

Service Trade Liberalization: Some Political Economy Considerations

K.C. Fung
Department of Economics
University of California
Santa Cruz
CA 95064
USA

Alan Siu
HIEBS
School of Economics and Finance
University of Hong Kong
Pokfulam Road
Hong Kong

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1. Introduction

The three major areas of negotiations for the Doha Round of trade talks are in service trade liberalizations, cuts in agricultural subsidies and protections and reductions of industrial tariffs. Negotiations over agriculture prove to be very difficult, with France and other European Union (EU) members being reluctant to provide deeper cuts in subsidies and protections in the sector than what the United States and members of the G-20 such as Brazil and India would want. Some analysts have argued that in order to move the negotiations forward, various governments (particularly developing economies in the World Trade Organization WTO) have to switch gear and start showing concessions in sectors that provide benefits to the richer countries such as France (Financial Times, December 2, 2005). This will provide concrete incentives for industrialized countries to liberalize their agricultural sectors.

There has been a very large literature on trade liberalization associated with the WTO. On liberalizations of selective sectors such as services, many influential and insightful papers have also been written. Two early important papers are by McCulloch (1987, 1990). Other papers include Sapir 1998, Hoekman and Messerlin 2000, Hoekman and Carlos Primo Braga 1997, etc. However, while

earlier contributions are substantial, in terms of policy-motivated theoretical pieces on liberalizing trade in services, there have been relatively few by comparison.¹

At this conference, we are celebrating Professor McCulloch's many contributions to the field of international economics. We wish in particular to highlight her seminal work in trade in services. In this paper, we thus aim to provide a simple, tractable model of the political economy of the service sector liberalization in the context of the Doha Round trade negotiations. The model, while simple, will allow us to capture some of the important stylized features of the service sector that are often alluded to in the literature (see for example McCulloch 1987, Hoekman and Messerlin 2000, Warner 2000, Sauve and Wilkie 200). Furthermore, the model will also permit us to consider the links between domestic service industry liberalization and liberalization in the trading partners' agricultural sector.

It is well known that according to the General Agreement on Trade in Services (GATS), there are four types of trade in services. Both Karsenty (2000) and Ito and Krueger (2003) discuss these modes extensively. They are first, cross-border trade in which services can be produced in one country and delivered to another economy. For example, banking services provided to foreigners via mail or telephone is counted as exports of services. Second, trade in which consumption

¹ Some recent exceptions include Francois and Wooton 2001, 1999.

occurred abroad, i.e. domestic residents go abroad to consume the products. An example here is tourism. Third, services are provided via foreign direct investment. That is, sales are provided to foreign nationals by foreign branches and subsidiaries of the home entities. This includes foreign subsidiaries of insurance companies, hotel chains, etc. Fourth, services are provided by movement of natural persons. This category includes people such as consultants, accountants, doctors, etc. moving from the home country to the foreign country to deliver the services.

There are also several stylized economic characteristics of the service industries that affect trade liberalization in the sector (see for example Feketekuty 2000, Francois and Wooton 2001). In this paper, we will attempt to capture the following.

- (i) service trade barriers are often perceived to be qualitatively different from trade barriers in goods.² Instead of tariffs and quotas, trade barriers in services are often closer to regulatory barriers (e.g. regulations in telecommunication) and entry barriers (e.g. restrictions against entry by foreign banks).
- (ii) Second, due to barriers to entry and other inherent economic characteristics, service industries often exercise various degrees of

² For attempts to measure trade barriers in the service sectors, see Dee, Hanslow and Phamduc 2003.

market power. In other words, they are quite often imperfectly competitive.

- (iii) Third, service industries, in particular, producer services, are used as “lubricants” for other industries (e.g. in trade-related services, finance, distribution, etc.) This last feature often leads observers to call on the governments of the developing countries to recognize the virtues of unilateral liberalization and go ahead with domestic reforms in the service industries without regards to global negotiations. While this is eminently reasonable and a fair amount of reforms have actually taken place (particularly in East Asia), it may strike one as unrealistic given that most governments, may be particularly governments in developing countries, will be subject to influences by special interests.

We argue here that to discuss the issue of service trade liberalization (with the above characteristics); it is more appropriate to examine a model with explicit political-economic influences. We will in the next section construct a simple basic model highlighting the features above. In section 3, we will then extend our model to discuss what we may need to do to facilitate service trade liberalization in a world where rents in the service industries are captured by insiders. In section 4, we conclude.

2. The Basic Model

To start our model, consider an open economy (a developing country) with two sectors: one formal sector that is open to international liberalization negotiations and one informal sector that is not open to trade. The formal sector consists of three industries: the service industry, the manufacturing industry and the agricultural business (agribusiness) industry. The producer service industry is regulated by the government so that there are trade barriers in the form of entry barriers against foreign affiliates. The manufacturing industry is also import-competing. But the agribusiness industry is producing for home consumption as well as for exports. Here we are attempting to depict a situation of a developing economy that may be involved in the Doha Round of trade talks (e.g. Brazil). It is exporting agricultural products but importing manufacturing goods and services.

The informal sector produces the numeraire good N using the mobile homogenous labor only. The technology for the numeraire good is constant return to scale. The mobile factor is supplied inelastically to the developing country's economy. As long as the informal sector is active, the constant marginal product of the mobile factor fixes its economy-wide return to unity.

Total population in the economy is normalized to one. A fraction α^s of the population are the owners of capital in the service industry, a fraction α^m of the population are the owners of capital the manufacturing industry, while α^a is the

fraction of the population who are capital owners in the agricultural business. The remaining $1 - \alpha^s - \alpha^m - \alpha^a$ (hence after, α^w) individuals are the owners of the mobile factor (labor), which are used in both formal and informal sectors, and earn a fixed return normalized to one. The owners of the mobile factor are assumed to be inactive politically. Owners of capital organize as interest groups for political activity.

The service industry has n identical domestic firms³, each producing a homogenous service output s at a price $P^s(S)$, where $S = ns$. Each firm in the industry produces its service output s with an identical production function f using capital and the mobile factor labor. With the standard properties of the production function⁴, we can generate the dual cost function C^s , which depends on the quantity of the producer service output s and the factor prices r and w .⁵ As discussed earlier, one important characteristics of service industries is that they tend to have market power, so we assume that these firms are Cournot-Nash oligopolists. Each firm's profit function π^s is:

$$\pi^s = sP^s(S) - C^s(s, w, r) \quad (1)$$

The first and second order conditions are:

$$d\pi^s/ds = \pi^s_s = P + sP' - C^s_s = 0 \quad (2)$$

³ We can allow the industry to contain some foreign firms as well. The results below will not be altered.

⁴ f is continuous from above, quasiconcave and is nondecreasing.

⁵ The wage rate is actually fixed at one.

$$d \pi^s / d^2 s = \pi_{ss}^s = 2P' + sP'' - C_{ss}^s < 0 \quad (3)$$

For the liberalization experiments that we want to study, we assume that a stable Nash equilibrium is holding:

$$D = P'n + sP''n - C_{ss}^s < 0 \quad (4)$$

$$K = P' - C_{ss}^s < 0 \quad (5)$$

These stability conditions are derived formally in Seade (1980). We assume that these service providers are shielded from foreign competition. An increase in n will denote foreign entry and a liberalization of service trade.⁶ Using (1) to (5), we can show that:

$$S_n = s(P' - C_{ss}^s) / D > 0 \quad (6)$$

$$\pi_n^s = -s(P' - C_{ss}^s) \pi_{ss}^s / D < 0 \quad (7)$$

where the subscripts n denotes partial derivatives.⁷ A reduction of the trade barriers in the service industry will thus increase the total volume of services (which will reduce the price of providing the service). But foreign entry will also lead to a reduction of the incumbent domestic service firms' profits.

Next we will turn to the manufacturing firms and the agribusinesses. The profit functions of each can be represented by:⁸

⁶ We have thus focused on a particular mode of service trade, namely trade via the movement of foreign firms to the domestic market.

⁷ The derivations of these partials are available upon request.

⁸ We can assume that the capital owners in the manufacturing industry are earning rents in an imperfectly competitive environment and that the capital owners in the agribusiness are owners of the specific factor—capital in each industry. An expansion of trade due to trade liberalization in the EU or the US agriculture will allow the capital owners in this agricultural industry to earn a higher real rate of return.

$$\Pi^m = mP^m(M) - C^m(m, w, r, P^s) \quad (8)$$

$$\Pi^a = aP^a(S) - C^a(a, w, r) \quad (9)$$

Notice that the price of the service output is used as an input to the manufacturing industry in (8). This captures a second feature of the service industry, in which services such as distribution, trade-related services are used as “lubricants” for other industries.

2.1 Political Economy of Trade Liberalization in the Service Industry

Next we want to develop the political-economy side of the model, which would allow us to discuss trade liberalization in the service industry in a more realistic setting. The model is similar in structure to Grossman and Helpman (1994), Rama and Tabellini (1997), and Fung and Lin (2001). To do this, we first turn to the demand side of the economy. All individuals in this developing economy are assumed to have the same preferences and they maximize the utility function:

$$U^i(N, m, a) = N^i + u^i(m, a) \quad (10)$$

where $i = s, m, a$ and w (individuals in each of the four groups); N^i is the consumption of the numeraire good. The function $U(\cdot)$ is differentiable, increasing and strictly concave in all arguments. Utility is maximized subject to the budget constraint:

$$I^i \geq N^i + P^s s + P^m m + P^a a \quad (11)$$

where I^i is the net income of individual I in each group.

From Equation (10) and Equation (11), the indirect utility function of each individual in group i has the form:

$$V^i = I^i + CS^i(P^m, P^a) \quad (12)$$

where CS = consumer surplus derived from consumption of the manufacturing good and the agricultural product. We assume that the producer service output is not directly consumed by individual consumers.

The gross indirect utility functions for each individual in each group are; $V^s = n\pi^s/\alpha^s + CS^s$, $V^m = \pi^m/\alpha^m + CS^s$, $V^a = I^a + CS^a$, $V^w = I^w + CS^w$, where I^a is the return to the specific capital in the agricultural sector and I^w is the fixed return to the mobile factor.

With no lobbying, we assume that the policymakers can choose an appropriate level of n to maximize social welfare. The government's objective function is given by:

$$\text{Max}_n W = \alpha^s V^s + \alpha^m V^m + \alpha^a V^a + \alpha^w V^w$$

where W is the social welfare level which can be attained in the absence of any political contributions to the government. The socially optimal n is then given by $n^w = \arg \max W$.

The lobbying structure follows Grossman-Helpman (1994) framework which applies Bernheim and Whinston (1986) study on menu-auctions and common

agency. The various interest groups, as bidders, offer various contribution schedules corresponding to different entry barriers to the government at the first stage. The government, as the auctioneer, sets n by evaluating the weighted sum of contributions and aggregate social welfare at the second stage. An equilibrium is a set of contribution schedules and the politically-determined number of producer service providers.

The equilibrium contribution schedules imply that the interest groups make contributions up to the point where the marginal benefit from the resulting change in the number of providers exactly equals to the marginal contribution costs. In equilibrium, the contribution schedules of each interest group are given by:

$$\alpha^i V_n^i = \lambda_n^i(n) \quad (13)$$

where i is the lobby group, $\lambda_n^i(n)$ is the contribution schedule provided by interest group i and they are differentiable at n .

2.2 Lobbying by the Producer Service Providers

First we assume that only the producer service providers will lobby to restrict entry to their own industry. The government's objective is to maximize the possibility of being reelected. With lobbying, other than providing a high standard of living to the general public, the government has another resource to enhance its possibility of being reelected, i.e. the contributions provided by the interest groups.

With lobbying, the government's objective function contains not only the aggregate social welfare but also the total level of political contributions. The objective function can be written as

$$\text{Max}_n V^G = (\beta^s - 1)[\lambda^s(n)] + W \quad (14)$$

where $\beta^s > 1$ represents the weight that the government puts on the contributions provided by the interest groups.⁹

Using (13) and (14), the first order condition of the government's optimization problem is:

$$V_n^G = \beta^s \alpha^s V_n^s + \alpha^a V_n^a + \alpha^m V_n^m + \alpha^w V_n^w = 0 \quad (15)$$

The politically-determined number of providers is given as $n^p = \arg \max V^G$. By totally differentiating (15) with respect to n and β (and evaluating β at 1, we can show that lobbying by the service providers will lead to entry barriers. By restricting entry, the economic rents of the incumbent service providers are increased. In the context of the Doha Round, we assume that the any relaxation of the entry barriers will lead to entries by the foreign firms. These entry barriers thus constitute trade barriers. So far we have:

Lobbying by the service providers leads to trade restrictions in services

3. Liberalizing Producer Service Trade Restrictions

⁹ $\beta > 1$ implies that the government values a dollar offered by the interest groups more than dollar in the hands of the public.

3.1 Cross-Cutting Lobbying

Given that trade restrictions are the result of explicit lobbying by the insiders of the service industries and that the economic rents are captured by these incumbents, what can one do to try to relax these politically-determined trade barriers? Suppose now we allow the manufacturing firms to lobby as well. The objective function of the government becomes:

$$Max_n V^G = (\beta^s - 1)[\lambda^s(n)] + (\beta^m - 1)[\lambda^m(n)] + W \quad (16)$$

where $\beta^m > 1$ is the weight attached by policymakers on the contributions made by the manufacturing capital owners. The first order condition for maximization of this modified objective function is:

$$V_n^G = \beta^s \alpha^s V_n^s + \alpha^a V_n^a + \beta^m \alpha^m V_n^m + \alpha^w V_n^w = 0 \quad (17)$$

Essentially, the government places more weight on the interests of both the incumbent service providers as well as the manufacturing capital owners because they provide funds to the government. What are the effects of allowing an industry to lobby for the entry and trade policy in another industry? That is, what are the effects of allowing *cross-cutting lobbying*? We can see the result by totally differentiating (17) with respect to n and β^m . The resulting politically-determined number of producer-service providers will be larger than that when only the service providers are allowed to lobby. Intuitively this is precisely because producer services are used as *lubricants* in other industries. The manufacturing

capital owners lobby to relax the trade and regulation barriers in order to allow foreign affiliates to enter the service industry. With a larger number of providers, the price of the service output declines, which raises the profits to the owners of manufacturing firms.

In reality, existing regulations in the service industries are often opaque, complex and convoluted. For example, information and specific knowledge about the financial industry or telecommunication industry are difficult to master. That is why rents in services are often captured by insiders. To facilitate cross-cutting lobbying, these regulations should be made more transparent and consistent. The process of government policy making should also be made more transparent, which is not always the case, particularly in developing economies. We have:

Allowing cross-cutting lobbying by the manufacturing industry will enhance trade liberalization in the service industry. More transparent policymaking and more transparent regulations in the service sector will facilitate such cross-cutting lobbying

3.2 State-Owned Service Providers

In many service industries of developing economies, the provision of services is often done by state-owned enterprises. Suppose we assume that $\theta < n$ is the number of incumbent service providers in the economy. Bureaucrats and government

ministries directly own these entities and the economic profits of the state-owned firms go directly to the treasury of the government. Both the government bureaucrats and ministries derive explicit and implicit income from the state-ownership of these service providers. The maximization of the government objective function becomes:

$$V_n^G = \beta^s \alpha^s V_n^s + \alpha^a V_n^a + \beta^m \alpha^m V_n^m + \alpha^w V_n^w + \alpha^b V_n^b = 0 \quad (18)$$

where V_n^b is the impact of a relaxation of the trade restriction in the service industry on the utility of the government bureaucrats in control of the state-owner service providers and α^b is the fraction of the population who are government bureaucrats who control these state-owned service providers. By differentiating (18) with respect to n and α^b , we can easily see that reducing the number of government owned service providers will lead to a more relaxed policy towards service trade. The reason is simple: trade restrictions allow government bureaucrats to capture some of the economic rents in the service industry. These rents are proportional to the number of service firms under the government control. Thus we have:

Reducing the number of state-owned service providers will enhance trade liberalization in the service industry

3.3 Cross-Sectoral Cross-Country Negotiations

In the literature, there has always been a notion that cross-sectoral negotiations will enhance liberalizations across the board. For the current proposed cuts in subsidies and tariffs in the EU farm sector, it is clear that these cuts are contingent on “satisfactory” openings in the service industries in the developing countries. In our model, this feature can be seen by incorporating lobbying by the agribusinesses, with the first order condition the government objective function being:

$$V_n^G = \beta^s \alpha^s V_n^s + \beta^a \alpha^a V_n^a(t) + \beta^m \alpha^m V_n^m + \alpha^w V_n^w + \alpha^b V_n^b = 0 \quad (19)$$

where β^a is the weight attached by the policymakers on the contributions provided by farmers and t is the farm tariff rate imposed by the EU. Without cross-sectoral negotiations, the impact of liberalizing the service industry on the domestic farmers is only through their consumption of the lower-priced manufacturing goods. With linked negotiations, a larger n will also lead to a lower t , which raises the returns to the specific capital owned by the lobbyists from the domestic farm sector. By differentiating (19) with respect to n and t , we can see that linked negotiations will lead to an easing of the trade barriers in the service sector. We thus have:

Cross-sectoral cross-country negotiations will enhance trade liberalization in the service sector

4. Conclusion

Professor Rachel McCulloch has been influential in international economics in many areas. One area that she has made early seminal contributions is trade in services. To celebrate her work, we provide in this paper a simple theoretical model that depicts the various facets of trade liberalization in the service sector in the context of the Doha Round trade talks. We first build a model that incorporates three stylized features of the service sector: trade barriers often occur in the form of entry barriers; producer service providers are used as lubricants in other industries and service firms often have market power. To discuss liberalizing the service sector, we feel that an explicitly political-economy model along the line pioneered by Grossman and Helpman would be more appropriate than the depiction of a welfare-maximizing government. Using this simple formal model, we show that lobbying by the service providers lead to trade restrictions in the service industry.

We next use this model to highlight how it can be used to discuss several interesting issues in the context of global trade negotiations. First, it is seen that allowing cross-industry lobbying (in the sense of allowing the manufacturing capital owners to lobby for influences in the service industry's entry restrictions) will enhance trade liberalization in the service sector. Next we also note that in many developing economies, service providers are often owned by the state.

Using this model, we can also show that reducing the number of state-owned service providers will ease trade restrictions in the service industry. Lastly we consider the issue of cross-sectoral negotiations. Proposed liberalization by the EU and the US are contingent upon “satisfactory” openings in the service sectors in the developing countries. Using this model, we show that such linked negotiations will indeed lead to more trade liberalizations in the service sector.

The contribution of this paper is to provide a more formal structure in discussing various political economy aspects of the Doha Round trade negotiations, with a focus on the service sector negotiations. While we claim no new technical innovations, we do see the potential of using this simple, tractable model to analyze a variety of issues arising from global trade talks. Furthermore, this model can provide us with a foundation to develop empirical work in the future.

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