



EMPIRICAL AND THEORETICAL RESEARCH ON TRADE IN SERVICES

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Trade in services

Service trade differs from goods trade in two major ways:

- While the majority of goods trade involves shipping goods from one country to another, many services require personal contact between customers and clients, making trade possible only via sales through a foreign affiliate or if either the customer or producer travels across borders.
- Services tend to be highly regulated. Many types of services are publicly provided or are produced by regulated monopolies. This means that identifying and measuring trade barriers in the service sector is very complex.



Outline

- A. What are services and how are they traded
- B. Gains from international trade in services: the theory.
- C. Services trade patterns and modes of supply
- D. Interaction between trade in goods and services
- E. Trade policy and the services sector
- F. Measuring services trade restrictiveness
- G. What has been done and what could be done



A. WHAT ARE SERVICES AND HOW ARE THEY TRADED



How are services different from goods?

- **Services:** intangible, invisible and perishable, requiring simultaneous production and consumption.
- **Goods:** tangible, visible and storable – and hence do not require direct interaction between producers and consumers.
- There are some exceptions, e.g. a software program on a diskette or an architect's design on paper
- Services are covered by the General Agreement on Trade in Services (GATS).



How are services traded?

- We can distinguish between services that necessarily require physical proximity between the user and the provider and those that do not.
- Trade in the latter is not much different from trade in goods.
- In the case of many services, cross-border trade is either not possible at all, or only possible if complemented by some form of local presence.
- Four modes of supply



B. GAINS FROM INTERNATIONAL
TRADE IN SERVICES:
THE THEORY



Services patterns of trade

- Standard concepts of comparative advantage and product specialization as determinants of trade patterns can be applied to services (Hindley and Smith 1984; Deardorff, 1985).
 - **Comparative advantage**: relies on fundamental differences between countries to generate trade.
 - Gains from specialization arising from **increasing returns to scale** or **agglomeration** effects: can explain trade between similar countries
- Both explanations apply not only to cross-border trade, but also to other modes of trade, including commercial presence and movement of natural persons.



Determinants of trade in services patterns: some evidence

- Little empirical work on the determinants of the pattern of trade in services and the use of alternative modes of supply.
- Langhammer (2004) calculates revealed comparative advantage indices (RCA) for modes 1 and 3 trade for the EU, Japan and US.
 - Mode1 RCA reflects relative resource endowments,
 - Mode 3 RCA is determined by services characteristics domestic regulations and other variables that determine the attractiveness of the country for FDI.
- For US trade in services are similar in some service sectors for the two modes, but not in all.



Gains from international trade in services

At country level

- Gains from specialization and reallocation of limited resources
- Exploiting economies of scale, gains from product variety, pro-competitive effects.
- Productivity gains

At individual level

- Income distribution effects of trade



The concept of opportunity costs

- The term opportunity costs refers to the alternatives that have to be **given up** in order to produce a given quantity of a good or service, i.e. **the true cost of something is what you give up to get it.**

Opportunity costs can differ across countries due to:

- **Technological** differences (David Ricardo) – the techniques used to turn inputs into output.
- Differences in countries' relative **endowment** in production **factors** such as labour, land, capital, natural resources. (Heckscher-Ohlin).



Comparative advantage and trade

- Gains from trade for countries arise thanks to differences in **opportunity costs** to produce different goods or services.

Ricardo:

- Each country has a comparative advantage in the production with a relatively low opportunity cost compared to other countries.

Heckscher-Ohlin:

- Each country has a comparative advantage in the production that requires relatively more of the factor with which it is well endowed



Comparative advantage and services

- Differences such as skill levels and technological knowledge, affect trade in services. E.g. countries with access to sophisticated medical technology will export medical services.
- Differences between countries can also arise from a variety of other sources such as:
 - Differences in institutions and legal systems. E.g. services such as insurance require that the client trust that contracts will be honoured if a claim is made.
 - Differences in legal and regulatory systems affect the degree of confidence that a foreign client has in a firm, and this can affect its export success.



Gains from specialization

Under autarky (i.e. no trade):

- The (relative) price of a good equals the opportunity cost of producing that good in a country

Under free trade:

- World (relative) prices are determined by world supply and demand and converge across countries (i.e. they fall **between** the opportunity costs of the two countries)

All countries gain from free trade:

- When comparing a world with international trade to an autarkic world, with trade the **consumption possibilities** of both countries will **expand**



The mechanism allowing countries to gain from trade

- Recognition that economic **resources** and endowments are **scarce** and limited in all countries.
- Allowing countries to allocate their resources (specialize) in the economic activities in which they have a **comparative advantage** and then trade for the activities in which they have a **comparative disadvantage** expands the size of global production.
- Voluntary trade then allows for all countries to potentially consume beyond what they can individually produce (expanded “consumption possibilities”).



Specialization of production and gains from trade

- Trade driven by differences between countries generates two types of potential benefits.
 - Producers gain from access to a larger market and higher prices.
 - Consumers gain because they get access to both a wider variety of goods and services and to lower priced imported goods and services.



Gains from trade and modes of supply

- One differences between service trade and goods trade is that much service trade must take place via movements of factors.
- From a positive point of view a difficulty arises when modes of supply are close substitutes: it is not easy to predict whether comparative advantage will manifest itself as a trade flow, investment flow or labour flow.
- From the point of view of the normative theory standard tools of gains from trade can be applied: a country gains from the import of services, irrespective of the choice of mode, if the terms at which international transactions take place are more favourable than those available on the domestic market.



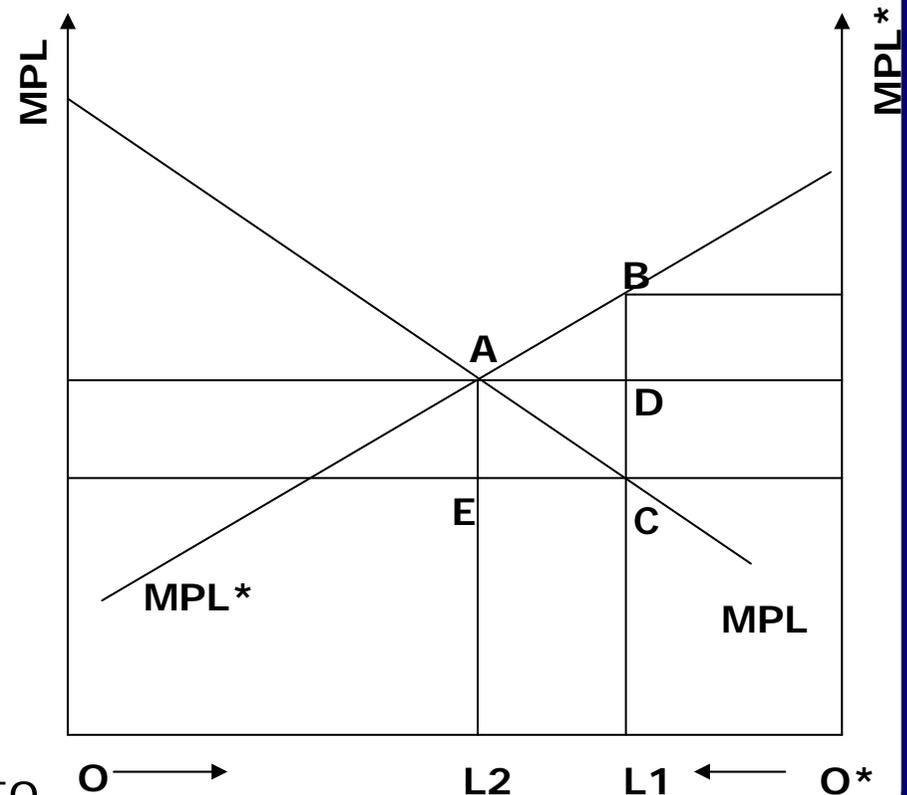
Movement of factors and gains from trade: an example

In the initial situation there are OL_1 lawyers at home and O^*L_1 lawyers abroad.

Assuming that factors are paid their marginal product, lawyers will be paid L_1C at home and L_1B abroad.

In this initial allocation, the return of lawyers at home is lower than abroad.

If lawyers can move some will leave home. The flow from home to abroad will stop when the return is equal in both countries.





Specialization of production and distribution effects

- Services trade will have a positive effect on aggregate welfare.
 - From the previous example the total world output will increase by the areas ABD and ADC
- National welfare impacts will depend on the income accruing to the factors concerned and the nationality of the owners of the factors.
 - If lawyers movement is permanent migration (excluded from the calculation of national welfare), then welfare declines at home by ACE and increases abroad by ABD. Migrants' welfare increases ADCE.
 - If movement is temporary or if migrants make substantial remittances, then welfare can increase at home as well. In the extreme situation home welfare increases ADC.



Increasing returns to scale

- Much of the trade between similar countries is in similar products. E.g. Canadian engineers work on projects in the US, and US engineers work on projects in Canada.
- Trade theories including economies of scale can explain why trade occurs between similar countries.
- When **economies of scale** exist, large firms may be more efficient than small firms, and the industry may consist of a monopoly or a few large firms.
 - Production may be imperfectly competitive in the sense that excess or monopoly profits are captured by large firms.



Increasing returns to scale

- A firm or industry may have **increasing returns to scale**
 - If all factors of production are doubled, then output will more than double.
 - Larger is more efficient: the cost per unit of output falls as a firm or industry increases output.
- Two types of economies of scale
 - **Internal**: as individual firms produce more output (become larger), average costs fall which allows for lower prices.
 - **External**: as a country's industry produces more output (become larger), average costs fall which allows for lower prices



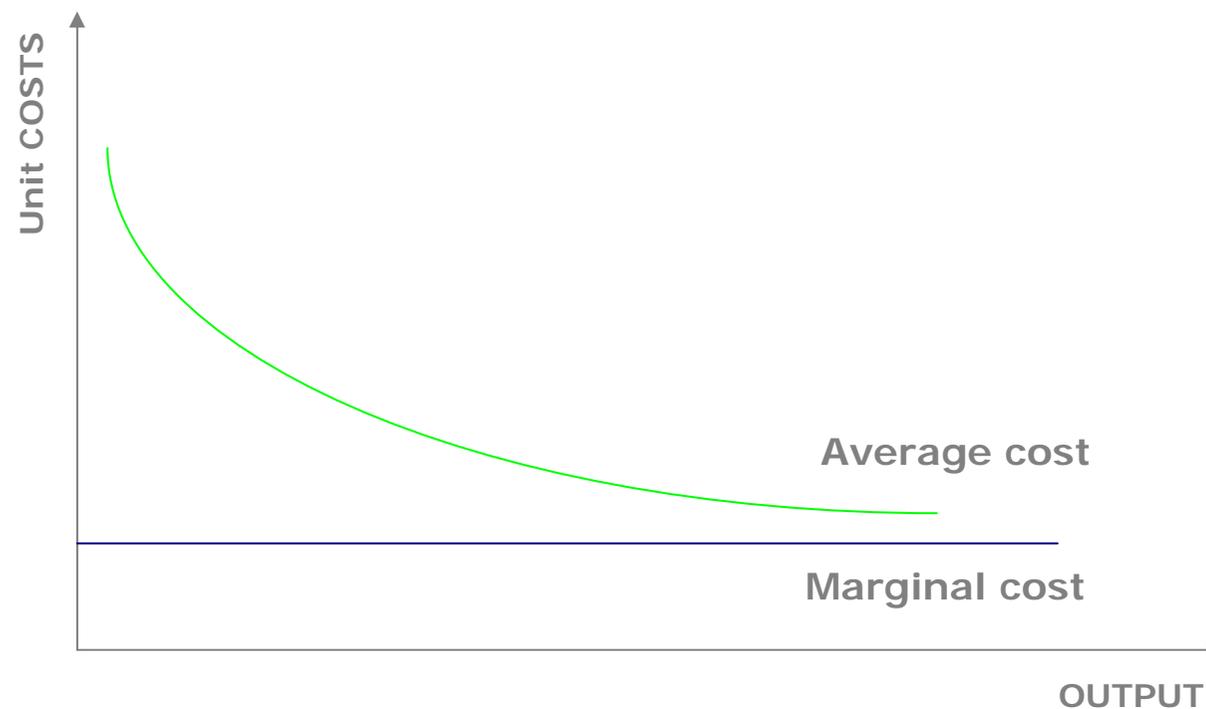
Internal Economies of scale

- Suppose that costs are measured by $C = F + cQ$,
 - where F represents fixed costs, independent of the level of output.
 - c represents a constant marginal cost: the constant cost of producing an additional unit of output Q .
- Average costs = $F/Q + c$
- A larger firm is more efficient because average cost decreases as output Q increases



Internal economies of scale

- Average costs are decreasing in output. This generates scale economies (fixed costs spread across larger output)





New trade theory models (Krugman)

Assumptions:

- Differentiated products: “varieties” (firms face a specific demand for their product)
- Imperfect competition (e.g., monopolistic competition)

Main message:

- Through trade, a larger variety of goods is available across markets.
- Through trade, each firm has access to additional markets which allows it to reduce costs (and potentially lower prices to consumers).



Monopolistic Competition

Under Monopolistic competition

- Each firm can differentiate its product from the product of competitors.
- Each firm ignores the impact that changes in its own price will have on the prices competitors set: even though each firm faces competition it behaves as if it were a monopolist.

A firm in a monopolistically competitive industry is expected to:

- Sell more the larger the total sales of the industry and the higher the prices charged by its rivals.
- Sell less the larger the number of firms in the industry and the higher its own price.



Monopolistic Competition

- At some number of firms, the price that firms charge is higher than the average cost that firms pay.
- New firms will enter the market until the point in which firm has *zero profits*: price matches average cost.
- This number is the equilibrium number of firms.



Monopolistic Competition and Trade

- Because trade increases market size, trade is predicted to decrease average cost in an industry described by monopolistic competition.
- Because trade increases the variety of goods that consumers can buy under monopolistic competition, it increases the welfare of consumers.
- Because average costs decrease, consumers can also benefit from a decreased price.



External scale effects and trade

- Economies of scale that occur at the level of the industry instead of the firm are called external economies.
- There are at least four different ways in which scale effects can generate trade:
 - Market niche effect
 - The development of firm-specific intangible assets
 - Agglomeration



Market niche effect

- Product variety is a major aspect of service trade (services tailored to individual customer needs).
- If product variety is valued either by producers or by final consumers, then firms have an incentive to carve out their market niche and produce a specialized variety of a service.
- If there are fixed costs to establishing a market niche or developing a new variety, then larger markets will have more product variety.
- Examples of product variety include entertainment (movies, television programs, music), tourism (consumers gain a wider choice of destinations), restaurants (cities which are open to a lot of foreign visitors can support a wider variety of restaurants),



Gains from trade and market niche effects

- Trade driven by the market niche effect will potentially generate three types of gains.
- The total variety of products available to consumers in any given market will increase because consumers gain access to both domestic and foreign varieties of the products.
- each individual producer will have access to a larger market, and this can allow them to expand their output and reduce costs due to scale economies.
- A specialized service that might not be economically viable in a small country might become viable as a result of the market-expansion effects of trade.



Firm specific intangible assets

- Many firms exist because they have developed specialized firm-specific assets, such as specialized knowledge of organizational and production processes, distribution and supply networks, and reputations for quality and reliability.
- This can explain the success of large firms in many different industries, such as financial institutions, construction firms, and courier companies.
- Successful large firms can potentially provide services to foreign markets via each of the four modes.
- This theory is particularly helpful in explaining foreign direct investment.



Agglomeration effects

- Agglomeration can take two forms.
 - A particular industry can concentrate in one area. E.g. the concentration of financial services in cities like New York
 - There can be concentration of a wider variety of economic activity in cities, regions, or countries. (cores and peripheries)
- Three main reasons explain why a cluster of firms may be more efficient than an individual firm in isolation:
 - Specialized suppliers or networks
 - Labor market pooling
 - Knowledge spillovers



Specialized Suppliers

- In many industries, the production of goods and services and the development of new products requires the use of specialized equipment or support services.
- An individual company does not provide a large enough market for these services to keep the suppliers in business.
- A localized industrial cluster can solve this problem by bringing together many firms that provide a large enough market to support specialized suppliers.
- This phenomenon has been extensively documented in the semiconductor industry located in Silicon Valley.



Labor Market Pooling

- A large and concentrated industry may attract a pool of workers, reducing employee search and hiring costs for each
- It is an advantage for:

Producers:

- They are less likely to suffer from labor shortages.

Workers:

- They are less likely to become unemployed.



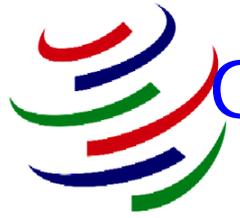
Knowledge Spillovers

- Workers from different firms may more easily share ideas that benefit each firm when a large and concentrated industry exists.
- The specialized knowledge that is crucial to success in innovative industries comes from:
 - Research and development efforts
 - Reverse engineering
 - Informal exchange of information and ideas



External Economies of Scale and Trade

- Trade based on external economies has an ambiguous effect on national welfare.
- There may be gains to the world economy by concentrating production of industries with external economies.
- But there is no guarantee that the 'right' country will produce the 'right' goods.
- It is even possible that a country is worse off with trade than it would have been without trade: a country may be better off if it produces everything for its domestic market rather than pay for imports.



Gains and distributional effects from agglomeration-driven trade

- Those who live in core gain from trade because the concentration of economic activity in their area leads to benefits from both scale economies and access to a wide variety of goods and services.
- Those who live in the periphery may lose from trade if specialized goods and service production migrate to the core.
- Whether or not there are gains or losses from trade depend on the magnitude of trading costs. (Krugman and Venables 1995)



Standard trade theories and services gains form trade

- Some difference between goods and services make it difficult to explain the patterns and gains from trade using standards theories
 - Services generate network externalities
 - The prediction of the law of one price will not always apply.
 - Services might be embodied in the output of both tradable and non-traded activities.



Network externalities

- Services network externalities have potential implications for the distribution and magnitude of gains from integrating markets.
- The analogy with goods of a small country benefiting disproportionately from liberalization may not hold.
- The absolute (aggregate) benefits of network liberalization are likely to be more evenly divided between large and small countries than is the case for goods, as the larger per capita gain to small countries from access to a larger market is offset by the size of the country.



The law of one price

- Close substitutes not necessarily will have the same real price in different locations adjusted for transport costs.
- This because many services require local factor inputs to be applied in a transaction.
- Thus, local factor prices and regulation will be a determinant of the prices prevailing in different markets.
- Liberalization of trade in goods may not result in an integrated market, because of differences in the prices/costs of the ancillary services that make up the “product bundle”



Services embodied in goods

- Services are a determinant of overall employment and productivity.
- An economy that can trade the services inputs ("factor services") directly may have greater gains from trade and higher total factor productivity (TFP) than one that trades final goods produced with domestic, non-traded service inputs and labour.
- Some models incorporate producer services as intermediate inputs that are an increasing returns activity to take into account the intermediation role of services. Markusen (1989), Burgess (1989), Francois (1990b) and Ethier and Horn (1991).



Services embodied in goods

- Some recent literature incorporates FDI in services and recognizes that FDI may be driven by the non-tradability of the products concerned.
- Markusen, Rutherford and Tarr (2005) explore the potential effects of FDI restrictions on services on the pattern of trade and national welfare of a host country.
- They conclude that FDI is beneficial to host economies not only because it is a source of new knowledge and competitive pressure, but also because FDI in services can help host countries to begin to produce and export more advanced products.



Disembodied cross-border trade: a new phenomenon

- Bhagwati (1984a) started analyzing some of the implications of the need of proximity for services supply.
- Trade in services may expand as a result of the incentive to “splinter” the production chain geographically, not just in terms of tangible inputs but also services.
- Over time it has become increasingly apparent that the disembodied cross-border trade in services is rapidly growing with technological advances.



Disembodied cross border trade

- Revolutionary progress in communication and IT has enabled historic (and ongoing) **fragmentation** of production processes.
 - Output of many tasks can be sent electronically
 - Coordination is possible over great distances
 - Specialization by task no longer requires proximity
 - Global sourcing
- A new paradigm is needed for studying international trade that emphasizes **trade in tasks**.



Examples of services tasks

- **Offshoring:** transferring activities to another country by hiring local subcontractors or by building a facility in an area where labor is cheap.
 - Call centers: telemarketing and customer care
 - Back office: data processing, payroll, bookkeeping
 - IT: systems support, web design
 - Publishing: copy editing and proof reading
 - Legal support services
 - Accounting: tax form preparation
 - Software development



Trade in tasks: a new paradigm

Productivity is the key!!!

- Productivity is now a global race between regions and nations.
- Those who can make things cheaper, faster, better – win!
- The tradability of a task does not correspond perfectly (or even very well) with the skilled required to perform it
- Factories & process plants moving
 - Closer to customers
 - Closer to raw materials



Task trade: the theory

- Grossman and Rossi-Hansberg develop a simple analytical framework to study effects of improved opportunities for offshoring.
- Authors conceptualize the production process in terms of the tasks needed to produce goods.
- Tasks differ in “offshorability” – those with low offshoring costs can be separated from headquarters at lower cost.
- Study the effects of improved opportunities for offshoring “*L*-tasks” (tasks that can be performed by lowskilled labor) or “*H*-tasks” (tasks that require highly-skilled labor) or both.



Offshoring: 3 effects

- What effect will have a decline of offshoring L -tasks on wages of domestic low-skilled workers in developed countries ?
- A negative Labor-Supply Effect: job destruction due to relocation of production / services to cheaper countries
- A negative Relative Price Effect
- A **positive** Productivity Effect



Productivity effect

All else equal, a decline in the cost of offshoring L -tasks

- Reduces cost of tasks already performed offshore
- Raises firms' profits in proportion to use of low-skill labour
- Benefits most the labour-intensive industries and thus boosts demand for low-skilled labour
- The productivity effect potentially can outweigh the adverse labour-supply and relative-price effects



Offshoring as technological progress

- Analogy between falling costs of offshoring tasks and factor-augmenting technological progress
- Both reduce the cost and amount of the local factor needed to produce a given amount of output
- Both benefit firms that use the factor intensively and create incentives for these firms to expand
- Firms' expansion can lead to a net increase in demand for factor whose productivity has increased
- With offshoring, some of increased demand falls on local workers, who perform tasks that cannot readily be moved offshore



Trade in tasks: measurement difficulties

- Offshoring of many business functions does not result in any physical good passing through a customs house.
- Trade may be between affiliates or non-affiliates
- Reporting requirements differ
- Incentives to manipulate transfer prices in intra-firm trade
- Trade data collected as **gross flows, not value added**
- Impossible to know the national content of traded goods



Blinder off-shorability index

| Activity | index |
|---------------------------------|--------------|
| Computer Programmers | 100 |
| Office Clerks | 94 |
| Customer Services Rep | 94 |
| Bookkeeping and auditing | 84 |
| Stock clerks and order fillers | 34 |
| Shipping and receiving clerks | 39 |
| Sales managers | 26 |
| Business operations specialists | 25 |



C. SERVICES TRADE PATTERNS AND MODES OF SUPPLY



Services modes of supply

- International services transactions are more complex to analyze due to
 - different “modes of supply” and their relationship (complements or substitutes)
 - Services availability (costs)
- The pattern of trade will depend in part on the feasibility (cost) of using alternative modes.
 - Technology or policy changes may lead to a shift from trade in final goods embodying nontraded services inputs to trade in service intermediates.



Services modes of supply

- Theory on trade in services do not always explain why firms choose particular modes to supply services to foreign customers.
 - If trade in all modes was unconstrained, how would firms choose to supply services to their foreign customers?
 - Are different modes substitutes or complements?
 - What is the effect of allowing trade via some modes but not others?
- The answers to these questions have important implications both for predicting and assessing the implications of trade liberalization in services.



Services modes of supply

- Explicit consideration of the existence of alternative modes of supply and their relationships is needed not just for better understanding the determinants and pattern of trade, but also the effects of policies.
- If modes are substitutes, a particular policy restriction may be redundant or less restrictive than it would appear to be when considered in isolation.
- Policies that restrict one mode more than another may generate inefficiencies.



Asymmetric costs across modes of supply

- For many types of services, the costs of provision vary substantially across the different modes of supply.
- For some services, supply is essentially not feasible via some modes.
 - Tourism: cannot take place unless consumers free to travel and spend their money in foreign countries.
 - Fast food: cannot be provided without a commercial presence in the country where the food is served; hence this requires foreign direct investment or provision for franchising agreements.



Asymmetric costs across modes of supply

- Heterogeneity across services is particularly important because countries have comparative advantages in different types of services.
- Policies that allow some modes but not others will favor some countries over others.
- The rules affecting different modes of supply can be critically important both in determining which services will be traded, and in determining the distribution of the gains from trade across countries.



A particular case

- Allowing FDI, cross-border export of services, and movement of customers between countries, but not allowing labour movement across countries will preclude certain types of services from being traded at all.
- The services that cannot be traded in such a regime are labour-intensive services that require physical contact between the customer and service provider.
- Countries which have a comparative advantage in such services (labour abundant countries) will be seriously constrained in their ability to export these types of services.



Modes of supply as substitutes

- If the different modes of supply are substitutes, then in some cases virtually all of the gains from trade can be realized by opening up just one mode of trade.
- This is the basis of Robert Mundell's (1957) observation that under some conditions, trade in goods and services and trade in factors are perfect substitutes.
- A country with an abundance of skilled workers can either export goods and services directly produced by these workers or the workers themselves can move to produce in other countries. In both cases, gains from trade will be realized.



Substitute modes of supply: some examples

Insurance firm:

- A foreign customer could buy an insurance contract by mail or electronically and for the claims the insurance company could send agents from the home office to assess the claim (temporary movements of personnel)
- The insurance company could set up a branch office in the foreign country to serve its foreign customers.

Medical services:

- A specialized surgical team could come from a foreign country to perform surgery in the home country
- The patient could go to the foreign country to receive treatment.



Modes are typically not perfect substitutes.

Considering the example of Medical services

- Hospital facilities will differ across countries and so the success rate and cost of the surgery will differ depending on where it is performed.
- Travel costs for patients and surgeons will differ.
- The health of a seriously ill patient may be jeopardized by travel.
- The opportunity costs of travel for a surgeon may be high because of the needs of other patients.



Modes of supply as complements

Modes of supply might also be complementary.

- If a firm chooses to have a physical presence in a foreign market, then the effectiveness of its operation may be enhanced if personnel are allowed to move between the home and foreign establishments.
- When modes of supply are complements, a policy restricting any of the modes would affect both the cost and quality of the service provision.



Modes of supply and income distribution

- Different modes of supply will have different effects on income distribution. Suppose a country (North) has a comparative advantage in the provision of insurance services.
- If FDI is liberalized but mode 4 is not firms from North are likely to set up branch offices in foreign countries to serve foreign clients. This will increase the demand for labor in the insurance sector in foreign countries and may push up wages.
- If FDI is not allowed, and mode 4 is allowed the reduction of the demand for labor in the insurance sector in foreign countries and may push down wages.



D. INTERACTION BETWEEN TRADE IN GOODS AND SERVICES



Interaction between trade in goods and services

- Services may also be complementary with goods trade.
- Export of goods requires transportation and insurance services, but it may also require the establishment of distribution networks, facilities to deal with repairs or with training of customers in these of products, etc.
- In some cases the potential gains from goods trade cannot be fully realized without liberalization of service trade.



Magnification effect

- In the services context imperfect competition may further increase the gains from liberalization.
- Liberalizing trade in services is likely to encourage greater specialization, thus helping to realize increasing (international) returns where these exist.
- Even if a country does not happen to have comparative advantage in certain services, liberalization may have a positive effect in terms of encouraging further fragmentation of production activities, fostering exports of merchandise and/or other services.



Magnification effects channels

- One channel through which “magnification effects” may occur is through a reduction in trade costs, many of which are services-related.
- Trade costs are often (much) greater in *ad valorem* equivalent terms than the border barriers that confront goods when entering an export market.
- The most obvious source of such costs is infrastructure-related services.



Some evidence

- Shipping margins have been found to be a multiple of tariffs for developing country exports to the US (Fink, Mattoo and Neagu, 2001).
- Infrastructure is a significant determinant not only of export levels, but also of the likelihood exports will take place at all. (Francois and Manchin, 2006)
- Internal transport and related transactions costs are a major factor determining the competitiveness of (potential) exporters. (Djankov, Freund and Cong, 2006)



Other studies

- Deardorff (2001) illustrates the importance of transport-related costs as a barrier to trade in goods (and services), and the potential welfare gains from actions that lower such costs.
- Francois and Wooton (2006) note that trade in goods may depend on the degree of market power exercised by the domestic trade and distribution sectors.
- Absence of competition in the domestic service sector can serve as an effective import barrier against goods.



Services inputs and trade in goods

- There is evidence on the interdependence between the efficiency of available domestic service sectors and trade in goods.
- Francois and Wooton (2006) note that trade in goods may depend on the degree of market power exercised by the domestic trade and distribution sectors.
- Fink, Mattoo and Neagu (2005) show that international communication costs are a determinant of export performance for higher value, differentiated products, whereas they matter less for more homogenous, bulk type commodity trade.



Services inputs and trade in goods

- Numerous “services inputs” affect the volume and composition of trade since they will factor into the overall level of trade costs confronting firms.
- Freund and Weinhold (2004) find that access to the Internet increases trade in goods, noting that this is consistent with a model where there are market-specific fixed information/search costs that are lowered as a result of the Internet.
- A policy implication is that efforts to facilitate trade must go beyond customs clearance and related procedures, and be informed by analyses that identify the most binding (cost-raising) constraints.



E. TRADE POLICY AND THE SERVICES SECTOR: INSTRUMENTS OF PROTECTION



Service trade barriers

- Most trade barriers in the service sector are non-tariff barriers.
- Tariffs (discriminatory taxes imposed on foreign service providers) are relatively uncommon because
 - Cross-border trade in services is often in intangible form, and this makes it difficult to monitor and tax.
 - Modes of supply for services different than for goods.
 - Many services are highly regulated or provided by the public sector.



Non tariff barriers

- The popularity of non-tariff barriers in the service sector means that trade liberalization in this sector is complex.
- Moreover, a major reason for the pervasiveness of non-tariff barriers is because of market imperfection in service sectors.
- Many trade barriers in the service sector are a side effect of domestic regulations that have legitimate purposes.



Discriminatory regulations

- **Discriminatory regulations** add to the cost of trading services, but do not yield any direct benefits to local consumers. They are a very common form of trade barrier.

Examples

- Delays in crossing the border, country-specific standards for trucks (such as differing weight and trailer length regulations) which add to the cost of cross-border transport services.
- Preferential government procurement policies.
- Lack of transparency of domestic regulations.



Licensing and certification requirements

- They inhibit trade in professional services.
- Professional service providers typically need to satisfy local regulations for certification.
- In some cases, compliance may be very costly (domestic residence or graduating from a domestic educational institution may be required).
- These regulations can be justified by the need to protect consumers by ensuring quality and safety standards are met. However, they can also protect local service providers from foreign competition, which can lead to higher prices and reduced choice for local consumers.



Quotas

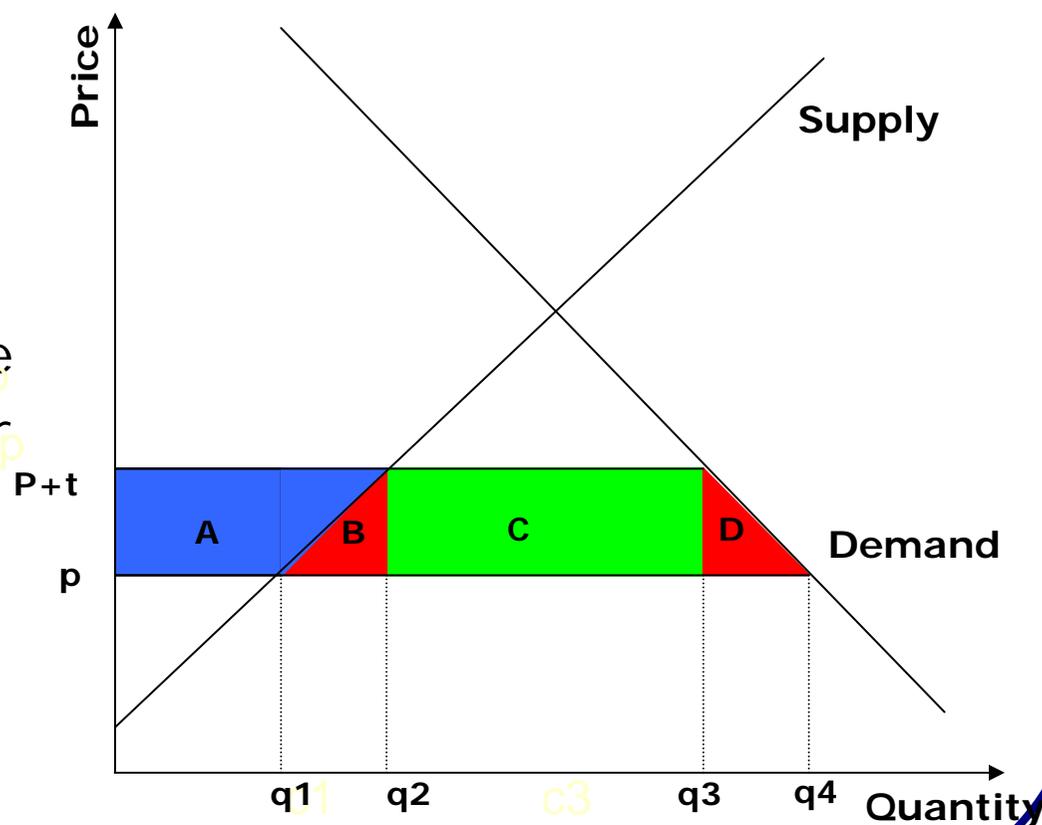
- Quotas are very common.
- On cross-border trade, they are common in the transport sectors:
 - foreign providers are either completely shut out (i.e. a zero quota) of certain segments, such as transport within a country; or only provided limited access, as in international transport.
- On consumption abroad, quotas are sometimes implemented through foreign exchange restrictions.
 - E.g. the ability of citizens to consume services, such as tourism and education, abroad is limited by limits on foreign exchange entitlements.



Effects of an import quota

Consider the effect of a quota of the size « $q_3 - q_2$ » which corresponds to the effect of a tariff t

The two red triangles ($B + C$) represent the net loss caused by the trade policy. The area C does **not** represent revenue for the government, but for those holding a license to import (**rents**).





Tariffs versus quotas

- The administration of a quota is often arbitrary and therefore **not** very **transparent**.
- Who **benefits** from the «rent» depends on the administration of the quota licences;
- The **source** of the imports depends on the administration of the quota licences, not the most efficient foreign supplier.
- Quotas are even worse when markets are not competitive. An import quota gives the monopolist the power to charge a higher prices once the quota is filled.



FDI restrictions in competitive markets

- If markets are competitive the benefits of FDI are similar to the standard gains from trade.

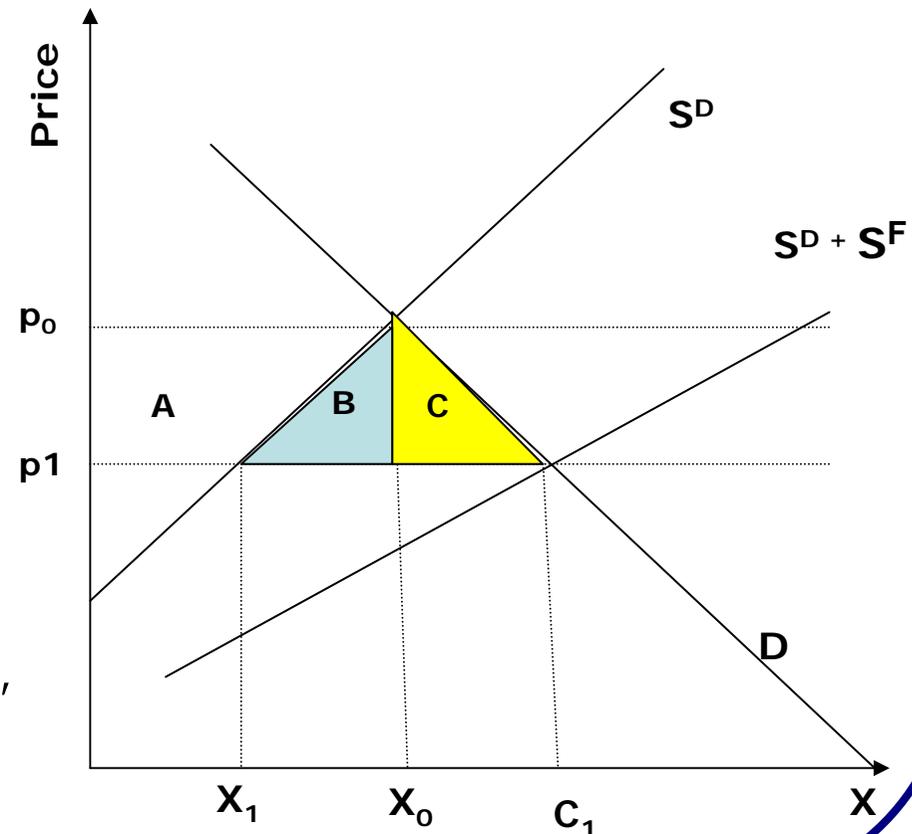
If FDI is allowed prices fall to p_1 and output increases to X_1 .

Consumer surplus: $A+B+C$

Producer loss: A

Social gain: $B+C$

Restricting FDI would increase prices and decrease consumers' choices eroding the area $B+C$





Non discriminatory measures

- Non-discriminatory measures apply equally to foreign and domestic providers.
- These may consist on limitations of the number of firms allowed to contest a market, or on the nature of their operations.
- Non-discriminatory measures usually involve either a monopoly (telecommunications) or an oligopolistic market structure (insurance, air transport).
- Consumer protection, high fixed (sunk) costs, prudential supervision and regulatory oversight often induce governments to limit the activities of foreign providers.



Interaction between trade policy and domestic regulation

- Restrictions on FDI assume particular significance in services where cross-border delivery is not possible, and domestic market is monopolized.

Under monopoly

Consumer surplus: **A**

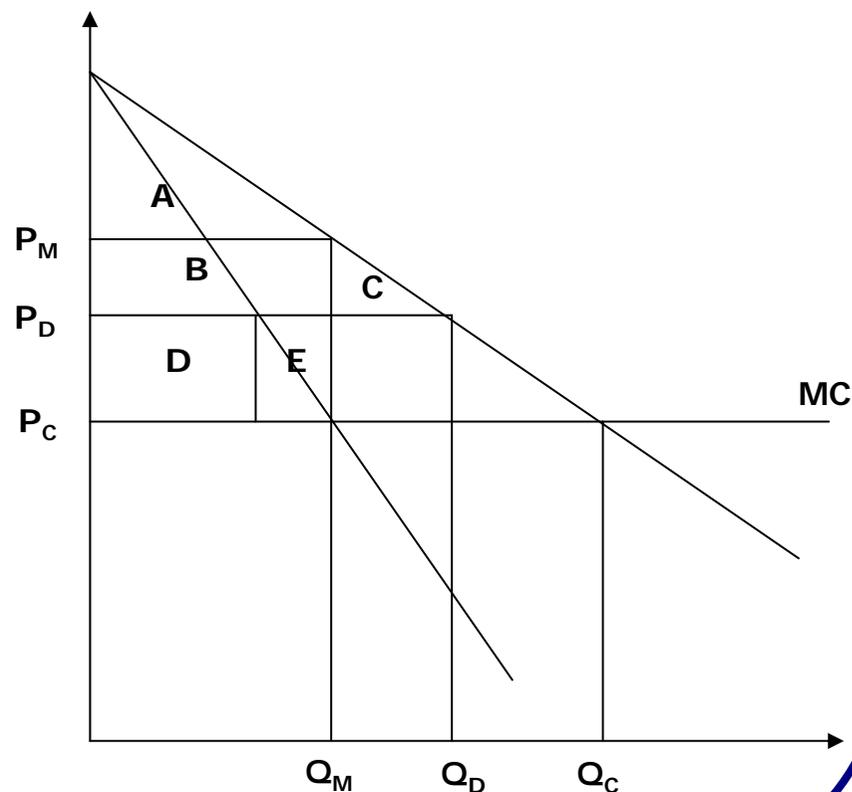
Producer surplus: **BDE**

If FDI is allowed, supposing there is a duopoly and the aggregate quantity produced is Q_D

Consumer surplus: **BC**

Producer loses **BE**

Aggregate welfare depends on relation between **E** and **C**





F. MEASURING TRADE IN SERVICES RESTRICTIVENESS



Trade in services liberalization: empirical studies

- The empirical literature on international trade in services and trade policy is limited, reflecting the weakness of the available data on both flows and policies.
- Because services are generally intangible, as we saw before barriers to trade do not take the form of import tariffs, which are easy to measurable.
- New measures for policy restrictiveness are needed.



Services restrictiveness and modes of supply

- A necessary but not sufficient condition for free trade in services is the elimination of discrimination between alternative sources of supply.
 - Foreign products/providers should be subject to regulations that are no less favorable than those applied to domestic products/providers (i.e., national treatment).
 - All foreign products/providers should be subject to the same barriers, if any.
- However reducing discrimination may not result in a greater volume of international transactions.
 - If government policies support a monopoly, non-discrimination will have no effect, as entry is barred to all potential sources, whether foreign or domestic.



Discriminatory vs. non-discriminatory barriers

- To analyze trade in services liberalization a distinction needs to be made between
 - Policies that discriminate on the basis of nationality of ownership of factors of production and
 - Policies that affect *entry* into a market – through whatever mode of supply, and/or the *operation* of firms (Warren and Findley, 2000; Deardorff and Stern, 2006).



Discriminatory vs. non-discriminatory barriers

Table 1. A Typology of Policies Affecting Trade in Services

| | Impact on entry/establishment | Impact on operations |
|--------------------|---|---|
| Non-discriminatory | E.g., A limit of two mobile phone providers permitted to operate in the country; | E.g., all retail banks must have personnel on call to monitor and service ATMs |
| Discriminatory | E.g., nationality requirements for senior managers of affiliates; maximum equity ownership limit for foreign investors; | E.g., car and fire insurance subject to additional capital requirements; cross-border provision of insurance services subject to price regulation |

- Discriminatory vs. non-discriminatory barriers can alternatively be thought about in terms of whether policies affect fixed or variable costs, and, whether they create rents for incumbent (domestic) firms.



Difficulties in measuring trade in services restrictiveness

- The availability of information on policies that restrict international trade in services is limited.
- This reflects the immense difficulty of identifying and quantifying barriers to services trade, which in turn is a reflection of the historical nontradability of most services.
- As services are not observed crossing borders – at best factors of production (labor, suppliers) may be observed – governments need to survey economic activity in order to get a picture of trade in services.



Measuring trade in services restrictiveness

- Two different approaches to assess the magnitude and impact of policy barriers to trade.
- Collection of information on applied policies and conversion into coverage/frequency indicators. The resulting indices can be used as regressors to explain observed measures of prices or costs (often the price-cost margin is the focus of estimation).
- Indirect methods such as calculation of price-cost margins by sector across countries or gravity regressions to estimate what trade flows “should be” and back out an estimate of the tariff equivalent of policies from the difference between estimated and observed flows. (some problems)



1st approach

- Information on policy can in principle be collected on a sector-by-sector basis, but is not available in the form of databases of the kinds that researchers can use when analyzing merchandise trade flows.
- However, what would appear to be the most obvious source of information of services policies – trade agreements – is incomplete and misleading given the limited coverage of country commitments.
 - A commitment exists to provide market access and national treatment for a sector and a specific mode of supply only if no exceptions are scheduled.



Methodology: index creation

- To directly measure the extent of policy barriers on a sectoral and cross-country basis a policy index of some kind is used.
- The policy indices are constructed by identifying existing policies towards entry/establishment and seeking to determine if policies differentiate between domestic and foreign firms.
- Sectoral experts are generally required to identify potentially pertinent policies and to assign relative weights to them.



An example: distribution services

- In the case of distribution services, a country may have restrictions on
 - Nationality of workers.
 - Limits on operating hours.
 - Restrictions on size and location.
 - Rules that prevent advertising through specific types of product promotions.
 - Limits on the temporary entry of workers (engineers, executives, etc.).
- A different weight is going to be attributed to each of these policies.



Methodology: assigning weights

- There are several ways in which the weight of different barriers in a restrictiveness index can be assigned.
 - Usually they reflect the judgement of knowledgeable investigators as of the importance of each barrier. This method is inherently subjective.
 - Apply factor analysis
 - Another approach is not to construct an index at all but to use the proxy measures of each barrier separately in the empirical analysis.



Methodology: estimation

- Once indices of policy have been constructed, the usual approach is to use them to estimate their
 - Price and/or cost effects
 - Impacts on quantities
- In these estimations controlling for standard determinants of performance for the sector concerned is necessary.
- Difficulties arise since data on more than just the barriers themselves is needed.



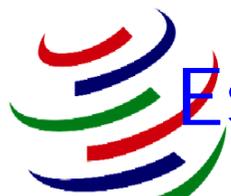
Further estimation problems

- Impossibility to distinguish the effects of nondiscriminatory regulation from discriminatory policies.
- Regulations generally will increase costs of production for firms, and may result in an exclusion of new entry, thereby increasing prices.
- When regulation is motivated by market failures created by the characteristics of specific service industries price impacts may be social welfare enhancing.



STRI: existent estimates

- Much of the existing research mapping policies into “restrictiveness indices” has been done by and for the Australian Productivity Commission.
- This work suggests that barriers to services trade appear to be substantial, especially for modes 3 and 4, in the sense that there is significant discrimination against foreign providers of services (Findlay and Warren 2000).
- The various restrictiveness indices suggest there is significant variation in the estimated extent of discrimination against foreign providers.
- Foreign discrimination tends to be higher in the developing countries that are in the sample.



Estimates of impacts of services policies

| Sector | Source and period covered | Measure | OECD countries | | | Developing countries | | |
|------------------------------------|--------------------------------------|--|----------------|----------|-------|----------------------|----------|----|
| | | | Simple average | σ | N | Simple average | σ | N |
| Maritime shipping | Clark, Dollar and Micco (2001); 2000 | Percentage impact on shipping costs of mandatory use of certain port services | 2.0 | 2.6 | 21 | 5.6 | 3.5 | 32 |
| Air transport : economy fare | Doove et al. (2001); late 1990s | Estimated increase (%) in fares over an estimated "free trade" level for a set of bilateral routes | 30.6 | 19.5 | 23 | 63.9 | 19.6 | 12 |
| Air transport : APEX discount fare | Doove et al. (2001); late 1990s | Estimated increase (%) in fares over an estimated "free trade" level for a set of bilateral routes | 8.9 | 4.4 | 23 | 16.8 | 3.5 | 12 |
| Retail food distribution | Kalirajan (2000); | Impact on costs of barriers on foreign establishment | 2.7 | 1.7 | 12 | 2.3 | 3.2 | 6 |
| Retail banking | Kalirajan et al. (2000); 1996-97 | Percentage impact on net interest margins of discriminatory policies | 11.8 | 11.6 | 7 (a) | 31.8 | 19.0 | 9 |
| Engineering | Nguyen-Hong (2000); 1996 | Impact of barriers to FDI on price cost margins (%) | 5.2 | 4.1 | 14 | 8.4 | 4.3 | 6 |
| Mobile telecom | Doove et al (2001); 1997 | Price impact (%) of regulatory policies relative to a notional benchmark regime | 26 | 27 | 24 | 21 | 15 | 18 |
| International telecom | Doove et al (2001); 1997 | Price impact (%) of regulatory policies relative to a notional benchmark regime | 73 | 61 | 24 | 34 | 9 | 18 |



Quantifying trade in services barriers: some challenges

- A challenge for the analysis of the effects of policies is to consider the relationships between modes of supply for a specific service and the price/cost impacts on margin services (producer service inputs).
- The implications of trade liberalization in services are tied closely to the mode of liberalization (establishment or cross-border trade) and to the underlying market structure.
- Because many services operate as margin sectors (facilitating exchange, such as banks in the savings-investment market and transport firms in the international goods market), the implications of liberalization are closely tied to gains from trade in other sectors (Francois and Wooton, 2006).



Other challenges

- Another challenge is to determine whether observed price-cost margins or estimated tariff equivalents reflect real costs or rents.
- If the policies generate real costs, removing them may give rise to much greater welfare gains than is the case if the policies generate rents that are captured by domestic agents.
- If there are rents there is also the possibility that policy reforms result in international transfers from domestic producers to foreign firms.



G. WHAT HAS BEEN DONE
AND WHAT
COULD BE DONE



What has been done

- The literature on trade in services has grown significantly since the late 1980s. The factors that determine trade and investment flows, the effects of such flows, their importance and the types of policies that affect them are now much better understood.
- That said, the current state of knowledge still leaves much to be desired.
- Much uncertainty continues to prevail regarding the determinants of trade in services, the extent to which countries restrict trade and the impact of past or prospective liberalization – the magnitude of (potential) net gains, their distribution, and the associated adjustment costs.



Data limitations and challenges

- The lack of comparable cross-country, time series data on services output and prices, the limited availability of bilateral trade and investment flow statistics, and the very patchy coverage of data on “foreign affiliate trade in services” and mode 4 transactions explain the paucity of empirical research and policy analysis.
- Progress has been made on the methodological front, including the development of an international manual and methodology to collect services trade statistics.
- What is needed now is implementation—which in turn will depend on advocacy from and willingness by the private sector to support such a global venture.



Possible avenues for future research

- Services are an engine of export growth for some countries (India) and are a key determinant of the competitiveness of all firms in open economies, no matter what they produce.
- To better understand the previous mechanisms research in the following areas is important:
 - The interaction between services policies, the availability of new or cheaper services, and the productivity of firms and farms in countries.
 - The extent to which services access and use is a determinant of TFP at the firm level.
 - The role of services (and services policies) in expanding product variety more generally and diversifying the export bundle of countries



Possible avenues for future research

- More research on the relative importance of policies that discriminate against foreign providers as opposed to domestic regulation that applies to all firms whatever their nationality is another priority.
- This is an important question from a national policy reform perspective, and also has implications for international cooperation.
- Research on the political economy of services trade and policy reform is also important since it has implications for the design of policy reform.