.000)	-0.113 (0.000)***	-0.117*** (0.001)	-0.122*** (0.001)	-0.125*** (0.000)	—
Log firm size	—	—	1.7E-04 (0.000)	-0.008*** (0.000)	-1.3E-04 (0.000)	-3.4E-04 (0.000)	0.006*** (0.002)
Profits/ Employee	—	—	3.5E-04*** (0.000)	9.3E-04*** (0.000)	2.6E-04*** (0.000)	3.0E-04*** (0.000)	0.003*** (0.000)
High skilled	—	—	0.101*** (0.002)	0.168*** (0.002)	0.081*** (0.002)	0.250*** (0.002)	0.676*** (0.030)
Low skilled	—	—	-0.109*** (0.002)	-0.052*** (0.004)	-0.091*** (0.002)	-0.128*** (0.003)	-0.285*** (0.033)
Capital intensity	—	—	0.031*** (0.000)	0.038*** (0.000)	0.021*** (0.000)	0.024*** (0.000)	0.025*** (0.002)
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²	0.06	0.42	0.45	0.47	0.44	0.47	0.47
No. of obs.	1,624,056	1,614,255	1,610,408	837,970	1,069,333	4,997,334	5547

Individual level estimates 1996–2000 (dependent variable — log full time equivalent monthly wage).

Source: Heyman et al. (2007)



Refinement #4

- Again look at the effects of takeovers. Premium close to gone! But was the takeover random?

Table 5
Wage effects of foreign takeovers of Swedish firms

	1	2	3	4	5	6
	Unmatched sample of firms			Matched sample of firms		
Foreign takeover	0.031*** (0.000)	0.016*** (0.001)	-0.041*** (0.000)	0.015*** (0.002)	9.7E-04*** (0.002)	-0.017*** (0.002)
Ind. characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Firm characteristics	No	Yes	Yes	No	Yes	Yes
Fixed effects		—	Yes	—	—	Yes
Time dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	—	Yes	Yes	—
Hausman			17,235***			451***
Adj. R^2	0.41	0.43	0.36	0.37	0.41	0.18
No. of observations	1,367,459	1,363,692	1,372,393	67,438	67,426	67,576

Individual level estimates 1996–2000 (dependent variable — log full time equivalent monthly wage).

Source: Heyman et al. (2007)



Effects on Wage Levels

- A more fundamental question is what is the effect of MNEs on **average** host - country wages 东道国的平均工资水平
 - MNEs could lead to a large increase in average wages, with a disproportionate positive effect on workers employed in domestic firms
- Theoretically, the effect is unclear:
 - If MNE implies capital or technology inflow, or increased trade integration (fragmentation), then one would expect positive effect on wages (rule out factor price insensitivity)
 - If MNEs are monopsonists in labor markets, then there could be perverse effects



Effects on Wage Levels: Evidence

- Aitken et al. (1996) find that MNEs have a positive impact on host - country wages...
- ...but that this positive effect tends to be concentrated among the set of workers that are employed by these MNEs
- Their results indicate that skilled workers tend to benefit more than unskilled workers from FDI
 - result confirmed by a variety of studies
 - problematic for standard models of vertical fragmentation



Effects on Capital Markets

- Not too much work on this issue
- Feldstein (1995): “How much does the U.S. domestic capital stock decline per dollar of additional capital in foreign affiliates of U.S. multinationals?”
- Key issues: Do portfolio investment inflows compensate for part of these outflows? How much financing of affiliates comes from U.S.?
- Answers are: “No” and “Little” . Overall only about 20 - 40 cents are “lost”
- Desai, Foley and Hines (2005) find a complementarity at the firm level (more investment abroad → more investment at Home)



Spillover Effects

- There are several reasons for why FDI should affect productivity of local firms in host countries
 - 1 Domestic firms may benefit from increased technological diffusion if foreign affiliates located in that country **introduce new products or processes** 新产品新工艺
 - 2 Productivity may increase simply from host-country firms **observing** how production takes place in local affiliates of foreign firms 学习
 - 3 FDI may toughen the competition faced by domestic firms, thereby forcing them to **"trim their fat"** and become more competitive 竞争
 - 4 4. Productivity spillovers via **labor turnover** 劳动力培训
 - former employees of multinational firms set up their own businesses and adopt some of the techniques they were using in the foreign firm
 - 5 5. FDI can generate positive spillovers by increasing local demand for intermediate inputs, hence allowing suppliers to **move down along their average curve** 后向关联
 - 6 6. By the same argument, FDI can decrease the productivity of domestic firms operating in the same sector because the "business -stealing" effect may **increase average costs** 副作用, 本土企业产出减少, 成本上升



Spillover Effects: Evidence

- Aitken and Harrison (1999) estimate the productivity effects of inward FDI on a sample of Venezuelan manufacturing plants in the period 1976- 1989
- Although the average effect of FDI on plant productivity is positive, domestic firms in sectors with larger foreign presence actually record lower productivity levels
 - So average effect is purely coming from foreign firms being more productive 整体生产率上升的真正原因是 FDI 的流入，而非由于溢出效应带来本土企业生产率上升



Spillover Effects: Evidence (cted.)

- Other authors have found positive horizontal spillover effects in other countries (i.e., UK)
- Smarzynska (2004) argues that spillovers from FDI are more likely to be vertical than horizontal in nature 垂直 FDI 更可能发生溢出
 - she finds that the positive effects of FDI take place mostly through backward linkages, with a negligible effect of FDI through either horizontal or forward linkages
 - So local suppliers become more productive when MNEs enter a country



Next Time

- Begin the analysis of the causes and consequences of trade policy
- have fun!