ECO 352 – Spring 2010
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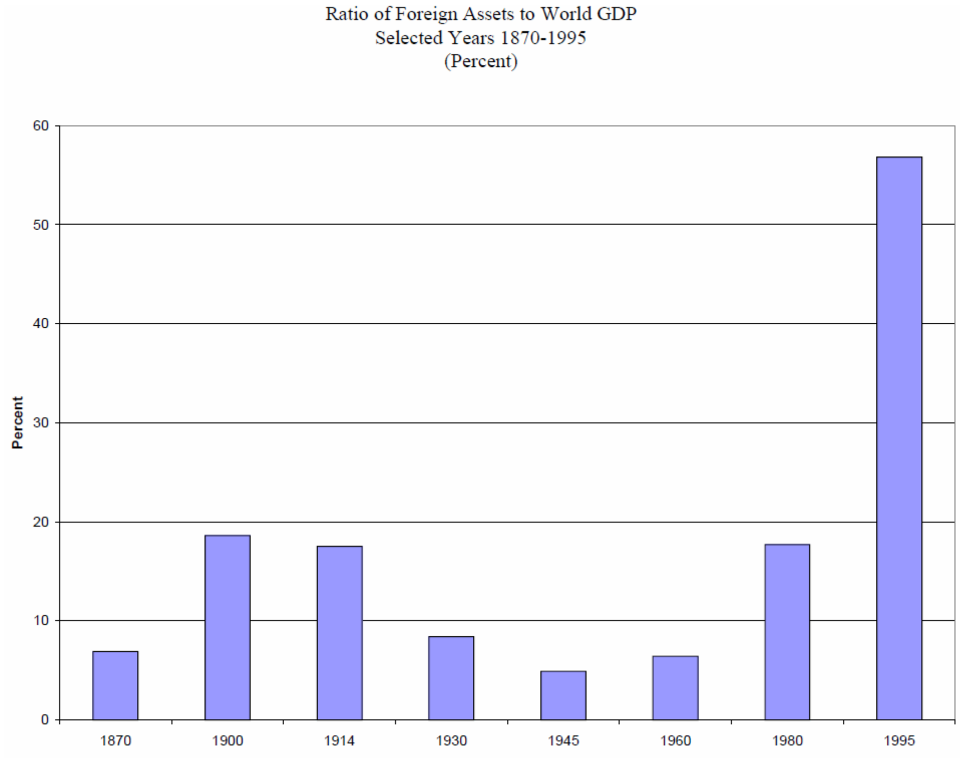
# CAPITAL FLOWS, FOREIGN DIRECT INVESTMENT AND MULTINATIONAL CORPORATIONS

## SOME FACTS AND FIGURES

Large cross-border capital flows
 are not a new phenomenon:
There was pre-World-War-1
 Globalization Mark 1
Only recently have foreign assets
 as a fraction of world GDP
 passed those levels
May retreat in the next decade!




Two forms of foreign investment:
[1] Portfolio: ownership
 equity or debt securities
[2] Direct: management and control
 by home-headquartered firms, of productive assets located abroad

The top-10 of portfolio investment: stock data for 2007
from IMF Coordinated Portfolio Investment Survey (CPIS)

| Country | Assets $trillions | Country | Liabilities $trillions |
|---|---|---|---|
| US | 7.192 | US | 8.003 |
| UK | 3.432 | UK | 3.629 |
| France | 3.012 | Germany | 3.184 |
| Luxembourg | 2.883 | France | 2.389 |
| Germany | 2.637 | Luxembourg | 2.166 |
| Japan | 2.524 | Cayman Islands | 1.746 |
| Ireland | 1.970 | Netherlands | 1.716 |
| Netherlands | 1.467 | Italy | 1.510 |
| Italy | 1.242 | Japan | 1.422 |
| Switzerland | 1.058 | Spain | 1.368 |
| Others | 12.581 | Others | 12.233 |
| Total | 39.998 | Total | 39.369 |

Note Large two-way holdings. Explanation: diversification

The top-15 of foreign direct investment (FDI): stock data for 2007 from UNCTAD database WIR 2008

| Region/economy | Inward $bil | Region/economy | Outward $bil |
|---|---|---|---|
| United States | 2,093 | United States | 2,791 |
| United Kingdom | 1,348 | United Kingdom | 1,705 |
| Hong Kong | 1,184 | France | 1,399 |
| France | 1,026 | Germany | 1,236 |
| Belgium | 748 | Hong Kong | 1,027 |
| Netherlands | 673 | Netherlands | 851 |
| Germany | 630 | Spain | 637 |
| Spain | 537 | Belgium | 613 |
| Canada | 521 | Switzerland | 604 |
| Italy | 365 | Japan | 543 |
| Brazil | 328 | Canada | 521 |
| China | 327 | Italy | 520 |
| Russian Federation | 324 | Sweden | 309 |
| Australia | 313 | Australia | 278 |
| Switzerland | 279 | Russian Federation | 255 |
| Developed economies | 10,459 | Developed economies | 13,042 |
| Developing economies | 4,247 | Developing economies | 2,289 |
| World | 15,211 | World | 15,602 |

Note: [1] Large two-way holdings. [2] Not just rich country FDI into LDCs. [3] Substantial FDI by developing countries: around 15% of total and growing.

## Intra-firm Trade:

Trade between parent firm and subsidiary located in different countries
Contrast with "arms-length" trade between independent firms

| Imports into the United States by Trade Categories: As percent of total imports | | |
|---|---|---|
| | 1992 | 1997 |
| Intermediate v. Final Goods | | |
| Percent intermediate inputs | 37% | 38% |
| Percent final goods | 63% | 62% |
| | | |
| Intra-Firm v. Arms' Length | | |
| Percent Intra-Firm | 43% | 52% |
| a) US MNEs | 17% | 30% |
| b) Foreign MNEs | 26% | 22% |
| Percent Arms' Length | 57% | 48% |
| | | |
| Total Imports $ Billions | 505 | 748 |

Source: A. Bardhan and D. Jaffee, UC Berkeley manscript, 2004, http://faculty.haas.berkeley.edu/JAFFEE/Papers/ForeignDirectJaffeefBardhan.pdf

Thus approximately $150 billion of US imports were intra-firm intermediates
This is expected to grow if vertical supply chains continue to get more complex

## THEORY: INTERNATIONAL BORROWING & LENDING (as in No. 10, Mar. 4, p. 11)

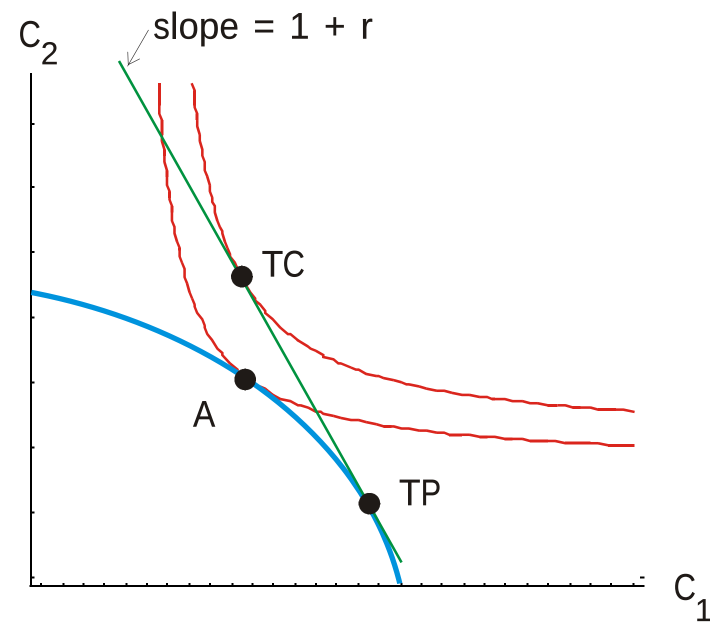
Suppose two periods: 1 = present, 2 = future. (Can generalize to any number.)

Interpret the goods as X = present consumption $C_1$ , Y = future consumption $C_2$

PPF shows the ability to get more $C_2$
by transferring labor, capital etc.
away from production of goods

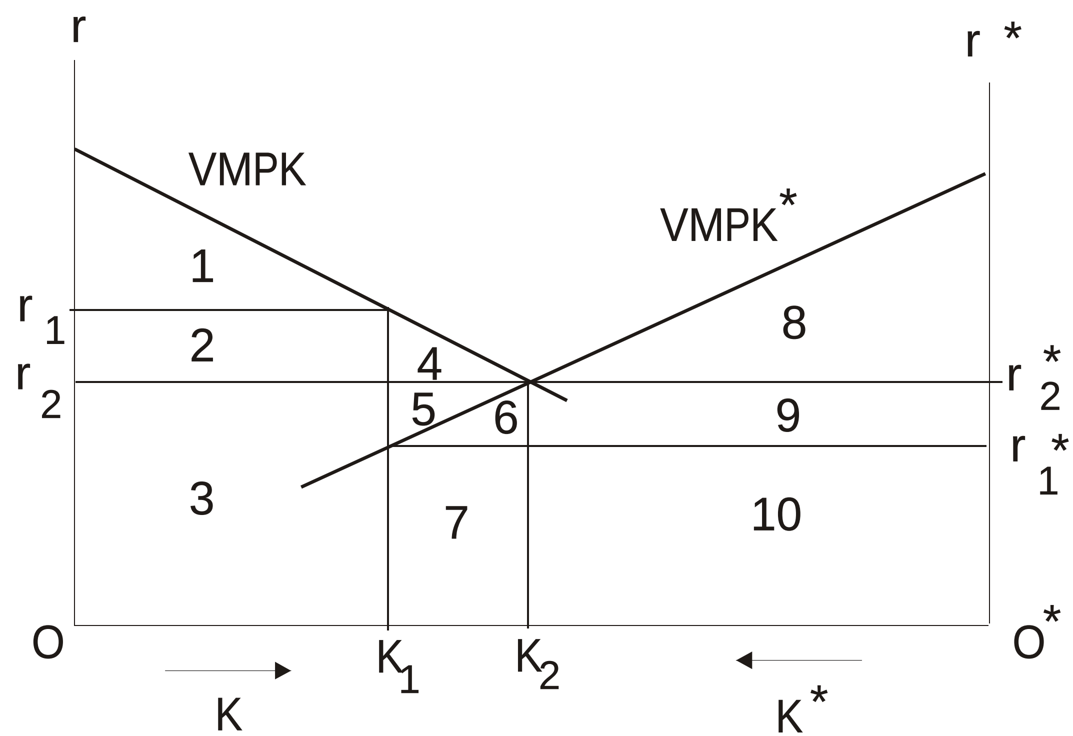
for immediate consumption ($C_1$) and
into production of investment goods
that enhance future consumption.

Slope of PPF =
= 1 + marg. product of investment
= 1 + real rate of interest (r)




Trade: consume less in the present than output;
export. Send excess either consumption goods (consumption loan)
or capital goods (that have higher MPK there) to the other country,
in exchange for promise to get (1+r) times that amount of future cons. goods
Run a trade surplus now, planning to run a trade deficit in the future
Other country does the opposite; both gain from this trade

Show gains from trade by analogy with immigration:
Capital flows from Foreign to Home
Return to capital goes to owners
 in country of origin (Foreign)
Measure of each country's
 welfare is GNP, not GDP




Home:
 GDP increase 4+5+6+7
 Foreign capital gets 5+6+7
 GNP increase 4
 Home capital loses 2
 Other factors' surplus
 increase 2+4

Foreign:
 GDP decrease 6+7. Capital working in Home earns 5+6+7. GNP increase 5
 Earnings of Foreign-owned capital increase by 5+6+9
 Other factors' surplus decrease by 6+9

Political economy: Think who will support and who will oppose this capital flow.

## DEFICIENCIES OF THIS THEORY IN EXPLAINING FDI

Definition of FDI: a company from “source” country making a physical investment in a production facility in “host” country. The definition can be extended to include investments made to acquire lasting interest in enterprises operating outside of the economy of the investor. The FDI relationship consists of a parent enterprise and a foreign affiliate which together form a multinational corporation (MNC).

Ownership of 10% or more is considered control. For many other practical issues of measurement, see http://www.oecd.org/dataoecd/10/16/2090148.pdf

Features of FDI:

[1] Headquarters in "source" country, subsidiary/affiliate in "host" country
[2] Longer term involvement than with portfolio investment
[3] Horizontal - produce same goods in multiple locations in different countries
[4] Vertical - intra-firm trade in intermediates between parent and subsidiary

Why FDI at all? Must argue it is better than relevant alternatives: some or all of

[1] Hold equity or debt of foreign firms without exercising managerial control
[2] Produce everything in source country and export to host country
[3] Outsource /license production to an independent firm in host country

Two key hypotheses to explain FDI: Location and Internalization

## LOCATION

Case for producing in one location and exporting to other markets:

(1) comparative advantage, (2) economies of scale

Case for producing in separate plants for each market:

(1) transport costs, (3) trade barriers (tariff-jumping FDI)

(3) adaptation and flexibility to match local tastes, exploiting local knowledge

But can these advantages be achieved by licensing or franchising to local firm?

## INTERNALIZATION

Specific assets can be non-contractible:

(1) managerial know-how cannot be credibly supplied in arm's length market,

(2) secrets of materials or production processes (technology) may leak

Non-contractible return to these can be bundled into return to capital

Vertical supply chains may be better kept within the firm:

(1) foreign suppliers may exercise monopoly power,

(2) greater supply certainty, (3) reduction of price uncertainty

## IMPLICATIONS OF THESE HYPOTHESES

[1] Trade and capital flows will be complements
In the factor endowment model they would be substitutes

[2] Managerial and technological non-contractible know-how can be firm-specific, and each country may have some such firms in various sectors
So should expect two-way flows of FDI, even within the same industry
(What special know-how do the expanding LDC multinationals have?
One guess – they have experience in operating under varied and difficult legal and political conditions; e.g. Mittal in Indonesia, Trinidad, Mexico.)

[3] Vertical integration and therefore intra-firm trade is an essential part of the story

## THEORETICAL AND EMPIRICAL WORK BASED ON THESE HYPOTHESES

Usual specification of the model: A firm in "the US" (an advanced economy) uses two inputs, one produced in its headquarters, the other in an LDC. Quality of the inputs is not contractible. This affects relative merits of vertical integration and outsourcing. Various hypotheses are generated, tested.

Vertical integration creates better incentive for the US firm to supply
optimal quality of its specialized input (technical and managerial know-how)
Outsourcing creates better incentive for the LDC firm to supply
optimal quality of its specialized input (upstream product in supply chain)
The choice depends on the relative importance of these two inputs for the final good
Therefore
[1] The share of intra-firm imports of a US multinational should be increasing
in the share of the non-contractible inputs it provides

Firms are heterogenous, and some have higher productivity because
they have better technical and managerial know-how. Therefore
[2] Across firms within an industry, the share of intra-firm imports of a
US multinational should be increasing in its productivity

If the LDC protects property rights well, the LDC firm's incentives can be contracted
for. It becomes more important to incentivize the headquarters firm. Therefore
[3] The share of intra-firm imports of a US multinational firm should increase
as property rights in the LDC are better enforced.

Econometric work finds support for all three. (Optional: Nunn and Trefler 2007, at
http://www.economics.harvard.edu/faculty/nunn/files/boundaries.pdf )

But this fits poorly with the growing picture of LDC-based multinationals.
Future research in this area will need new examples:

[1] Baosteel buys inputs from Rio Tinto, BHP Billiton,
[2] Mittal buys Arcelor, [3] CNOOC is not allowed to buy Unocal,
[4] Tata Motors buys Jaguar, Land Rover, [5] Lenovo buys IBM's PC division

And associated new explanations, hypotheses, e.g.
Boston Consulting Group's taxonomy of emerging multinationals' strategies:

(see article "The Challengers," in *The Economist*, January 10, 2008)
[1] Develop local brand and then take it global: Chinese consumer durables;
[2] Build on local engineering excellence: Embraer;
[3] Narrow product niche: Johnson Electric (tiny motors);
[4] Combine natural resources at home with global marketing, distribution skills: Brazilian agribusiness;
[5] Take new business model global: Cemex.

Some of these are similar to the picture of advanced-country MNCs turned around, others may need view of special know-how that is specific to operating in an LDC context.

## SOME POLICY ISSUES WITH REGARD TO FOREIGN INVESTMENT AND MNCs

[1] Workers in advanced countries oppose exports of capital, outsourcing etc.

[2] Countries fear volatility of portfolio investment;
LDC gov'ts prefer FDI but opposition, local NGOs often fear foreign domination

[3] They also fear monetary and exchange rate consequences of large capital flows:
inflows cause exchange rate appreciation and can harm current a/c trade
outflows cause exchange rate collapse, reduction in real incomes etc.
Gov'ts want controls; but controls can create other problems, e.g. corruption

[4] LDCs want advanced-country MNCs to transfer technology
MNCs fear expropriation by LDC governments
Need to construct contracts to mitigate fears, align incentives

[5] Transfer pricing of intra-firm trade makes corporate profit taxation problematic

[6] Prisoners' Dilemmas among LDC governments to attract FDI
(Similar problems exist among US states, cities)