Multinationals and the Globalization of Production

FDI and the host country

Penn State // Fall 2016

Administrative things

- Please sign in to Arkaive.com
- Problem set #3
  - Graded; up front for pickup
- Problem set #4
  - Turn in up front
  - Solutions posted tonight
  - Will be returned on Tuesday
- Exam 2…

Exam 2

- Thursday 11/3/2016 (get here 5 minutes early)
- Same format as exam 1
- Calculator + 1 page of notes
- Covers material from Leontief Production (10/4/2016) to today
- Review Tuesday 11/1/2016
- Practice exam posted tomorrow morning

Joanna Shields

- Transferring the Google/Facebook "setup" across countries
  - Ownership advantages
  - In our models: transferring productivity (φ)
- Country-specific problems
  - Many times these costs are informational
  - Regulatory costs
  - In our models: "pecuniary costs" for simplicity

Roadmap

- Past: Motives for firms to produce abroad
  - Horizontal reasons (market access)
  - Vertical reasons (factor cost differences)
  - Some mixture of the two
  - Focused on the firm

- Currently: The impact of FDI on the host country
  - Host country productivity effects of MNEs ✓
  - Factor market effects ✓
  - Competition effects ✓
  - How do governments encourage FDI?
  - Should governments encourage inward FDI?
  - Focus on host country

Evaluating potential FDI

- Policy makers faced with potential FDI projects
- Who are the winners and the losers?
- A framework of questions
  1. Is the investment likely to raise production costs for local firms?
  2. Are there local firms that compete directly with the MNE?
  3. Are there local firms that will likely benefit from the MNE?
- Often this a local (region/state/city) analysis
- Depends on how "big" markets are

Is the investment likely to raise production costs for local firms?

- Factor market competition
- What factors do the MNE need?
- How abundant are those factors?

Are there local firms that compete directly with the MNE?

- Competition effects: Are there other firms in the MNE's market?
- How competitive are the markets?

Are there local firms that will likely benefit from the MNE?

- Improved inputs for downstream firms
- Spillovers to upstream/downstream firms

In-class case study

- General Motors investment in Brazil
- The Blue Macaw project
- Assembly of small, low cost car for S. American market
- Located in Gravatai, Brazil
  - Chile, Argentina, Uruguay highest GDP/capita S. America
  - Brazil is part of the customs union Mercosur

In-class case study: GM in Brazil

- Read the background on Blue Macaw
- What are GM's FDI motivations?
  - Horizontal, vertical, etc.
  - Why? What does GM gain?
  - Why Rio Grande do Sul and not Sao Paulo?
- Evaluate the project using the framework we developed
  1. Is the investment likely to raise production costs for local firms?
  2. Are there local firms that compete directly with the MNE?
  3. Are there local firms that will likely benefit from the MNE?
- Who are the winners and losers?

In-class case study: GM in Brazil

- Read the article I handed out
- Write “notes” that you would use to form answers
- Think about how you would present this to an interviewer

- Take 15 minutes to read and form your answers
- Then we will discuss the issues

In-class case study: GM in Brazil

- What are GM's FDI motivations? What do they gain? Why?
- Why Rio Grande do Sul and not Sao Paulo?

In-class case study: GM in Brazil

1. Is the investment likely to raise production costs for local firms?

In-class case study: GM in Brazil

2. Are there local firms that compete directly with the MNE?

In-class case study: GM in Brazil

3. Are there local firms that will likely benefit from the MNE?

Governments and FDI

- How do governments compete for FDI?
- Should governments compete for FDI?

Competing for FDI

- Hoover Vacuum (U.S. MNE) in 1993
- Eliminates 600 jobs in France, moves production to Scotland
  - Relatively new "Common Market" lowers trade barriers in EC
  - Scotish labor costs lower than French
  - Scotland provides subsidies to Hoover

"We received funding from the Scottish office. It's assistance that is about the same as that offered by the French." [Hoover spokesman]

"The Hoover move is totally unacceptable," [French PM] Beregovoy said. "Aid was provided in Scotland. That assistance must be authorized by the Commission…But there should be no approval if that assistance works to destroy jobs elsewhere."

Competing for FDI

- Nissan Motors (Japanese MNE) in October 2016
- Announces plans to build two new cars in Sunderland, England
  - Brexit: uncertainty about market access (most cars exported)
  - Nissan postponed decision over new investment
  - Nissan chief executive: government "support and assurance"

"The promise to shield Nissan from the impact of Brexit will not be lost on rival manufacturers, both those already in the UK as well as those that might be tempted to come."

FDI promotion policies

- Available to most/all MNEs:
- Corporate income tax exemptions & VAT exemptions
  - Maybe complete or partial; usually temporary
- Import tariff exemption
  - Usually restricted to inputs to be used to create exports
- Usually come with string attached
  - Locate in specific places (export processing zones)
  - Do specific activities; hire a certain number of locals
- Not available to local firms!

CORPORATE TAX RATES FOR G-24 AND OTHER COUNTRIES, 1990 AND 1998

	1990		*1998*	
	Min. rate	*Max. rate*	*Min. rate*	*Max. rate*
Group of 24				
Congo	49.0	49.0	45.0	45.0
Egypt	34.0	42.0	34.0	42.0
Gabon	40.0	45.0	40.0	45.0
Ghana			8.0	35.0
Nigeria	20.0	40.0	20.0	30.0
India	50.0	64.8	40.0	43.0
Iran	12.0	75.0	15.0	57.0
Pakistan	45.0	66.0		
Philippines	35.0	35.0	34.0	34.0
Sri Lanka			35.0	35.0
Argentina	33.0	33.0	33.0	33.0
Brazil	6.3	41.5	15.0	25.0
Colombia	30.0	30.0	35.0	35.0
Guatemala	12.0	34.0	30.0	30.0
Mexico	36.0	36.0	17.0	34.0
Peru	35.0	35.0	30.0	30.0
Trinidad & Tobago	15.0	40.0	15.0	35.0
Venezuela	15.0	50.0		
Other countries (regional averages)				
Africa	36.2	46.5	25.8	35.6
East Asia	24.1	39.8	20.0	42.1
Eastern Europe	0.0	40.0	33.4	35.0
Latin America	19.2	31.7	24.5	28.5
Middle East	12.7	39.3	11.3	34.4
North America	27.5	47.3	26.6	48.3
Oceania	41.0	41.0	34.5	34.5
South East Asia	26.0	39.8	22.6	29.2
Western Europe	37.2	43.1	33.5	37.2

Source: Price Waterhouse (1990). Table 1: Hanson (2001) "Should countries promote FDI?"

Note: This table shows minimum and maximum corporate income tax rates for selected countries. See text for details. Data is more detailed for some countries than others. Approximations are made in certain cases.

TAX CONCESSIONS FOR INWARD FDI IN G-24 COUNTRIES, 1998

	(I)			*(II)*		*(III)*		*(IV)*	*Available to domestic corporations?*			
Country	*Corporate income tax exemption*	*Period*	*Sectors*	*Value-added tax exemption*	*Items*	*Import duty exemption*	*Items*	*EPZ provision*	*(I)*	*(II)*	*(III)*	*(IV)*
Côte d'Ivoire	X	5–8 years	All			X	All					
Egypt	X	5–20 years	All[a]						X			
Gabon	X	0–10 years	All						X[b]			
Nigeria	X	0–5 years	P, E, A, M	X	All[c]	X	E, R	X	X	X	X	X
Congo	X[d]	0–10 years	A, P, M									
Argentina	(tax credit bonds)			X	E	X	E, R			X	X	
Brazil				X	E, P	X	E, P			X[e]		
Guatemala[f]	X		E			X	K, E, R	X	X		X	X
Mexico	(tax credits)					X	E					
Peru	X		All[g]	X	All[h]				X	X		
India	X	5 years	All[i]			X	E	X			X	X
Philippines	X	3–6 years	All[j]	X	All[k]	X	All	X	X	X	X	X
Sri Lanka	X		P			X	P		X		X	

Source: Price Waterhouse (1998).

Note:
- * = taxed at lower rate.
- A = agriculture.
- E = exported goods/exporting.
- K = capital.
- M = manufacturing.
- P = priority companies/industries.
- R = raw materials.
- X = country offered concession in indicated year.
- Data is more detailed for some countries than others. Approximations are made in certain cases.

a An investment and guarantee law effective as of 11 May 1997 offers the profits of a project formed under it to be exempt from tax on industrial and commercial profits and from corporate tax.

b More restrictions apply on domestic corporations than on foreign corporations.

c 1998 budget abolishes payment of excise duties.

d Tax priority status giving exemption (or a reduction) from various taxes and custom duties for up to 10 years can be obtained by notification of agreement.

e Excise and sales and service tax exemptions are granted to exporters of manufactured goods.

f In general, exemption from payment of import duties on machinery and equipment and on raw and packaging materials and from income tax is available for those corporations classified as exporting companies. These exemptions also apply to free trade zones.

g Industrial entities established in the jungle, frontier zones and free trade zones are exempt from income tax.

h Exemption from value-added tax (VAT) is provided for industrial entities established in the jungle and frontier zones.

i New industrial undertakings satisfying certain conditions established in a free trade zone, software technology park, or electronic hardware technology park, or a 100 per cent export-oriented undertaking is entirely exempt from income tax.

j Income tax holiday giving full exemption from corporate income tax for six years for pioneer firms and those locating in less-developed area, and four years for non-pioneer firms from the date of commercial operation; expanding export-oriented firms are given three years.

k Local purchases of goods and services from VAT-registered entities are either VAT exempt or zero rated.

FDI promotion policies

- Individual subsidies
- Harder to find details, but they exist everywhere
- GM in Brazil: \$1.5 billion over 15 years $\rightarrow$ Subsidies to build roads and ports; VAT exemption; import duty exemption
- BMW in N. Carolina: \$150 million $\rightarrow$ Employment training program; manage rectuiting and screeningn of employees; modernize airport

- Domestic large firms often get these too…

Should governments promote FDI?

- Econ 102: Are there market failures?
  - No? Do not subsidize.
  - Yes? Maybe. Becomes a quantitative question.
- MNE market failures
  - Spillovers to upstream and downstream firms
  - Some evidence of spillovers...
  - Case-by-case evaluations needed

The perils of promotion

- Even if there are uncaptured benefits, competing for FDI can be problematic
- A simple game illustrates the point
  - Two countries $i = 1, 2$
  - Compete for two FDI projects $j = 1, 2$
  - Without subsidies, project 1 prefers country 1
  - Without subsidies, project 2 prefers country 2
  - Each project yields benefit $b = 100$
  - Countries can offer a subsidy, z_i (not firm specific)

Competing for FDI game

1. Neither country subsidizes: firm 1 $\rightarrow$ country 1, firm 2 $\rightarrow$ country 2
   - $z_1 = 0$ and $z_2 = 0$
2. Only country 1 subsidizes: firm 1 & firm 2 $\rightarrow$ country 1
   - Set as low as possible to capture firm 2, $z_1 = 25$
3. Only country 2 subsidizes: firm 1 & firm 2 $\rightarrow$ country 2
   - Set as low as possible to capture firm 1, $z_2 = 25$
4. Both countries subsidize: firm 1 $\rightarrow$ country 1, firm 2 $\rightarrow$ country 2
   - Set subsidy large enough to offset other country subsidy
   - $z_1 = 50$ and $z_2 = 50$

Note: These numbers are just examples.

Competing for FDI game

- Summarize payoffs to country 1 and 2
- Country 1 is row player
- Country 2 is column player

Payoff matrix (cty 1, cty 2)

	Subsidy	No subsidy
Subsidy	$(b - z_1, b - z_2)$	$(b - z_1 + b - z_1, 0)$
No subsidy	$(0, b - z_2 + b - z_2)$	(b, b)

- What is the equilibrium?

Equilibrium (the prisoner's dilemma)

Payoff matrix (cty 1, cty 2)

	Subsidy	No subsidy
Subsidy	$(100-50, 100-50)$	$(100-25+100-25, 0)$
No subsidy	$(0, 100-25+100-25)$	$(100, 100)$

- Subsidy is a dominate strategy for each country
- Equilibrium is both countries subsidize, payoff = (50,50)
- Better outcome is no subsidies, payoff = (100, 100)

Competing for FDI

- FDI competition makes both countries worse off
- FDI competition makes firms happy…
- Solution: policy coordination & rules about subsidies
  - Uniform policies with EU
  - French annoyed about Scotish subsidies to Hoover
  - EU annoyed about Irish tax treatment of Apple

Summary

- Countries compete for FDI
  - Tax breaks
  - Direct subsidies
  - Often with strings attached
- Subsidies only a good idea if market failures
  - How big are spillovers
- Subsidy competition can lead to "prisoner's" dilemma