Economics of services trade barriers

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Plan of the Session

- 1. Crucial role of business services in increasing productivity in manufacturing and improving economy-wide competitiveness—
- 2. Evidence of how liberalization of FDI in services increases productivity
- 3. A little data on growth of services exports
- 4. Examples of Barriers to Trade in Services
- 5. How to model the productivity effects of services liberalization—example of impact on Poverty and Distribution in the Case of Russian WTO Accession
- 6. Political Economy of Services Liberalization
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Importance of analyzing services and foreign direct investment policy

- Services are more than 65% of global GDP
- About 50% of FDI to developing countries is in services
- FDI is crucial to the effective delivery services (although cross-border trade is services increasingly possible)

I. Agglomeration Gains from Services

- Agglomeration Economies from services explain part of trade and industry development
  - Agglomeration benefits in film-making (Hollywood) and software in Silicon Valley and Bangalore ("the Silicon Valley of India").
  - Sassuolo Italy—produces 80% of all Italian ceramic tiles, with more than 300 ceramic factories in the district

Services Variety are an important source of agglomeration gains

- Professional services
- Firms can hire professionals like accountants, lawyers and drivers, or use the market
- Small and medium enterprises can not hire these professional full time.
- The more diverse and competitive the services market, the more likely firms can find a professional specializing in the need of the firm

Services increase productivity—Theory and Evidence

- Economic theory (Markusen, 1989; Francois, 1990; Markusen and Venables, 1998) has argued that wide availability of business services increases productivity.
- Agglomeration Economies explain part of trade

Evidence of Agglomeration Externalities

- Ciccone and Hall (1996) show that firms operating in economically dense areas are more productive than firms operating in relative isolation.
- Caballero and Lyons (1992) show that productivity increases in industries when output of its input supplying industries increases.
- Hummels (1995) shows that most of the richest countries in the world are clustered in relatively small regions of Europe, North America and East Asia, while the poor countries are spread around the rest of the world. This is partly explained by transportation costs for inputs since it is more expensive to buy specialized inputs in countries that are far away for the countries where a large variety of such inputs are located. Transportation costs for services are sometimes extremely high, but are offered through FDI.

Business Services are Key Inputs that lead to Agglomeration Externalities

- Many business services are either non-traded internationally or provided at much higher costs from a distance so that there are significant disadvantages to a user of these services from being far from the core location of these activities.
- Marshall (1988) shows that in three regions in the United Kingdom (Birmingham, Leeds and Manchester) almost 80 percent of the services purchased by manufacturers were bought from suppliers within the same region.
- McKee (1988) argues that the local availability of producer services is very important for the development of leading industrial sectors.

2. Services liberalization increases Total Factor Productivity

- Francois and Hoekman (JEL, 2010) survey the empirical evidence.

Prominent studies based on firm level data include:

Arnold, Javorcik and Mattoo (JIE, 2011) for the Czech Republic;

Fernandes and Paunov (JDE, 2012) for Chile;

Shepotylo and Vakhitov for Ukraine;

Mattoo and others for India;

and recent study on Indonesia.

Cross country studies include: Mattoo, Rathindran and Subramanian (JEI, 2006) and Fernandes (EoT, 2009).

There are productivity gains from trade and FDI

they increase with the technological sophistication of the partner

- Coe and Helpman (EER, 1995)—TFP benefits of trade in intermediate goods increase with the R&D stock of the trading partner (for OECD countries)
- Coe, Helpman, and Hoffmaister (EJ, 1997) –extend results to 77 developing countries—largest benefits are from trade with the US.
- Lumenga-Neso et al. (EER, 2005), Schiff et al., (2002), Keller (WBER, 2000) and Falvey et al., (EL, 2002), confirm these results—unchallenged literature at this time.
- Since the data show that OECD countries have the vast majority of R&D stocks, it implies that it is important for small developing countries to trade with large technologically rich countries, such as the U.S. and the EU, at least indirectly.

FDI has positive TFP spillovers on both upstream and downstream industries, but not in the same sector

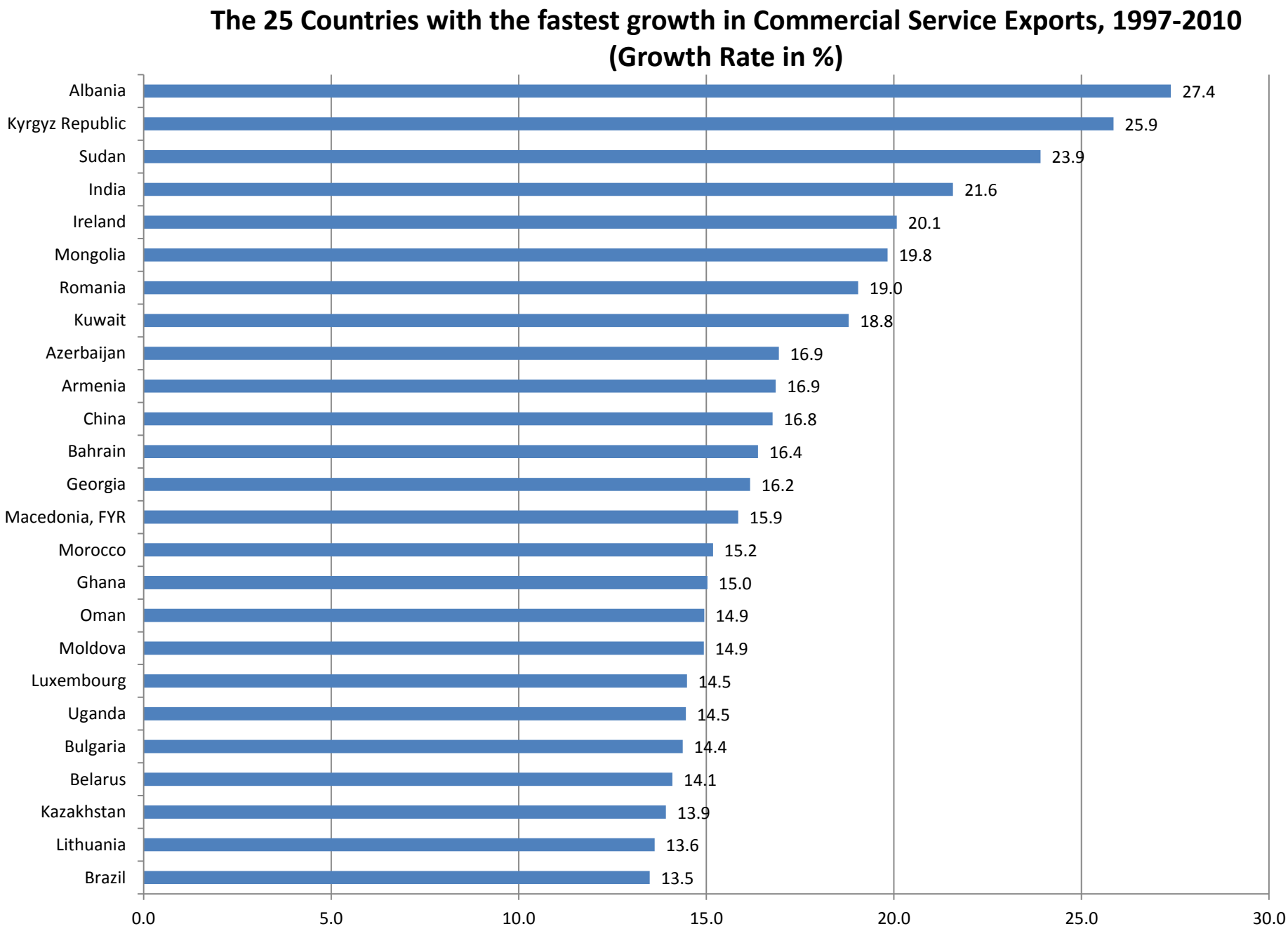
- Due to adverse competitive or market share impacts in the same sector—mixed results in the literature
- Javorcik (AER, 2004); Blalock and Gertler (JIE, 2008); and Javorcik and Spatareanu (JDE, 2008) productivity spillovers from FDI in upstream (supplying) industries
- Wang (CJE, forthcoming); Jabbour and Mucchielli, (JAE, 2007); and Harris and Robinson (NIER, 2004) productivity spillovers from FDI in downstream (using) industries

Evidence that Trade and Services Liberalization leads to large welfare gains

- Cross country econometric evidence (albeit criticized by Rodriguez and Rodrik) suggests larger welfare gains from trade liberalization, e.g., Sachs and Warner—2.45 percent greater growth for open economies;
- Frankel and Romer (AER, 1999) adjusting for simultaneity bias does not decrease Sachs and Warner results.
- Wacziarg and Welch (2008) liberalization leads to higher growth of about 1.5% Trade intensity increases after liberalization.
- Bolaky and Freund (2004), depends on institutions; 25% of countries (those with excessive regulations) do worse after trade liberalization; with good regulations, trade liberalization leads to greater gains than found in earlier studies.
- Coe and Helpman literature have added to support for productivity gains from trade
- Cross country econometric literature ignores services and FDI, which should add to larger gains if incorporated.

Crucial to Create a Policy Environment that allows many service providers

- **There is increasing evidence that a diverse and competitive business services sector is crucial for the competitiveness and productive efficiency of the manufacturing sector as well as agriculture and the services sector itself.**


The 25 Countries with the fastest growth in Commercial Service Exports, 1997-2010
(Growth Rate in %)
Albania 27.4
Kyrgyz Republic 25.9
Sudan 23.9
India 21.6
Ireland 20.1
Mongolia 19.8
Romania 19.0
Kuwait 18.8
Azerbaijan 16.9
Armenia 16.9
China 16.8
Bahrain 16.4
Georgia 16.2
Macedonia, FYR 15.9
Morocco 15.2
Ghana 15.0
Oman 14.9
Moldova 14.9
Luxembourg 14.5
Uganda 14.5
Bulgaria 14.4
Belarus 14.1
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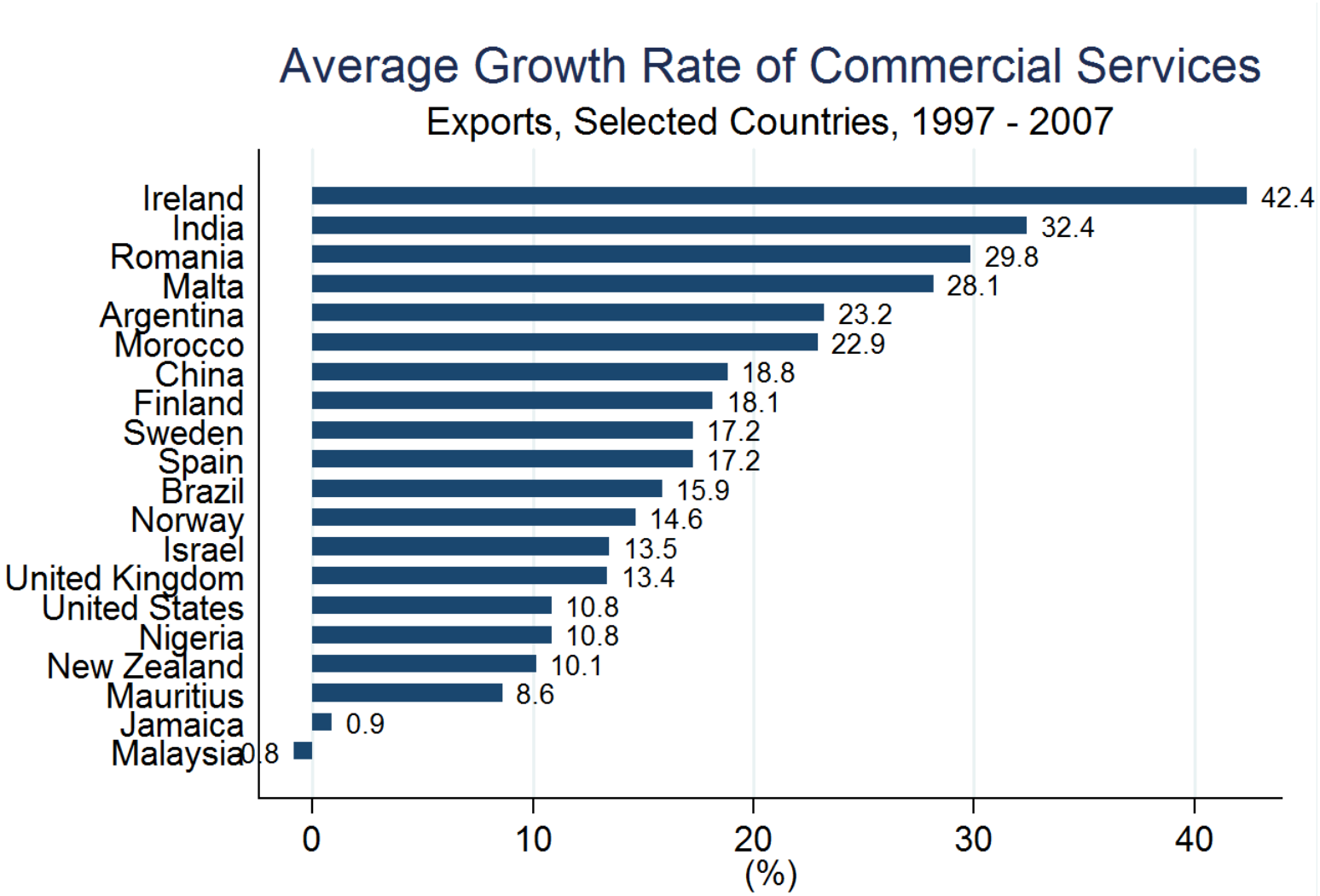


Source: WTO Trade in Services Database,
Other Commercial Services.

IV. Examples of Barriers against service providers

- Both discriminatory barriers against foreign investors and non-discriminatory regulatory barriers exist in most countries.
- Non-discriminatory barrier examples—awarding a monopoly contract for port services with perverse incentives (it could be foreign as in Tanzanian ports).
- The multinational port operator receives storage fees for the time the containers are in the port, not on how fast the containers leave the port. The more time containers are in the port, the more money the port operator earns. 40% of its income comes from storage fees.

Non-Discriminatory Barriers

- Awarding a contract for the construction of key backbone services to a high cost company--foreign. Consumers of the services will likely have to pay in the long run.
- E.g., construction of the Information and Communication Technology (ICT) backbone network in Tanzania.

Discriminatory Barriers in

- Limitations on foreign ownership—, e.g., maximum 49% foreign ownership of telecom companies in Kazakhstan,
- Minimum 33% ownership by Kenyans required in Kenya—has prevented entry and limited competition, resulting in higher prices compared with similar countries

Protecting National Champions in telecommunications

- Licensing restrictions on entry limit competition; very common in telecommunications,—e.g., in Tunisia, Kazakhstan and earlier Russian restraints on long distance fixed line telephone services. Governments want to protect champions hoping they will build out the networks.
- Experience in Africa has shown this was an incredibly costly and failed policy. In the late 1990s, there were less than 200,000 fixed lines available in Kenya and Tanzania for populations of more than 35 million. With entry from multinationals into mobile, in 2012 there were 20 million mobile subscribers in Tanzania. Similar success in Kenya with opening to new entrants.

Insurance restrictions in Kenya

- Cross border provision of insurance is often prohibited—e.g. in Kenya for most types of insurance
- Foreign insurance companies must be at least 33% Kenyan owned
- Boards of Directors must be one-third Kenyan
- Kenyan capital asset requirements for foreign companies discriminatory

Restrictions on the temporary movement of persons—Mode 4 restraints.

- Many countries limit visas to employees of multinationals or require a percentage of the managers to be nationals of the home country.
- Guest workers—Visa restrictions prevent the delivery of Mode 4 services. Developing countries have a large interest in seeing an agreement that allows greater temporary movement of workers.

V. Modeling the Productivity impacts of Services Liberalization--Varieties lead to additional productivity and welfare gains

- Variety in tools increases productivity
- Variety in consumer goods increases welfare
- Even when consumers use only one variety, different consumers choose different varieties
- Broda and Weinstein estimates of gains from variety

Dixit-Stiglitz Production Structure leads to a TFP externality from additional varieties

- $Q = L^{\alpha} K^{\beta} X^{(1-\alpha-\beta)}$
- $X = (\sum x_i^{\rho})^{1/\rho}$ is a Dixit-Stiglitz aggregate of intermediate varieties x_i, where $0<\rho<1$.
- Dual to the production function is a cost function for firms that use intermediates. If firm costs are identical, there will be a unique price p for all varieties and the unit cost function for users reduces to:
- $C = p/[n^{1/(\sigma-1)}]$, where n is the number of varieties produced in equilibrium and $\sigma = 1/(1-\rho) > 1$.

- Services Z enter the production function as a CES aggregate of domestic and multinational services

1) $$Z_x = (ZD^{\gamma} + ZM^{\gamma})^{1/\gamma}$$

- Domestic and imported services are CES aggregates of domestic and multinational firm varieties, respectively.

2) $$ZD = \left[\sum_{i}^{n_d} zd_i^{\delta}\right]^{1/\delta} \qquad ZM = \left[\sum_{j}^{n_m} zm_j^{\varepsilon}\right]^{1/\varepsilon}$$

This is pure firm level product differentiation.

- Dual to the Dixit-Stiglitz quantity aggregates are Unit Cost Functions that reflect the quality adjusted cost of purchasing service varieties at minimum cost:

3) $$CM = \left[\sum_{i}^{n_m} p_{zm_i}^{1-\sigma_m} \right]^{\frac{1}{1-\sigma_m}} \qquad \sigma_m = \frac{1}{1-\varepsilon}$$

4) $$CD = \left[\sum_{i}^{n_m} p_{zd_i}^{1-\sigma_d} \right]^{\frac{1}{1-\sigma_d}} \qquad \sigma_d = \frac{1}{1-\delta}$$

With symmetry within firm types:

5) $CD = p_{zd} / n_d^{[1/(\sigma d-1)]}$ $CM = p_{zm} / n_m^{[1/(\sigma m-1)]}$

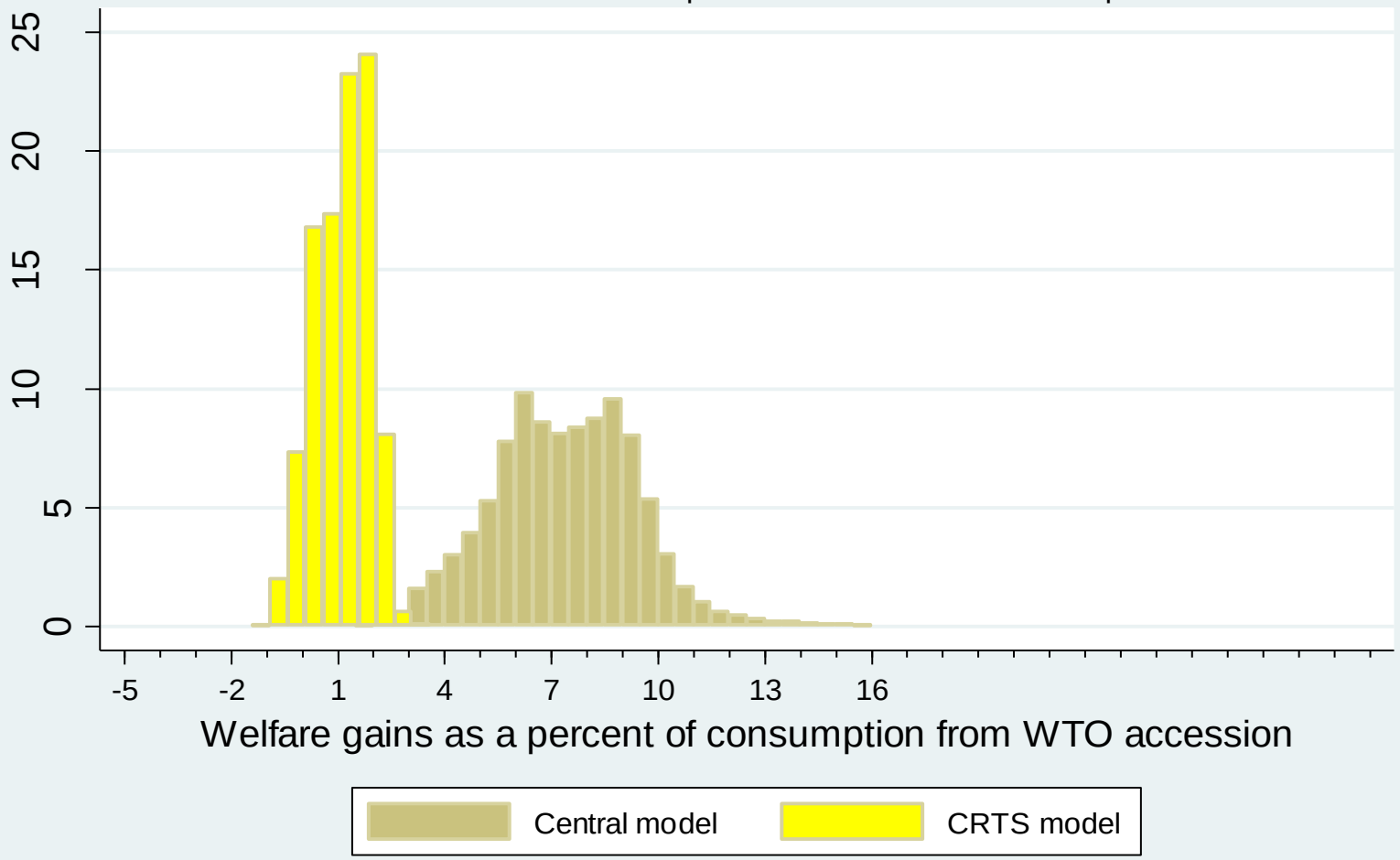
where p_{zd} and p_{zm} are the prices firms pay for one unit of the domestic or multinational variety.

Thus, quality adjusted costs decline with the number of varieties—the Dixit-Stiglitz love of variety effect.

Services and FDI--Theory

- Theory—Markusen (1989, 1990); Francois (1990a, 1990b); Markusen and Venables (1998).
- Markusen—When multinationals engage in FDI, they bring technology and expertise to the local production process. Thus, they have a different cost structure than local firms.
- We incorporate this idea in our Malaysia modeling.

Figure 3. Distributions of estimated welfare gains from Russian WTO accession.



CRTS models typically yield small estimated welfare gains from trade liberalization

- Welfare gains in CRTS models come from
- 1. Resource reallocation (Harberger triangles). “The Harberger constant” of less than 1% in gains.
- 2. Possible rent capture (can be significant—often several multiples of the Harberger triangles)
- 3. Possible terms of trade gains or losses
- Why small gains in CRTS CGE models?
- Problem of aggregation—reduces estimated gains
- Most importantly--Lack of productivity effects from trade—endogenous growth literature can not be captured in a CRTS model.

VI. Political Economy of Services Liberalization—Differing interests of labor and capital

- **Substantial econometric evidence that better access to business services increases the productivity and competitiveness of manufacturing, agriculture and services themselves.**
- **Our estimates of substantial gains for Malaysia from services liberalization are consistent with those empirical studies conducted on many countries.**

Public Choice Theory

- Economic theory of regulation (public choice theory) sees regulation as competition among interest groups to use the state to obtain economic rents.
- The losers from regulation realize small gains and don't lobby. They prefer to "free ride" on the lobbying of others. Known as the free rider problem
- "Free rider" problem for diverse consumer interests means that consumer interests are usually not represented.

Regulators are often “captured” by the industry they regulate

- Industry or special interests have concentrated gains and are more effective at lobbying.
- So the concentrated interests typically win the battle for the shape of the regulation.
- unless there is a concentrated consumer interest opposing the industry or the inefficiency costs to society are very large
- Inefficiency costs of poor regulation in services can be very large, but the argument is subtle. For the general interest to be served, need to identify and motivate counter lobbying (difficult, but not impossible)—examples below, or bring the costs to the attention of the public better.

Wages in Sectors Receiving FDI should increase

- Many of the business sectors expand employment and output, (new FDI output in Malaysia is part of Malaysian GDP).
- Transportation sectors also expand due to increased demand for their services from increased external trade.
- Malaysian skilled workers may not have the same interests as the capital owners—as multinationals enter the industry in these sectors, they hire skilled workers, raising their wages. Thus, skilled workers should favor FDI liberalization.

Wage increases in the Israeli telecom sector following liberalization

- The monopoly State Owned Enterprise in Israel **and** its workers opposed allowing new entry in 1990.
- Opening up the sector to competition fueled the large expansion of Israeli high tech services exports in the following decade.
- Gur Ofer: This led to a dramatic expansion of demand for telecom services and for skilled workers in the sector, who saw very substantial wage increases.

Capital owners in Malaysian business services

- Multinationals often look for a local joint venture partner.
- Malaysian firms that become part of joint ventures will likely increase the value of their investments.
- Malaysian capital owners in business services who remain wholly independent of multinational firms, will likely see the value of their investments decline. These are the losers from liberalization.

Chinese post WTO accession experience in insurance

- As part of its WTO accession commitments in 2001, China agreed to fully open its rather closed insurance markets by January 2005 (except foreign companies could hold a maximum of 50% in the life insurance market).
- Like in Russia, this was a controversial policy commitment within the insurance sector. Fear of loss of the market.
- What happened between 2001 and 2005?
- (i) FDI led to extremely positive results for consumers of insurance services in China. Total premiums more than doubled between 2001 and 2005.
- (ii) large increase in employment of skilled workers (e.g., actuaries, statisticians) in the sector. Wages grew.

Chinese post WTO accession experience in insurance

- (iii) very strong growth of both domestic Chinese and foreign insurance companies operating in China;
- (iv) continued dominance of the market by Chinese companies; acquisition of foreign capital by Chinese companies through strategic partnerships.
- (v) entry by foreigners through either joint ventures or strategic investment in Chinese companies; and
- During this time, the total number of insurance companies increased from 41 to 78, and the number of Chinese companies increased from 20 to 41.
- Source: Richard Daniel Ewing, “Life Insurance Market Heats Up,” ChinaBusinessReview.com, May-June, 2006. 48-53.
- Datamonitor, ‘Non-Life Insurance in China: Industry Profile,” November 2005.