Government Procurement:
Market Access, Transparency, and Multilateral Trade Rules*

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Abstract: The effects on national welfare and market access of two important public procurement practices (discrimination and non-transparency) are analyzed with an eye to the ongoing international discussions on procurement reform in the Doha Round as well as regional integration agreements. The analysis suggests that the welfare payoffs of adopting mechanisms that foster domestic competition and transparency are likely to be greater than the return to efforts to ban international discrimination. However, improved transparency is unlikely to result in significant enhancements in market access, which in turn raises questions about the likely enforceability of a WTO transparency agreement.

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Introduction

With the conclusion of the Uruguay Round and the creation of the World Trade Organization (WTO), multilateral disciplines applying to all WTO members were established in many areas. One substantial exception is in government procurement, where the principles of non-discrimination have only been accepted on a plurilateral basis. The absence of general trade policy disciplines on public purchasing practices is therefore a major "hole" in the WTO edifice. Developing countries have been subject to substantial pressure to agree to multilateral disciplines limiting their ability to discriminate in favor of domestic firms when allocating contracts. Their vigorous resistance to such pressure led a number of WTO members in the late 1990s to propose that multilateral efforts be confined to attaining agreement on improving transparency in this area.[1] At the December 1996 WTO Ministerial meeting in Singapore it was agreed to establish a Working Group with the mandate to study on transparency in government procurement practices and develop "elements for inclusion in an appropriate agreement" (WTO, 1996, p. 6).[2] At the 2001 WTO Ministerial Conference in Doha, Qatar, agreement was reached to launch negotiations on transparency in government procurement in 2003, on the basis of modalities that must be agreed by explicit consensus.

Given that the WTO is a forum to negotiate and enforce market access opening commitments, not surprisingly a major motivation of pursuing transparency is to improve the ability of foreign suppliers to contest procurement markets. Thus, an important question is what effect transparency will have on market access. This paper examines both this question as well as

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[1] The United States is playing a lead role in this connection. US legislation requires the United States Trade Representative (USTR) to monitor foreign procurement policies that deny access to markets for American goods and services, and procurement policies figure prominently in USTR's annual *Foreign Trade Barriers Report*. The Clinton Administration made public procurement a priority trade policy issue, linking this to the broader issue of corruption. "This Administration is determined to ... push initiatives to clean up government procurement practices around the world" (*Financial Times*, May 1, 1995, p. 5). In April 1996, largely at the insistence of the US, OECD members agreed not to allow firms to write off bribes against tax obligations (*Oxford Analytica*, April 18, 1996).

the likely impact on national welfare of alternative multilateral disciplines on government procurement policies so as to permit an assessment of whether reforms that enhance welfare also enhance market access, and visa versa. Traditionally, the formula for successful trade reform under the WTO umbrella has typically involved those initiatives that enhance national welfare through improving market access.[3] A major question is whether any proposed set of multilateral procurement disciplines does so. Although the analysis is largely motivated by WTO discussions, it applies also to regional efforts to agree on common rules on procurement. Procurement disciplines are, for example, on the agenda of the Free Trade Area of the Americas (FTAA) initiative, and also will figure in future efforts to expand the coverage of Euro-Mediterranean Partnership Agreements.

We argue that, in many circumstances, explicitly discriminatory and non-transparent procurement policies have little effect on market access, although they can have detrimental effects on national welfare. What matters more for efficient procurement outcomes is the degree of competition in national markets; and so ancillary policies—especially competition policies and the restrictiveness of foreign direct investment (FDI) regimes—are a major determinant of the effects of procurement favoritism.[4] Insofar as procurement policies create excess profits in an industry, these will be eliminated over time through entry. Indeed, an implication of this analysis is that removal of procurement preference policies need not result in greater sourcing from foreign firms. In such circumstances, liberalization cannot reverse the detrimental effect on imports of prior procurement discrimination.

The market access implications of non-transparency center on the argument that absence of information on procurement opportunities and lack of 'due process' may impede the ability of foreign firms to bid for contracts. A lack of transparency may also generate opportunities for corruption. Even though improving transparency is typically beneficial from a national welfare perspective, we show that reforms to this end need not enhance market access; and the latter may detract from the attractiveness of a WTO agreement on transparency in procurement. This

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[2] For an analysis of the origins of this Working Group, and its relationship to the Uruguay Round GPA, and the likely consequences of strengthening transparency provisions in the GPA, see Arrowsmith (1997).

[3] As is the case in the small open economy that lowers its tariffs as part of a multilateral trade agreement.

[4] Foreign direct investment is critical because many of the products purchased by government entities are effectively non-tradable, including many services. In such cases, procurement preferences will only be binding if foreign firms can contest the market through FDI and government entities differentiate across firms on the basis of their "nationality".

finding also implies that such an agreement may be subject to only weak enforcement as foreign nations will not have strong incentives to bring cases on behalf of their frustrated exporters.

The paper is organized as follows. After a brief discussion on the possible rationales for discrimination (Section 1), we analyze the impact of the most egregious form of discrimination—a ban on government purchases from foreign suppliers (Section 2). Then, we analyze the impact of a less extreme form of discrimination, that of so-called price preference polices (Section 3). These analyses use a straightforward partial equilibrium framework, which we extend in Section 4 to include different configurations for firms' costs. In Section 5 we analyze instances where purchasers either have a strong (rational) preference for being in close geographic proximity to suppliers, or markets where products are non-tradable (such as services). The effect on national welfare and market access of non-transparent procurement regimes is examined in Section 6, with implications for the discussions on procurement reform at the WTO outlined in Section 7. Conclusions are offered in Section 8.

1. Existing analyses of the motives for and effects of discrimination in procurement.

The rationales for discrimination in procurement vary, but in most instances revolve around industrial objectives, national security considerations, or other non-economic objectives. The latter include policies that reserve certain types (or a certain share) of contracts for businesses owned by minorities, for firms located in certain geographic regions, or for small and medium-sized firms. From a normative perspective, of course, a key question is whether discrimination in procurement is an efficient way of attaining the underlying objective. Efficiency is particularly important in this policy area where it is often claimed that an overarching goal of procurement disciplines is 'value for money.'[5]

In the last 25 years a small literature has developed focusing on the effects of international discrimination in procurement. Much of this literature considers procurement discrimination in perfectly competitive markets and, in partial equilibrium settings, typically finds no efficiency rationale for discrimination.[6] In such settings, observed procurement

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[5] Having said that, it is not difficult to conceive of models where a government buyer with market power could purchase goods at prices below those in a perfectly competitive market and distort the allocation of resources.
[6] In addition to the seminal analyses of Baldwin (1970) and Baldwin and Richardson (1972), relevant contributions assuming competitive markets include Lowinger (1976), Herander and Schwartz (1982), Joson (1985), and Kim (1994). Miyagiwa (1991), Branco (1994, 1999), Laffont and Tirole (1993), and Trionfetti (2000) extend the analysis to consider imperfect competition.

discrimination is likely to be driven by industrial policy or other non-economic objectives. In contrast, in markets characterized by imperfect competition and a small number of firms, discriminating against foreign bidders may have an efficiency rationale. McAfee and McMillan (1989) show that discrimination may increase national welfare *if* domestic firms have a cost disadvantage in producing the products to be procured *and* only a limited number of firms (foreign and domestic) bid for the contract. An explanation for this finding is as follows: a policy that gives preferences to domestic firms reduces the effective competition they face from foreign firms and so induces domestic firms to raise their bids. However, foreign firms respond by lowering their (pre-preference inflated) bids. If the probability of a low cost foreign firm winning the contract is large enough, this can result in a reduction in the government's expected procurement costs. Here, price preferences effectively shift profits towards domestic firms while potentially reducing government outlays. Even if the cost structure of domestic and foreign firms are identical and account is taken of the social cost of distortionary taxation, discrimination may be optimal simply because foreign profits do not enter into domestic welfare (Branco, 1994; Vagstad, 1995). In the small numbers context assumed by these models, prices will exceed marginal costs, so that shifting demand to domestic firms may also reduce price-cost margins as domestic output expands (Chen, 1995).

Rationales for preferences hold in other settings too. Even if there are many potential suppliers, discrimination may be beneficial to the procuring entity if the products are intangible or if monitoring contractors and enforcing compliance is costly. In such situations by paying quasi-rents to contractors procuring bodies can use the threat of losing repeat business to increase the likelihood of better performance (Laffont and Tirole, 1991; Rotemberg, 1993).[7] Moreover, geographic proximity may be a precondition for effectively contesting procurement markets— making some products, in particular services[8], in essence non-tradable. Problems of asymmetric information and contract compliance may imply that entities can economize on monitoring costs by choosing suppliers that are located within their jurisdictions (Breton and Salmon, 1995). In turn this will make it more difficult for foreign firms to successfully bid for contracts, even if the

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[7] Of course, this is not necessarily the optimal instrument. Naegelen and Mougeot (1998) show that alternative instruments, such as cost targets, can be more efficient. Governments may also want to consider dual sourcing in this situation, see for example McGuire and Riordan (1995).
[8] Given that services are often the largest category of purchases by governments (Francois, Nelson and Palmeter, 1997)—and increasingly so in countries that have been pursuing outsourcing and contracting policies—this has

goods or services involved are tradable. If cross-border trade is frustrated, then attention turns to whether there are barriers to entry through establishment (FDI) and to how procuring entities decide whether suppliers are local "enough"—i.e., effectively raising the issue of which "rules of origin" are applied to foreign subsidiaries in the procurement context. An important question, then, is the extent to which the impact of procurement policy depends on the government's stance towards the degree of domestic and foreign competition, a point developed further below.

Even though there are a variety of situations under which discriminatory procurement can, in theory, enhance national welfare by lowering procurement costs, little is known about whether existing procurement discrimination has this effect. Even in the case where there are significant differences in production costs between domestic and foreign firms and only a small number of potential suppliers, simulation studies suggest that welfare gains are likely to be modest at best. Greater profits of domestic firms will tend to be offset by increased average prices paid by public entities, resulting in at most small welfare gains (Deltas and Evenett, 1997). Worse still, small deviations from the optimal policy eliminate those gains. And given that the optimal policy in each situation will depend on parameters that are unlikely to be observed by policymakers (such as the distribution of the bidders' costs and the expectations that each bidder has about each other bidder's actions), these findings suggest that in practice procurement favoritism is likely to be more costly than a policy of non-discrimination.[9]

In considering the implications for the multilateral trading system, there is interest in the effect of procurement policies on market access as well as national welfare. Given the long history of bargaining over market access in the multilateral trading system, our analysis will consider the effects of discrimination against foreign firms by state buyers on market access, as proxied by the level of imports. If these effects are small, then a nation's exporters are likely to perceive few benefits from negotiating a multilateral agreement on procurement. Consequently, such an agreement will do little to mobilize domestic support for a package of multilateral trade reforms, providing little counterbalance to the opponents of reform. Thus, even though market access is a different concept than national welfare, the extent of domestic political support for a

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potentially far-reaching implications for the assessment and design of multilateral disciplines for procurement practices.
[9] Most of the literature analyzing discrimination is static with technologies and market structures taken as given. To the best of our knowledge dynamics have only recently been investigated in Branco (1999), who shows that discrimination in favor of higher cost domestic firms can enhance their incentives to become more efficient,

welfare-improving trade agreement will depend in large part on its perceived impact on overseas market access.

2.   The effect of a ban on government purchases from foreign suppliers

In an influential paper Baldwin and Richardson (1972) analyze the impact on imports, prices, and national welfare of a ban on government purchases of foreign suppliers in a partial equilibrium perfectly competitive framework.[10] They conclude that *in the short run* a procurement ban only has an effect on domestic prices, net imports, and national welfare when government demand for the product is greater than domestic supply (at free trade prices). We show below that, in the case of a small open economy, once allowance is made for entry by new firms, a procurement ban may not have any *long run* effects either.

Our focus on partial equilibrium models can be justified on the grounds that, once one moves beyond the stylized two good model to a world of many goods, changes in government sourcing patterns across foreign and domestic suppliers need not affect national factor prices.[11] The focus on perfectly competitive markets is justified in part by empirical studies that suggest that price-cost markups tend to fall rapidly towards competitive levels once the number of firms in a industry reaches as few as five (Bresnahan and Reiss, 1991). Thus, in many situations procuring entities will be able to source from a large number of firms with little market power.

We use a standard supply and demand framework, where P_W is the world price of the good; P_C is the unit price paid by the domestic consumer; P_G is the unit price paid by the domestic government; $D_G(p)$ is the demand schedule of the domestic government; $D_T(p)$ is total domestic demand schedule; $S_H(p)$ is the short run supply schedule of the domestic industry; $LS_H(p)$ denotes is the long run domestic supply curve; ATC and MC are the average total and marginal cost schedules of the representative firm in the domestic industry, respectively; and π is the short run profit of the representative domestic firm. We also assume that the country is small (a price taker on world markets) so that a reduction in imports does not affect the terms of trade.

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providing a firmer foundation for interventionist policy in contexts characterized by asymmetric information and imperfect competition. Further work is required in order to explore the robustness of these findings.

[10] See also Herander and Schwartz (1982) and Deardorff and Stern (1998).

[11] In a two-good two-country model it is straightforward to show that shifts in government demand for a good towards domestic firms can generate general equilibrium effects. Indeed, in cases when government demand for tradables is large in the appropriate sense, such two-by-two models may well provide the basis for useful policy implications. However, in contexts where government demand for individual goods is not large, a partial equilibrium approach is probably more appropriate.

To establish a point of departure assume that there is free trade. That is, there are no tariffs or other impediments to trade. Each domestic firm has a U shaped average cost curve that reaches a minimum at level C*. The market is perfectly competitive, with domestic and foreign firms producing perfect substitutes. There is free entry and exit in the long run. In the short run the number of firms in the domestic industry is fixed. In the absence of a ban on government procurement from foreign firms, the long run equilibrium is portrayed in Figure 1. Free entry ensures that profits are zero in the long run, and that $P_W = C^*$. Free trade ensures that domestic consumers and the domestic governments pay the world price, $P_W = P_C = P_G$. Note that in this figure at the initial equilibrium price P_W, domestic industry output is greater than the government's purchases but is less than total domestic demand. In this case, the subsequent imposition of a ban on procurement from foreign suppliers has no effect on equilibrium prices, imports, and quantity traded. All foreign producers that previously supplied the government can find a domestic consumer to supply at world prices; domestic consumers that are abandoned by domestic firms who now supply the government can source foreign suppliers. Each domestic supplier is unable to raise the price charged the government, as other domestic suppliers are willing to step in at the existing world price.

Figure 2 portrays the case when government demand exceeds domestic supply at free trade prices. A procurement ban now implies that the supply decisions of the domestic industry can only be reconciled with the government demand schedule at a higher price, P_G. Since $P_G > P_W$, overall government purchases fall, domestic output rises, and the representative domestic firm makes positive profits. Domestic private sector consumers can still source from abroad, and do so, as foreign suppliers are willing to sell the good at a lower price than domestic suppliers. Overall imports fall from AC to BC. The procurement ban has an adverse effect on national welfare, creating consumption and production distortions equal to a deadweight loss of area ADB. Finally, domestic private sector consumer choices are unaffected by the procurement ban, and thus their welfare does not change. Thus, our framework replicates the principal findings of Baldwin and Richardson (1972).

Consider now the effects of allowing free entry of firms. This does not alter the analysis in Figure 1, as the imposition of a procurement ban does not alter the profitability of domestic firms. In contrast, in the case portrayed in Figure 2, a procurement ban raises the profits of domestic firms in the short run. This will induce other domestic firms to enter, expanding the

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total industry supply, and forcing prices down until profits are eliminated at $P_G = P_W$. This result obtains in part because of the assumptions that foreign and domestic firms have identical minimum long run average total costs[12], there are no other trade restrictions, and firm costs do not increase as the industry expands. The latter implies that the long run domestic industry supply curve $LS_H(p)$ is horizontal which, along with the government's demand schedule $D_G(p)$, implies that domestic sales to the government are given by the quantity at point B in the long run equilibrium. Under free entry, therefore, a procurement ban is only distortionary in the short run. (At point B, since $P_G = P_W$, there is no consumption distortion and, as production takes place at the lowest possible production cost in the long run, there is no resource allocation distortion either.)

In sum, the welfare consequences of a procurement ban depend not only on the relative size of government demand and domestic industry output at the free trade prices, but also on the strength of a nation's competition policy as reflected in the ease of entry and exit. The effects of imposing a procurement ban are summarized in Table 1.[13]

Table 1: Long run equilibrium impact of a procurement ban

Variable:	At initial free trade prices, P_w		
	$D_G(p_w) < S_H(p_w)$	$D_G(p_w) > S_H(p_w)$	
		No free entry	Free entry
Price	0	+	0
Domestic industry output	0	+	+
Quantity of imports	0	-	-
Domestic welfare	0	-	0

Key: 0: no impact; — : Decline; + : Increase.

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[12] While one might object to this assumption, several observations are in order. First, the assumption that both domestic and foreign firms share the same minimum level of long run average costs does not imply that they have the same cost functions or indeed access to the same technology. Second, if domestic and foreign firms do not have the same minimum level of long run average total costs then, in the absence of any trade barriers, it would have been impossible for both types of firms to potentially supply the domestic government in the initial long run equilibrium. Third, if in the initial long run equilibrium the foreign firms had lower costs than domestic firms, then domestic firms would not be supplying the domestic consumers either—and so would have had no sales. (That is, there would have been no domestic industry to shift government contracts towards!) Fourth, one can relax the assumption of identical minimum average total costs to allow for a foreign cost advantage so long as there is some international friction (such as international transportation costs) that exactly closes the gap between the minimum long run average costs of the foreign and domestic firms. Obviously, the latter argument has a "knife edge" property to it.

[13] One can question the assumption of constant industry costs that underpins the horizontal industry supply curve. Although in our view in many cases this will be appropriate in practice, we discuss the increasing industry cost case (upward sloping long run supply schedule) in Section 4.

The impact of removing a procurement ban is, therefore, also sensitive to entry. Suppose the market is in long run equilibrium and the ban is eliminated. In the case of Figure 1 nothing changes: the government need no longer buy from domestic firms, but has no incentive to switch to foreign firms as $P_G=P_W$. In the case of Figure 2 with no entry, the pre-liberalization long run equilibrium is point D, where $P_G>P_W$. Removing the procurement ban would shift the equilibrium back to point A, reducing the domestic industry's output, eliminating the rents and the consumption distortion and increasing imports from BC to AC. Procurement liberalization would increase imports, eliminate the distortions created by the ban, and so improve national welfare. This conclusion does not carry over to the free entry case. If point B represents the level of domestic firm's sales to the government in the long run equilibrium before liberalization, removal of the ban does not alter the long run equilibrium price as every domestic supplier can find a buyer at this price, and every domestic buyer can find a domestic or foreign supplier. No one has an incentive to alter their plans, and removal of the procurement ban will not change the level of imports or the output of the domestic industry. Put another way, the damage has already been done: removing a procurement ban need not restore the pre-ban market outcomes.

3.   The effects of price preference policies

In practice, rather than ban all purchases from foreign firms outright, governments often employ price preferences to discriminate against foreign suppliers.[14] That is, the government inflates the actual supply price by ρ% (where $\rho>0$ is the margin of preference). If the foreign firm's 'preference inflated' price is below that bid by domestic firms, the government purchases from the foreign seller at its actual (not its preference inflated) price. Otherwise, it buys from the lowest price domestic supplier.

The analogue to Figure 1 is represented in Figure 3: at free trade prices the quantity demanded by the government is less than or equal to the quantity supplied by the domestic industry. Irrespective of the size of the parameter ρ, the price preference policy results in the same reallocation of sales between firms observed under a procurement ban. Government purchasers evaluate the supply price of foreign suppliers as $(1+\rho) P_W$, and domestic suppliers as

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[14] In the absence of a formal procurement ban against foreign suppliers, the best justification for assuming that a government procurer does not source from abroad is that this is the combined effect of all of its discriminatory procurement policies.

P_W. Switching their purchases to domestic suppliers has no effect on prices, imports, domestic output, and national welfare. Similarly, removal of the preference policy has no effect.

When government demand exceeds domestic supply at free trade prices, two cases must be distinguished. The first is where the percentage difference in prices between P_W and P_G is less than the price preference (Figure 4). Starting from the original long run equilibrium at point A, the preference policy effectively "prices" the foreign supplier out of the market since their supply price to the government rises to $P_W(1+\rho)$. Here, government demand can only be met by domestic suppliers at a higher price P_G. In the absence of entry, point D is both the short and long run equilibrium, and similar to a procurement ban, the price preference policy creates both a long run consumption and resource allocation distortion. Here, removal of the price preference policy would shift the equilibrium back to A, eliminating both distortions and restoring the "lost" market access. However, if we allow for entry, the rents created by the preference policy in the short run attract firms into the industry. Analogous to Figure 2, with the long run supply curve LS_H a long-run equilibrium with domestic firms supplying the government the quantity of goods associated with point B does not distort create long run resource misallocations. Moreover, elimination of the preference policy has no impact on prices, domestic output, net imports, and welfare. With free entry, the reduction in imports caused by imposing a price preference policy cannot be reversed by its removal.

The second case is portrayed in Figure 5: here the price preference parameter, ρ (expressed as a percentage) is less than the percentage increase in price that would result if only domestic suppliers were allowed to sell to the domestic government. Thus, ρ is low enough so as not to "price" foreign suppliers entirely out of the market. Any domestic firm that attempts to price above $P_W(1+\rho)$ will find itself with no customers. Consequently, in the short run prices paid by the state rise to $P_W(1+\rho)$, and the government still imports some foreign goods (equal to amount DE). The price preference creates rents for incumbent domestic firms, as well as consumption and resource allocation distortions. Without entry, the long run equilibrium remains at point D. Elimination of the preference policy would in this case shift the long run equilibrium from point D to A, increasing national welfare and imports.

Allowing for entry in Figure 5 has some new implications. Domestic firms enter until prices fall to P_w and sales to the government reach the quantity associated with point B on the long run supply curve LS_H. However, the additional domestic output reduces long run

equilibrium imports to zero. Thus, price preference policies need not eliminate imports in the short run (as a procurement ban would), but with free entry will eliminate imports in the long run. This implies that even a small price preference can create a large long run increase in industry output and corresponding reduction in imports. When the new long run equilibrium has been established after the introduction of a price preference policy, removal of that policy will have no effect on prices paid by the state. Once again, after the price preference has been imposed free entry ensures that the long run effects of preferences cannot be reversed by their removal.

The impact of a price preference policy is summarized in Table 2. In the case where government demand exceeds domestic industry supply at free trade prices, one cannot observe whether the price preference parameter is such that Figure 4 or Figure 5 characterizes the short run and long run equilibria. Consequently, in this case, we cannot predict whether or not imports will collapse to zero in the short run.

Table 2: Impact of price preferences

Variable:	At Initial Free Trade Prices			
	$D_G < S_H$ Short & Long Run Impact	$D_G > S_H$		
		Short Run Impact	Long Run Impact	
			No entry	Free Entry
Price	0	+	+	0
Domestic industry output	0	+	+	+
Quantity imported	0	-	-	-
Domestic welfare	0	-	-	0

Key: 0: no impact; — : Decline; + : Increase.

4. Increasing long run industry costs

The results obtained in sections 2 and 3 are sensitive to assumption that the long run supply curve is horizontal.[15] The consequences of relaxing this assumption are straightforward: entry will still occur after a procurement ban is imposed, but this will not drive prices for the government back down to P_W. In the case of figure 2, for example, the long run equilibrium price paid by the government will be found at the point on the line segment DB where this segment

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[15] One reason that this assumption may not hold is if factor prices increase as industry output expands because factors are specific. More generally, it is an empirical matter whether an industry has an increasing long run supply curve or a horizontal supply curve.

intersects with the (upward sloping) long run industry supply curve. The implication is that in the long run the domestic market for the product concerned becomes segmented and even though domestic private consumers remain unaffected, there is a resource allocation distortion. Furthermore, the size of this distortion is smaller when entry is possible compared to the no entry case; again demonstrating the importance of entry barriers in determining the magnitude of any resource misallocation created by procurement discrimination. In terms of market access, if the long run industry supply curve is upward sloping, then removing a binding procurement ban or price preference will result in some domestic firms exiting the industry and imports increasing.

Another interesting point emerges when the long run industry supply curve is upward sloping: the market segmentation that results from procurement discrimination also creates an incentive for arbitrage. Given that $P_G > P_W$ in cases where $D_G > S_H$, traders will find it profitable to try to import goods and resell these to the procuring entities. If procurement officials are subject to hard budget constraints and have incentives to minimize costs they may be inclined to circumvent the ban. The same is true if officials are not interested in obtaining value for money—if there is corruption, officials may seek to procure foreign goods at (probably just above) world prices in return for kickbacks from the suppliers. This suggests another channel by which discrimination in procurement can generate incentives for corruption. Moreover, in this case, the incentive to engage in corrupt practices created by procurement discrimination may well mitigate any market access reductions suffered by foreign firms!

5. Procurement of non-tradables, services, and 'proximity' goods

Much of what is procured by governments is not tradable—including many services. Francois, Nelson, and Palmeter (1997) note that in 1993 purchases by federal, state, and local authorities in the United States exceeded US$ 1.4 trillion, equivalent to some 20 percent of GDP. Out of this, federal procurement totaled $445 billion, of which 68 percent was spent on defense (goods, services, and employee compensation). Of the remaining $141 billion, employee compensation comprised 48 percent, leaving $73 billion. Most of this ($59 billion) was used to procure services. After wages, at the state and local level, the largest category of expenditure is construction. Therefore, to a large extent, services are where the action is in procurement markets.

A difficulty that arises in evaluating discriminatory policies towards the procurement of nontradables is that there will be no world price to pin down the analysis. Independent of the potential effects of discriminatory procurement regimes, national markets will be segmented and prices will depend to a large extent on local factor costs and technologies. However in the long run, free entry ensures that firms earn zero profits, and that prices are set at minimum average total costs. In this case an assumption of U-shaped cost curves conveniently pins down long run prices.

While there are many forms of services procurement discrimination possible, for simplicity we consider the impact of a ban on government purchases from subsidiaries of foreign firms that have already established a local presence.[16] Assume that both domestically-owned (or "home") and foreign-owned firms have access to the same technology and confront the same factor prices. Figure 6 portrays the long run equilibrium in the absence of the procurement ban: in this case the prevailing price C* is such that government demand is less than home firms supply, i.e., $S_H(C^*) > D_G(C^*)$. The imposition of a ban has no effect—it merely reallocates customers to foreign affiliates.[17]

If at the initial long run equilibrium price C* (the minimum cost of production), government demand exceeds home supply, so that some foreign affiliates supply the government, a procurement ban acts to segment the market (Figure 7). Home firms supply the government at price P^I, which is higher than C*, and foreign subsidiaries are left supplying only the private sector at a lower price P^{II} (as home private consumers are unwilling to buy all of the output of these subsidiaries at the initial price C*). The short-run impact of imposing a procurement ban is therefore to introduce two consumption and two production distortions. Unlike the tradable goods case, in the short run the procurement ban actually raises home consumers' welfare!

This short run equilibrium will not persist as foreign-owned firms are making losses, and some will exit until the price paid by home consumers rises to C*, where foreign subsidiaries break even. In Figure 7 this implies that the home consumers' demand returns to point D from point B. Home firms are making positive profits at the short run equilibrium price P^I. If entry is

[16] Evenett and Hoekman (2000) discuss services procurement issues, including the treatment of services in the WTO Agreement on Government Procurement in greater depth.
[17] In nontradable services markets the appropriate comparison is between government purchases and home firms supply at free trade prices, not between government purchases and total supply.

permitted, this will force down the price paid by the government until firms make zero profits (at price C* and government demand at point C). Thus the long run effect of the ban is to increase the number of domestic-owned firms and to reduce the number of foreign-owned firms. In contrast to the case of non-tradable goods and services, both free entry *and* exit are needed to eliminate the consumption and resource allocation distortion in the long run. Furthermore, elimination of the ban has no effect on the equilibrium price and so cannot return the market to the pre-discrimination outcome. Table 3 summarizes our results, which reinforce the central role policies towards competition play in determining the long run impact of discriminatory procurement policies.[18]

Table 3: Impact of a ban on purchases from foreign-owned firms

Variable:	At Initial Free Trade Prices, C*			
	$D_G(C^*) < S_H(C^*)$	$D_G(C^*) > S_H(C^*)$		
		Short Run and Long Run without entry or exit	Long Run with exit only	Long Run with entry and exit
Price paid by home consumer	0	-	0	0
Price paid by government	0	+	+	0
Home Firm's output	0	+	+	+
Foreign Subsidiaries' output	0	-	-	-
Domestic Welfare	0	-	-	0

Key: 0: no impact; — : Decline; + : Increase.

6.   Transparency

The foregoing has focused almost exclusively on international discrimination, as this is the traditional focus of the WTO negotiators and trade policymakers. In the Doha round, however, considerable emphasis has been put on improving transparency in public procurement. A lack of transparency can impede the ability of foreign firms to bid for contracts even if there is no discrimination. Opaque procurement practices may result from either administrative inefficiencies, the absence of hard budget constraints or oversight by the Ministry of Finance; or rent seeking and corruption. The result can be a major source of loss for the government budget (as contracts will not go to the most efficient supplier). Case studies suggest excess costs per

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[18] Note that this analysis can be applied to policies that discriminate across different types of domestic firms, e.g.,

project can be in the 25-50 percent range (Rose-Ackerman, 1995a, b; Ades and Di Tella 1997, Bardhan, 1997).

Analyzing the effects of opaque procurement regimes requires specifying the motives for non-transparency, the impacts (if any) on firms' costs and on the composition of government expenditure. Several cases can be distinguished, the first two of which are straightforward applications of the framework developed in previous sections. The first case considered here refers to a situation where a government has not made the investments necessary to run a transparent procurement regime. For example, the government may be unwilling or unable to spend resources on public announcements of intended future purchases. Potential suppliers— both domestic and foreign—may therefore be uncertain of the demand curve facing them and so be reluctant to enter the market. To the extent that acquiring information about demand levels in potential markets requires incurring fixed costs (additional costs per unit supplied) then one would expect long run (short run) market outcomes to be affected. For example, if informational costs raise the marginal costs of firms (irrespective of location) then this will (i) shift upward the short run supply schedules of domestic firms and (ii) the price at which foreign firms effectively compete will rise above the world price. In this case, improving transparency will help reduce costs, which in turn will lower prices and enhance national welfare.

The second case does not require any administrative inefficiency or lack of administrative capacity. Here, non-transparency is motivated by a desire on the part of a government (or specific entities) to circumvent a non-discrimination rule.[19] If so, implementing a transparent procurement regime (perhaps in response to a WTO agreement on procurement) will have the same effects on market access and national welfare as reducing discrimination; in which case one can refer directly to the results discussed earlier.

These two cases are to be differentiated from a third case where the lack of transparency is the result of the self-interest of government officials—specifically, they attach a positive weight to income from bribes as well as from obtaining value for money for their government agency's purchases. There is a growing body of evidence that corrupt officials deliberately expand expenditures on goods and projects—such as aircraft and construction—which are highly differentiated and for which there are few, if any, comparable reference prices in world markets

legislation that grants preferences to small and medium sized or minority-owned businesses.

(Hines, 1997). Put simply, officials with an interest in rent collection are likely to employ non-transparent procurement regimes to expand government spending on those items where the opportunities for self-enrichment are greatest.[20] A consequence of having to pay bribes to bid for government contracts is to reduce number of domestic bidders.[21] That is, the result can be thought of as shifting outward the government demand curve for products where there are opportunities for corruption, and at the same time shifting in the supply curve of firms.

To see what is the maximum possible effect on market access of imposing transparency in such a context on the procurement regime, assume that until now no foreign firm supplied the domestic government.[22] Furthermore, suppose that following a multilateral agreement a transparent procurement regime is imposed and corruption ceases. The first effect is to reallocate government spending away from goods that were more prone to bribery. Figure 8 represents diagrammatically the consequences of this reform. With the opaque procurement system, foreigners would not sell anything to the government and the domestic firms' sold output Q_2 at price P_2 to the state.[23] Imposing transparency allows foreigners to sell the government, and shifts the demand curve from D_g to D_{g1}. The government takes advantage of access to world prices and buys quantity Q_3, which is less than if the demand curve had remained at D_g. This implies that the quantity imported rises by (Q_3-Q_1), with increase in market access worth $P_W(Q_3-Q_1)$. Thus, if corruption is the motivation for non-transparency *and* the latter resulted in effectively excluding foreign firms from selling to the government, then imposing a transparent procurement regime will improve market access less than the removal of a procurement ban that was not motivated by malfeasance by officials. Furthermore, if the fall in government demand is large enough so that domestic firms can now (at world prices) entirely supply the government's needs, then market access need not improve at all.[24]

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[19] Of course, this will only be relevant for countries that are subject to such a rule, i.e., current signatories of the plurilateral WTO agreement on government procurement.

[20] Further evidence for this argument can be found in Mauro (1998), who finds that spending on education suffers in more corrupt economies and conjectures that the purchase of standard items such as textbooks and the hiring of teachers offer fewer opportunities for corruption that other government projects.

[21] This is especially likely to drive out small and medium sized enterprises (SMEs). Unlike larger firms, SMEs do not have as many resources to devote to dealing with officials and paying bribes. See Tanzi and Davoodi (2000).

[22] Of course, this need not be the case as an opaque procurement regime may be deliberately designed so as to extract bribes from foreign firms. However, this is illegal under US law for US-based firms, while recent initiatives in the OECD context have made it more difficult for other OECD-based firms to engage in bribery.

[23] No doubt some of the premium over the world price (P_1-P_W) is paid in bribes to corrupt officials.

[24] The lower impact on market access of transparency reform may be offset by greater imports of those goods that the government now increases expenditure on. In principle, this latter effect may ensure that transparency reform

Elimination of a non-transparent procurement regime will have a second effect, namely expanding the number of domestic firms who are willing to sell to the government. This case is analyzed in Figure 9. The starting point is the same as in Figure 8: in the presence of a non-transparent procurement regime motivated by corruption the equilibrium price P_1 prevails and domestic firms supply quantity Q_1. Ignoring the effect of transparency reform on the government demand curve, such reform results in more firms entering the market (now that they do not have to spend time and money on officials), and this shifts the supply curve out to S_1. With the government keen to buy at world price P_W, domestic firms now supply Q_4 and imports expand but only to (Q_F-Q_4), not (Q_F-Q_1) as happened when the procurement ban alone was eliminated. Market access only rises, as a result of transparency reform, by $P_W(Q_F-Q_4)$. Arguably, these new firms could have been attracted from other markets, and imports to those latter markets may well increase—providing additional benefits to foreign firms. (Such an effect will depend on the availability of unemployed resources, which can enter a new market without reducing supplies to other markets, and upon the relative profitability of supplying different markets.) Again, the theoretical case is ambiguous, and it is entirely plausible that transparency reform creates less market access benefits than eliminating discrimination. In this third case, therefore, although there is little debate about the benefits of reducing corruption and the importance from a welfare point of view of transparency in procurement, the market access gains may be limited. If non-transparency in procurement is motivated by the self-enrichment of officials, the market access effects of fully implementing a transparent procurement regime are likely to be less than if protectionist impulses motivated non-transparency.

7. Transparency and trade agreements

The absence of a significant market access benefit to the transparency reform has implications for efforts to include transparency in trade agreements. If the major source of gain from transparency is lower cost procurement, then why is a reform than can be implemented unilaterally an issue for multilateral (or regional) negotiation? A number of arguments are

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creates more market access than eliminating a straightforward procurement ban, but the circumstances under which this is likely to occur are restrictive. This is due to the requirement that government demand must end up exceeding domestic firms' supply for imports to increase after the reallocation of government spending towards goods which offered (in the past) fewer opportunities for corruption. This requirement may not be satisfied for all the goods whose government demand expands under a transparent procurement regime.

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possible. What follows focuses on the WTO, but the arguments apply also to regional trade agreements.

First, it might be argued that starting with transparency is justified as being a precondition for non-discrimination to be enforceable, that is, as the first step towards market access disciplines (as non-transparency can help entities avoid non-discrimination). This is a rather weak argument for a contemporary initiative on transparency at the WTO given the opposition on the part of many countries to accept a binding non-discrimination rule. A second possible argument is that all WTO rules need not have a market access dimension. If there are gains from transparency, that should be sufficient rationale for agreeing to put such disciplines into the WTO. The critical question here is whether transparency can be better addressed in other fora and organizations such as the UN, development banks or regional organizations. In practice entities such as the UN and the World Bank are actively engaged in assisting governments to improve procurement regimes.

A third argument is that a WTO agreement on transparency might help those governments that still have problems unilaterally implementing procurement reform even after any assistance received from multilateral and bilateral development agencies. Presumably, as is true for other subjects, an attraction of the WTO is that cross-issue linkage can help governments mobilize support for reforms that will be opposed by powerful vested interests. A fourth— closely related—attraction of using the WTO as a focal point for procurement reform is that there is binding dispute settlement mechanism. An open question in this regard is whether exporters will have strong incentives to encourage their governments to bring cases. This depends in part on the net payoff that can be expected from dispute settlement. In practice, the length of time before a case is adjudicated at the WTO plus the absence (at present) of any compensation for forgone profits of "wronged" firms, call into question the usefulness of multilateral dispute settlement procedures when it comes to procurement contracts (Hoekman and Kostecki, 2001).[25] Therefore, WTO dispute settlement does not provide strong incentives to

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[25] This is to say nothing regarding a foreign firm's fear that a government will retaliate against it in future procurement decisions should the former complain.

WTO members not to erode what little market access benefits accrue from any improvements in transparency.[26]

One question that will need to answered during the course of any negotiations on transparency in the WTO concerns what will need to be done at the national (and sub-national) level to implement transparency provisions. Effective deterrents against nontransparency and corruption will be required—such as credible threats of *ex post* punishments that exceed the gains realized by officials and firms (e.g., by firing officials and fining and banning firms caught in attempts to engage in bribery from bidding for contracts for a number of years); the creation of external monitoring devices and institutions (including encouragement and protection of "whistle blowers"); audits by independent entities (that are publicly available and published); and the creation of mechanisms and incentives for losers of corruption to bring cases forward.

Last, but not least, transparency is not costless—indeed, the procedures, training and domestic enforcement institutions that are required to make transparency a reality are complex and extend far beyond the narrow confines of procurement. Insofar as the issue largely revolves around disciplining the scope for corruption, the focus must extend beyond procurement. It must encompass not only the civil service generally, but also institutions such as the police, the judiciary, etc. This suggests that at the very least implementation of WTO rules on transparency on procurement—if they are negotiated—should be linked to (and sequenced with) broader reform efforts by governments to improve governance, and complemented by active support by the development community.

8. Concluding remarks

From the perspective of improving the allocation of economic resources—which in poor countries should be a key objective of development policy—the most successful multilateral trade initiatives have involved policy instruments where reforms improved market access. In doing this, waste and resource misallocation are also reduced. Reductions in tariff rates, by and large, result in *both* improved market access and higher national welfare. While much has been accomplished in reducing these barriers over successive trade rounds, much less has been

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[26] A challenge or bid-protest mechanism that can be invoked by participants in a procurement process to contest instances where transparency rules appear to be violated may be more effective. At the WTO level, such a mechanism could involve multilateral surveillance (Hoekman and Mavroidis, 2000).

achieved in trade negotiations on public procurement. Our analysis provides one explanation why: potential international disciplines on procurement reforms are unlikely to translate into simultaneous improvements in market access and national welfare. Only under special—that is, not very general—circumstances is the economic case for reforms likely to be strong when the political economy to support such reform is favorable. This calls into question what can be realistically expected, or indeed what should be advocated, in international negotiations on procurement policies.

In many circumstances the impact of discriminatory procurement regimes on national welfare is likely to be limited in magnitude and duration. Often government demand will be too small to affect market outcomes. If the demand of government entities is initially larger than domestic supply—a situation that may be relatively more common in developing countries—discrimination can reduce imports and lower welfare. However, in the long run the distortions created by a discriminatory procurement policy will be smaller in economies with lower barriers to entry. While there may often be detrimental effects of such discrimination on market access—perhaps accounting for the concerted effort over many years in the WTO and OECD to discipline the scope for discrimination in procurement—a key finding of our analysis is that much of the adverse impact on market access may well not be reversed upon liberalization. The damage to market access will already have been done.

The focus of WTO members in the Doha round of negotiations is on transparency in government procurement, not on non-discrimination. We have argued that there is an ambiguous link between transparency and market access, raising doubts regarding the effectiveness of the WTO as an instrument to improve transparency of procurement practices. WTO negotiations may be an effective means for governments to pursue improved procurement procedures and outcomes by helping them to overcome political economy constraints that impede the adoption of better policies. However, although the *quid pro quo* in terms of better access to export markets or improved WTO rules in other areas may allow a transparency agreement to be pushed through at the domestic level, a major question is how such rules will be enforced. The lack of a compelling market access dimension to a potential multilateral agreement on transparency greatly reduces the incentives for firms to lobby their governments to bring cases to the WTO. All of these considerations cast doubt on the magnitude of the potential benefits of embedding

rules on transparency in government procurement in trade agreements—whether multilateral or regional.

A more effective method of encouraging the adoption of efficient procurement practices may well revolve around voluntary mechanisms such as development assistance, policy dialogue, and advocacy. There is a very large overlap between the procurement domain and the issue of public sector governance and improving the investment climate and business environment. It is important that assistance aimed at improving procurement practices be integrated into this broader agenda.

Finally, it can be noted that the argument that has been made here regarding the implications for the WTO of the limited market access dimensions of procurement policies may well apply more generally. There are other subjects that have been proposed for inclusion in the WTO (as well as regional trade agreements)—such as trade facilitation and competition law. Here also the market access link is arguably weak—these are primarily policies that have implications for national welfare and that require national action; indeed, often the issue of discrimination does not even arise.

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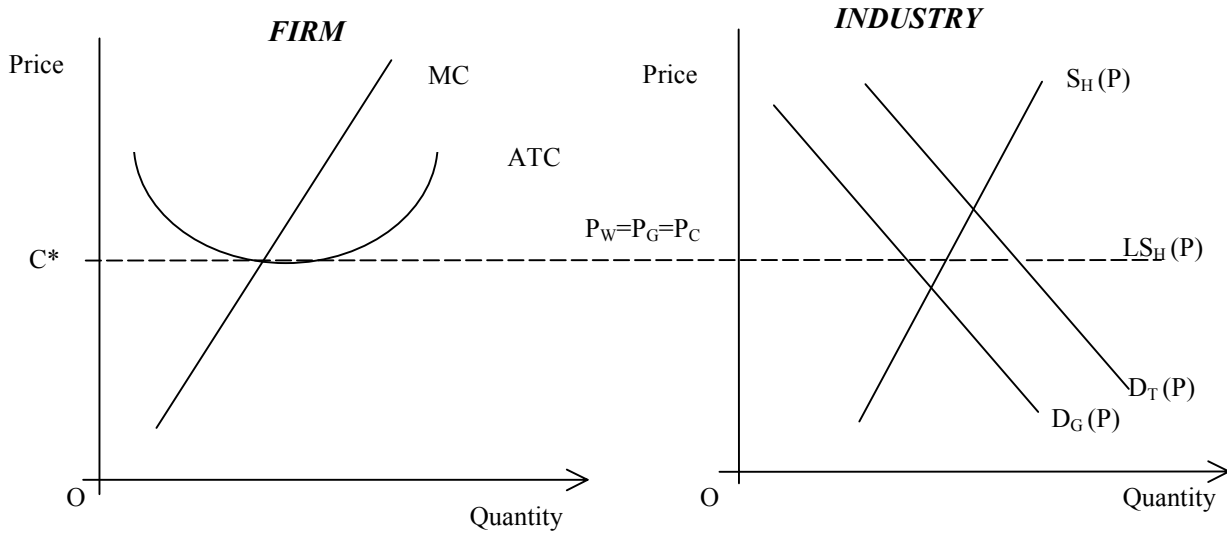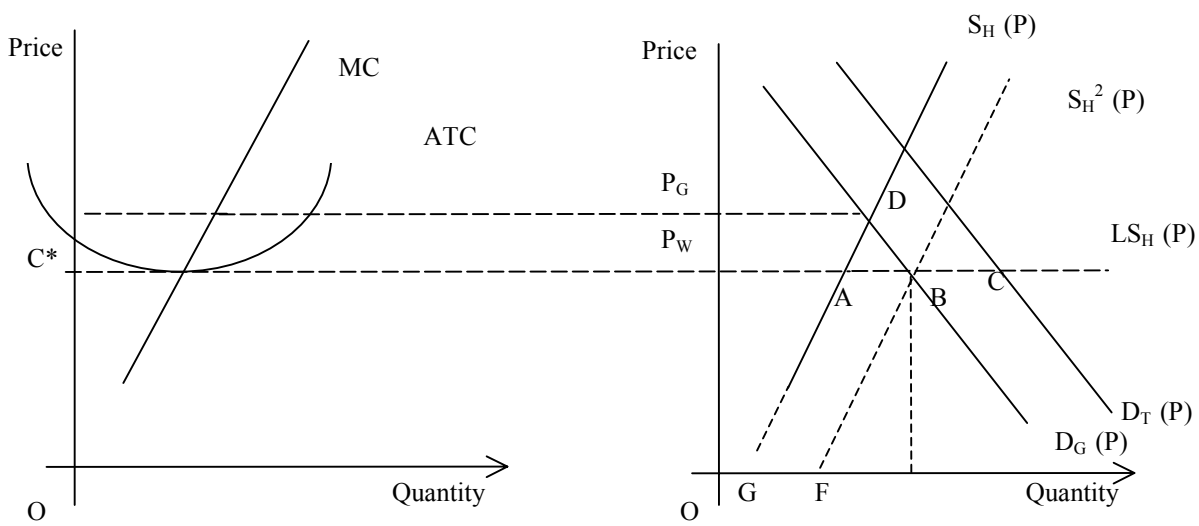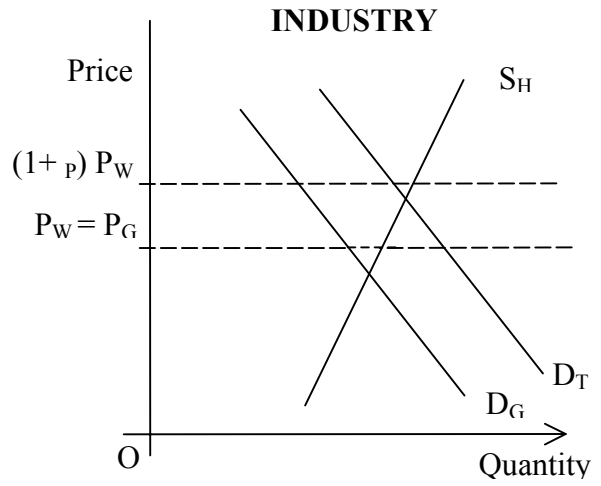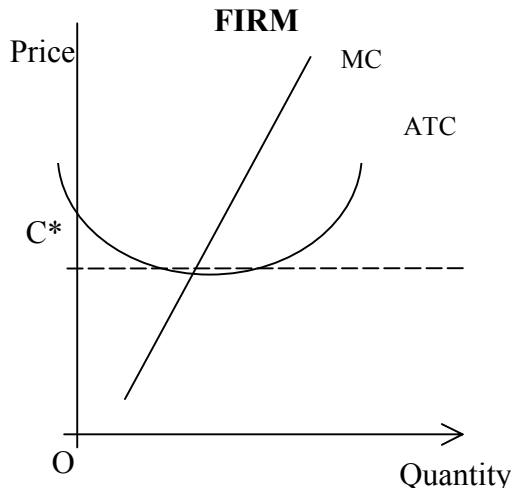World Trade Organization. 1996. "Singapore Ministerial Declaration." WT/MIN(96)/DEC.

FIRM

Price

MC

ATC

$P_W=P_G=P_C$

C*

O

Quantity

INDUSTRY

Price

$S_H(P)$

$LS_H(P)$

$D_T(P)$

$D_G(P)$

O

Quantity

Figure 1

Price

MC

ATC

C*

O

Quantity

Price

$S_H(P)$

$S_H^2(P)$

P_G

D

P_W

$LS_H(P)$

A

B

C

$D_T(P)$

$D_G(P)$

G

F

Quantity

O

Figure 2

24

FIRM

Price

MC

ATC

C*

O   Quantity

INDUSTRY

Price

S_H

$(1+_P) P_W$

$P_W = P_G$

D_T

D_G

O   Quantity

Figure 3

FIRM

Price

MC

ATC

P_G

$P_W = C*$

O   Quantity

INDUSTRY

Price

S_H S_H^2

$P_W (1+\rho)$

P_G D

P_W

A   B   C

D_T

D_G

O   Quantity

Figure 4

25

Figure 5

Figure 6

FIRM

Price

MC

ATC

C*

O   Quantity

INDUSTRY

$S_H(P)$

$S_F(P)$

Price

P^I

C*   D   C LS_H

$D_T(P)$

P^{II} B

$D_G(P)$

$D_H(P)$

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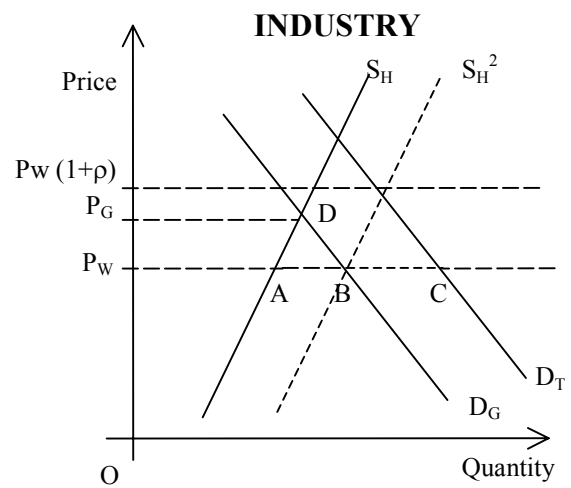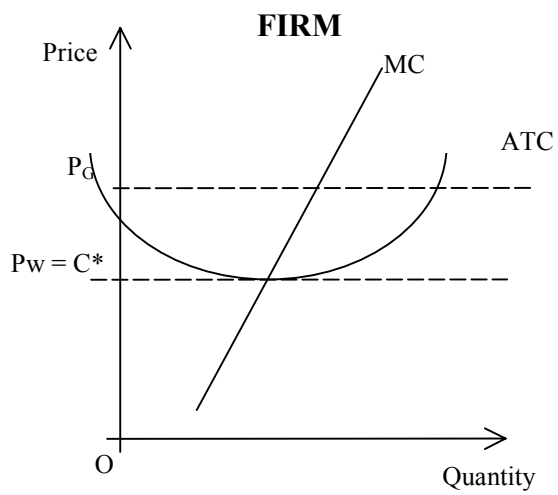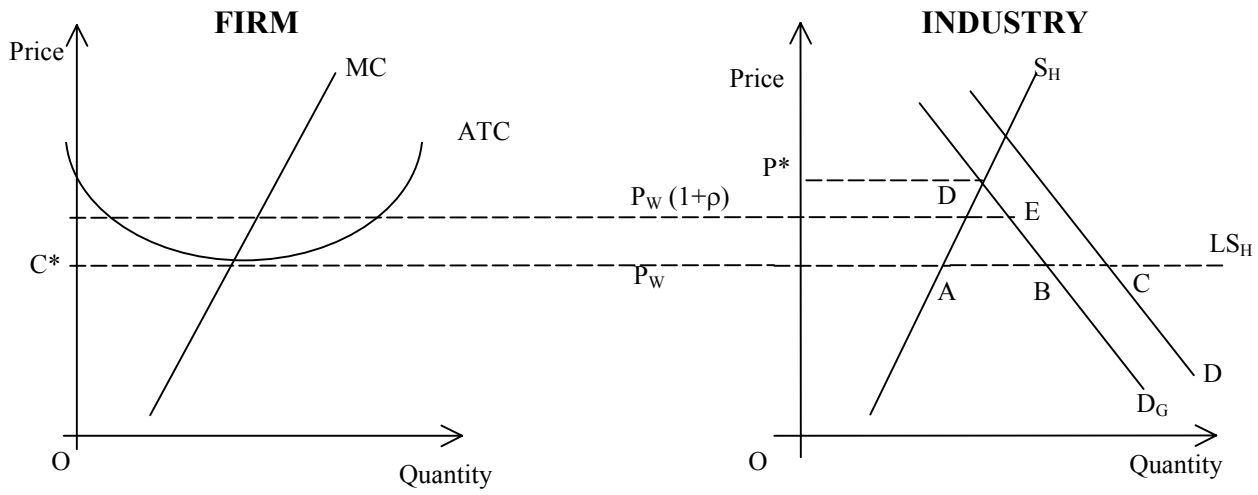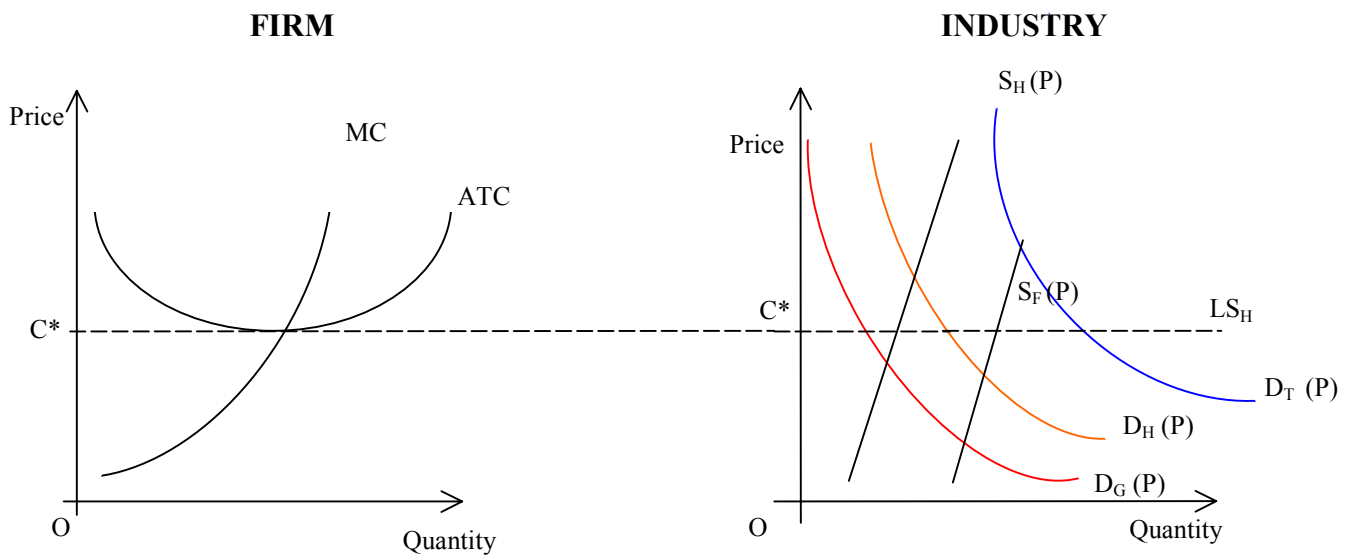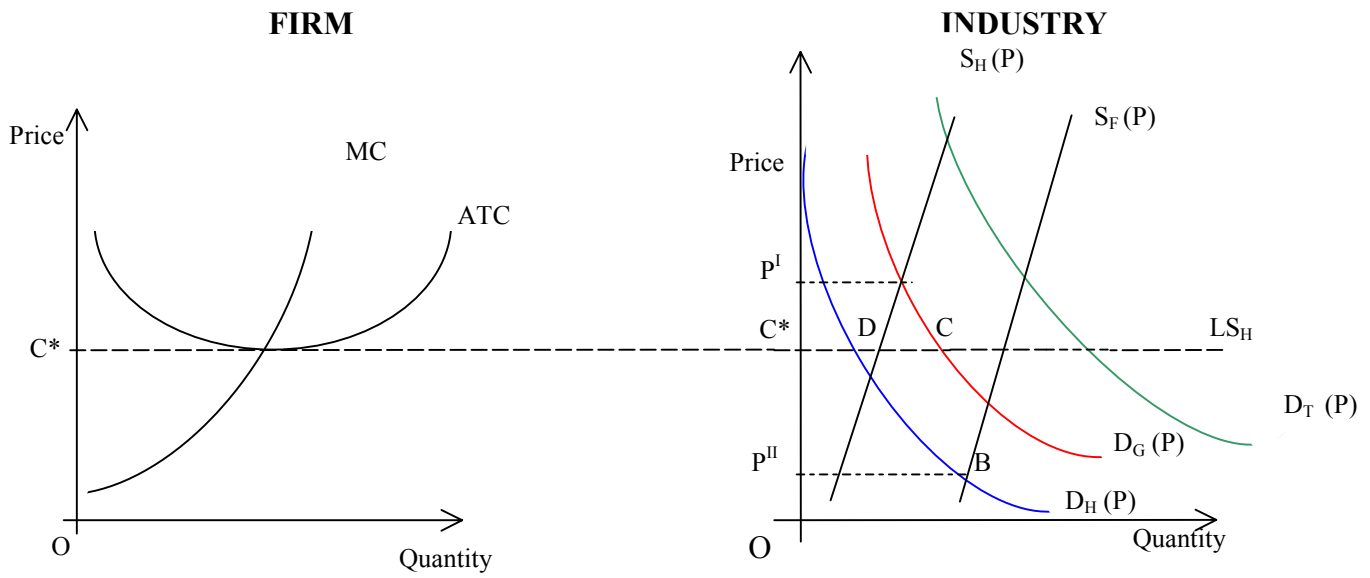
Figure 7

Figure 8:

Figure 9: