

PUBLIC PROCUREMENT: A POST-URUGUAY ROUND PERSPECTIVE

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ABSTRACT

Public Procurement: A Post-Uruguay Round Perspective*

This paper reviews the implications of the Uruguay Round Government Procurement Agreement, both for current practice in the United States and for general conditions of market access in other major markets. We emphasize the relative importance of government purchases within given markets. Because of the concentrated nature of US procurement patterns, the potential impact of preferences on overall conditions of market access is relatively limited. For those sectors we flag as important in terms of procurement practices, it is likely that future liberalization will have to involve both the expansion of the Procurement Agreement and of the relevant commitments under the General Agreement on Trade in Services.

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NON-TECHNICAL SUMMARY

Procurement negotiations between the United States and the European Union in the context of the Uruguay Round included detailed, sometimes tortuous, assessments of the procurement opportunities available in both markets. For example, at the end of the negotiations, the new Government Procurement Agreement was estimated to provide enhanced access for purchases worth over \$103 billion in both the US and EU markets. The appearance of comparability between the two offers was important to both parties. In the case of the United States, this represents 9.2% of total government purchases in 1992, and more than 22.2% of purchases excluding employee compensation. In contrast, the Tokyo Round Agreement on Government Procurement covered only about 1.9% of total US public procurement in 1991. On this basis, therefore, the Agreement represents a significant expansion of coverage.

In this paper, we review the implications of the Agreement, both for current procurement practices in the United States, and also for the conditions of market access in other major markets. In a negotiating context, the standard approach to examining the implications of procurement regulation for market access has been to emphasize the value of contracts covered. In keeping with this approach, our economic assessment starts with a brief overview of this aspect of procurement. We place actual emphasis on the *relative* importance of government purchases within given markets, however. This is in line with previous economic studies of the US procurement market. Basically, we argue that for government regulations to have a significant impact on the pricing and sales conditions prevailing in particular markets, we should expect to observe government purchases that are a significant share of the demand in those relevant markets. On this basis, we argue that the importance of government procurement regulations in the United States as a barrier to trade has been subject to exaggeration.

In most of the OECD market economies, the public sector represents a substantial share of intermediate and final demand. For example, in the United States, purchasing by federal, state, and local authorities amounted to over \$1.1 billion in 1991, or almost 20% of national income. Federal procurement accounts for over 40% of this total. Based on sheer size, therefore, we expect that government preferences, like any other import restraint affecting a comparable share of the national economy, could potentially have a significant impact on efficiency and national income.

There is a difference between potential and actual impact, however. Because of the concentrated nature of US procurement patterns, the potential impact of preferences on overall conditions of market access is relatively limited. In particular, for most of the merchandise sectors we have examined, the government typically accounts for less than 5% of total demand. For certain key sectors, however, and particularly for key service sectors, it is clear that government preferences can and most likely do affect overall market access. This includes construction, maintenance and repair services. These same sectors, however, are affected by overlap with the GATS (General Agreement on Trade in Services). Therefore, for most of those sectors we flag as important in terms of procurement practices, it is likely that future liberalization will have to involve both expansion of the Procurement Agreement *and* of relevant commitments under the GATS.

"What is prudence in the conduct of every private family, can scarce be folly in that of a great kingdom. If a foreign country can supply us with a commodity cheaper than we ourselves can make it, better buy it of them with some part of the produce of our own industry, employed in a way in which we have some advantage. The general industry of the country, being always in proportion to the capital which employs it, will not thereby be diminished ... but only left to find out the way in which it can be employed with the greatest advantage."

(Adam Smith, *The Wealth of Nations*, Book IV:2)

1. INTRODUCTION

Procurement negotiations between the United States and the European Union in the context of the Uruguay Round included detailed, sometimes tortuous assessments of the procurement opportunities available in both markets. For example, at the end of the negotiations, the new Government Procurement Agreement (henceforth the Agreement or GPA) was estimated to provide enhanced access for purchases worth over \$103 billion in both the U.S. and EU markets. (Deloitte and Touche, 1994). The appearance of comparability between the two offers was important to both parties. In the case of the United States, this represents 9.2 percent of total government purchases in 1992, and more than 22.2 percent of purchases excluding employee compensation. In contrast, the Tokyo Round Agreement on Government Procurement covered only about 1.9 percent of total U.S. public procurement in 1991. (GATT 1994). On this basis, therefore, the Agreement represents a significant expansion of coverage.

In this paper, we review the implications of the Agreement, both for current procurement practices in the United States, and also for the conditions of market access in other major markets. In a negotiating context, the standard approach to examining the implications of procurement regulation for market access has been to emphasize the value of contracts covered. In keeping with this approach, our economic assessment starts, briefly, with an overview of this aspect of procurement. However, we place actual emphasis on the *relative* importance

of government purchases within given markets. This is in keeping with previous economic studies of the U.S. procurement market. Basically, we argue that for government regulations on public purchases to have a significant impact on the pricing and sales conditions prevailing in particular markets, we should expect to observe government purchases that are a significant share of demand in those relevant markets. On this basis, we argue that the importance of government procurement regulations in general in the United States as a barrier to trade have been subject to exaggeration.

2. LEGAL ASPECTS OF THE AGREEMENT

Implementation of the Uruguay Round Agreement on Government Procurement required only minor change in federal law in the United States. The most important impediment to foreign suppliers of goods to the U.S. federal government, the Buy-American Act ("BAA"), was waived for signatories to the 1979 Tokyo Round Code. This waiver was continued for signatories to the Uruguay Round Code. In addition, the President may waive the BAA for non-signatories if they maintain transparent and competitive procurement regimes.¹

At the federal level, the GPA applies widely to all executive branch agencies with some limited exceptions, some of which appear to reflect nothing more profound than effective lobbying. For example, the GPA does not apply to purchases by the Department of Defense of luggage, tobacco products, or buses.² A wide variety of products also may be excluded pursuant to the security exception contained Article XXIII of the GPA. These include motor vehicles, engine accessories, materials handling equipment, rope, cable, chain and fittings,

¹ Uruguay Round Agreements Act, Pub. L. 103-465, 108 Stat. 4809 (Dec. 8, 1994) §343.

² See, Agreement on Government Procurement, Appendix I, United States, Annex 1.

and medical and dental equipment and supplies. In all 56 Federal Supply Classification categories may be subject to an Article XXIII exception.³

Still, GPA coverage in the United States is extensive, and is made even more so by its extension, as a result of the Uruguay Round, to 24 states, including such large states as California, Florida, Illinois, Michigan, New York, Pennsylvania, and Texas.⁴ To be sure, not all procurement even in those 24 states is open to imports. Florida, Illinois, Michigan, and New York, for example, exclude construction grade steel, coal, and motor vehicles.⁵ State procurement promoting the development of distressed areas and businesses owned by minorities, disabled veterans, and women is excluded. This is similar to exclusion at the federal level of set asides on behalf of small and minority business.⁶

By opening only certain procurements above a specified threshold to import competition, the GPA makes it difficult to grasp just what, in practical terms, has been achieved. Since prior to the Uruguay Round only goods were subject to the GATT system, the addition of services adds an entirely new, and as yet uncertain, dimension. Some indication may be obtained by looking briefly at the U.S. federal procurement system as it applies to goods in the absence of the GPA.

The BAA is the basic U.S. mechanism establishing preferences for U.S. "end products" in procurement by the federal government.⁷ It requires that "articles, materials, and supplies."

³ *Id.*

⁴ Agreement on Government Procurement ("GPA"), Appendix I, United States, Annex 2.

⁵ *Id.*

⁶ GPA, Appendix I, United States General Notes, para. 1.

⁷ A domestic end product is one for which the cost of U.S. materials or components comprises at least 50 percent of total cost. Federal Acquisition Regulation (FAR) §25.101. This definition raises questions under the normal rules of origin in the United States, which are formulated differently. See, Palmeto (1994).

acquired for public use in the United States,⁸ be manufactured, mined or produced in the United States, "substantially" from U.S. articles, materials or supplies, unless an agency head determines that: (1) such restrictions would be "inconsistent with the public interest"; (2) the cost would be "unreasonable"; or (3) the U.S. end products or components are not reasonably available in commercial quantities and of satisfactory quality.

Bids by U.S. companies exceeding foreign bids by more than prescribed differentials are deemed both "unreasonably costly" and "not in the public interest."⁹ Thus, the BAA is not a procurement ban, but a mandated preference for domestic articles. This preference is basically 6 to 12 percent for non-defense procurement, and 50 percent for defense items.¹⁰

Specific BAA Exceptions

nonavailability waiver

BAA restrictions may be waived if articles "are not mined, produced, or manufactured, as the case may be, in the United States in sufficient and reasonably available commercial quantities and of a satisfactory quality."¹¹ Individual federal agencies have compiled lists of materials for which the BAA is waived.

⁸ 41 U.S.C. § 10a. The BAA applies specifically to the acquisition of "articles, materials, and supplies" for public use in the United States. Acquisition of supplies or *services* to be used or performed outside the United States are governed by the Balance of Payments Program. See FAR §25.300(a).

⁹ Executive Order No. 10582, 10 Fed. Reg. 8,723 (Dec. 17, 1954) reprinted, as amended, in note to 41 U.S.C. § 10d.

¹⁰ Executive Order at § 2(c); FAR Section 25.105; 48 C.F.R. § 225.105. For civilian procurement, the 6 percent differential is applied for large businesses and the 12 percent factor is applied for small businesses.

¹¹ 41 U.S.C. § 10a.

public interest waivers

Executive Order 10582 generally establishes that the "public interest" and "reasonable cost" waivers of the BAA are to be applied through application of the price differential preferences. Nevertheless, agency heads have authority, case-by-case, to waive application of the preference on public interest grounds.¹²

federal government procurement for retail in commissaries

Procurement of basic foreign goods for resale at military commissaries generally is excluded from the BAA restrictions.¹³

Other BAA Waivers

Caribbean Basin Initiative

Under the CBI, specified products are treated as of U.S. origin for purposes of avoiding BAA preferences.¹⁴ Countries eligible for such waivers were designated under Title III by the USTR on February 27, 1986.¹⁵

North American Free Trade Agreement

Under NAFTA, the U.S., Canada, and Mexico entered a trilateral agreement to liberalize non-discriminatory access to government contracts among the three countries on January 1,

¹² 41 U.S.C. § 10a.

¹³ See FAR §25.102(a)(5).

¹⁴ Eligible products are those accorded duty free treatment. FAR §25.402(b).

¹⁵ FAR §25.401; Government Purchase of Products from Countries Designated Under the Caribbean Basin Economic Recovery Act, 51 Fed. Reg. 6,964 (Feb. 27, 1986).

1994.¹⁶ Mexico, which is not a party to the GATT Procurement Code, was obligated to implement procedures for the solicitation, award and protest of government procurements, and to eliminate discriminatory provisions.¹⁷

The overall procurement value threshold for goods and services under NAFTA is set at \$50,000.¹⁸ Higher threshold levels apply for construction service contracts (\$6.5 million),¹⁹ and for purchases by federal government-owned enterprises (\$250,000 for goods and \$8 million for construction services).²⁰ The waivers under NAFTA are subject to a number of exceptions including purchases pursuant to small or minority business programs, certain national security procurements, Agriculture Department programs, as well as procurements by state and local governments.²¹

Agreement on Trade in Civil Aircraft

The 1979 Trade Agreements Act also provided an express waiver to the BAA restrictions for procurement of "civil aircraft and related articles" from countries that are signatories to the GATT Agreement on Trade in Civil Aircraft.²² This continues under the Uruguay Round Agreements which simply continued the 1979 Code as subsequently modified or amended.

¹⁶ NAFTA, Chapter 10.

¹⁷ See NAFTA Art. 1008 through Art. 1016.

¹⁸ *Id.* FAR §25.402(a)(3)(ii).

¹⁹ *Id.* FAR §25.402(a)(3)(i).

²⁰ NAFTA Article 1001.

²¹ NAFTA Annex 1001.2. NAFTA Art. 1006 also provides that the three governments will eliminate any "offset" requirements in connection with bid awards. (Offsets condition the award on local value added, investment or technology licensing).

²² 19 U.S.C. § 2513.

bilateral defense agreements

The BAA procurement restrictions may be waived if an agency head determines that their application would be "inconsistent with the public interest."²³ The public interest waiver authority has been used by the Department of Defense to issue "blanket" (rather than case-by-case) waivers of the BAA restrictions covering prospective defense purchases of foreign goods from specified countries.

The blanket defense waivers of the BAA have opened large areas of U.S. procurement to foreign contractors. Nevertheless, these waivers are limited to items specified in the relevant bilateral agreements. Moreover, notwithstanding these waivers, defense procurement remains subject to additional restrictions or prohibitions on foreign purchases imposed for reasons other than the BAA, such as the "national interest" or the need to maintain a "mobilization base."

bilateral free trade agreements

For Canada and Israel, which have bilateral free trade agreements with the United States, contract threshold values are set below the level established in the GPA. The Canada-U.S. FTA opened Code-covered government contracts valued at over \$25,000 to bids for Canadian products, with certain exceptions.²⁴ Canada and the U.S. also are obligated to institute

²³ 41 U.S.C. § 10a, see also authorization provided in the Arms Export Control Act at 22 U.S.C. § 2791; FAR Section 25.102(a)(3). This waiver also applies to the Balance of Payments Program.

²⁴ 19 U.S.C. § 2518(4); FAR Section 25.105. A Canadian end product was previously defined as one for which the cost of U.S. or Canadian components exceeds 50% of total cost. Under the NAFTA, however, Canadian end products were defined as those that had been produced or "substantially transformed" into a new and different article of Commerce in Canada, a rule of origin borrowed from the U.S. Customs Service. FAR Section 25.401; 59 Fed. Reg. 544 (Jan. 5, 1994).

transparent solicitation, award and protest provisions under the Agreement. Pursuant to the Israel-U.S. FTA, contracts above \$50,000 are open to Israeli products.²⁵

3. ECONOMIC ASPECTS OF THE AGREEMENT

conceptual frameworks

We next turn from rules to the more quantitative aspects of procurement. The standard framework for evaluating the economic consequences of discriminatory government procurement is the Baldwin and Richardson model (Baldwin and Richardson 1972; Richardson 1972). This involves government inelastically demanding a quantity of good j , G_j . Private demand is given by the demand relation $x_j = D^j(p_j)$. The Home market is supplied by Home firms according to the relation $y_j = S^j(p_j)$ and Foreign firms according to the relation $y_j^* = S^{*j}(p_j)$.²⁶ The demand relation is taken to be negatively sloped and the supply relations to be positively sloped. The graph of the Foreign supply function is taken to lie everywhere above the graph of the Home supply function. (This last assumption simply means that imports hold a minority share of the market.) As shown in Figure 1, taken from Baldwin and Richardson (1972), the equilibrium without preferential procurement policy is given by the intersection of the demand curve with the aggregate supply curve. The standard approach to evaluating the implied margin of preference is to assume that, without procurement preference, the private sector and the public sector would purchase Home and Foreign goods in identical shares.

²⁵ Id.

²⁶ We consider only the simplest case, in which the Home and Foreign producers supply identical outputs, to motivate our empirical work. Baldwin and Richardson explicitly analyze the case of goods differentiated by country of origin. Another paper for this conference reviews this literature in more detail.

Within this simple analytical framework, Baldwin and Richardson demonstrate a striking result: for sufficiently large private demand, discriminatory government procurement has no impact on equilibrium price and quantity in the Home market. Consider the demand curve labeled D_1 in Figure 1. It should be clear that, with equilibrium quantity given by Q_1 ($= x = y + y^*$), government demand is less than supply by Home firms ($y_1 > G$).²⁷ In this case, even if the government were to switch all of its demand to Home firms this would have no effect on equilibrium price and quantity since the upward pressure on the price of Home goods would induce Home consumers to substitute Foreign produced units for Home produced units until the initial equilibrium is restored. Any price preference is simply a transfer from general government revenues to the units of Home production sold to the government. The remaining Home units and all Foreign units, i.e. total private purchase, continue to sell at P_1 .²⁸ In an important extension of the Baldwin-Richardson model, Miyagiwa (1991) showed that switching procurement from Foreign to Home producers continues to have no effect on equilibrium outcomes in the case of oligopoly.²⁹

²⁷ Note that subscripts now denote equilibria in a given market, not sectors.

²⁸ For the case of differentiated goods, Baldwin and Richardson argue that, although the differentiation provides some leverage for the discriminatory policy to operate on, the result will still be that the policy is likely to be ineffective.

²⁹ Miyagiwa does show that, if the policy takes the form of an *ad valorem* preference margin, then there will be an effect on the equilibrium. Specifically, for any level of Foreign sales the Home firm will prefer to sell less with the *ad valorem* preference margin since the increase in market price will raise the *cum* preference margin price received by the Home firm. In terms of the standard quantity-competition with strategic substitutes model, this policy has the effect of shifting the graph of the Home reaction function toward the origin. Since this implies increase Foreign share of the US market, the discriminatory procurement policy has the perverse effect of transferring a greater share of profits from the Home market to the Foreign firm and funding the policy that does so with a tax on Home consumers. Miyagiwa also considers the case of imperfect substitutes and, like Baldwin and Richardson, finds that in this case too there is some likelihood that the policy will result in greater imports.

Next, consider the case in which government procurement is a large share of total Home demand.³⁰ In Figure 1, this is represented by D_2 , with equilibrium price and quantity given by $\{P_2, Q_2\}$. With the lower price and quantity we see that without explicit discrimination government demand exceeds private supply, $G > y_2$. In this case, if the Government chooses to switch entirely to domestic supply it must be willing to pay a price sufficient to induce $y = G$. We denote that price Φ in Figure 1. If the government is paying Φ , it must be the case that private demand is being served entirely by imports. To find the new equilibrium price and quantity in the market for private sales of the good, shift the Foreign supply curve so that it originates at the government demand to give an aggregate supply curve ABCE.³¹ The equilibrium is at point C, where the Foreign supply curve intersects the private demand curve. Total imports have fallen from $Q_2 - y_2$ to $Q_3 - G$, and the import price has fallen from P_2 to P_3 . Thus, the policy has been successful at protecting domestic production. The comparison between these two cases suggests that size of government demand relative to local supply at the free trade price is fundamental to determining the effect of discriminatory procurement on both Home consumers and Foreign producers.

previous estimates

A small number of papers have applied models of the sort we have just sketched to develop “back of the envelope” estimates of the magnitude of discrimination and its economic effects.

³⁰Baldwin and Richardson refer to the case in which government demand is a small share of the market as the general rule and the case in which it is large as the exception. While this is certainly true with respect to a randomly selected traded commodity, it is surely also true that it is the cases for which the government is a large customer that generate the concern. Otherwise it is difficult to explain the long-standing concern of US trading partners with the Buy American Act and other forms of statutory discrimination.

³¹At E the policy distorted aggregate supply curve rejoins the undistorted curve.

Although we argue in this paper that US government procurement is generally characterized by relative transparency and small discretion by comparison to most of its trading partners, it remains the case that transparency is incomplete and discretion is non-zero. As a result, the statutory margins may be uninformative with respect to the actual margins of preference. One way of developing rough estimates of the degree of discrimination is via counterfactual analysis using simple models of the sort that we have just sketched. For example, if we assume that, without discriminatory purchasing, the government's propensity to import good j (m_j = imports/total consumption) is identical to that of the private sector, and we assume that government demand (G_j) is completely inelastic, we can estimate undistorted government imports as $m_j G_j$. The actual government imports of good j (designated M_j^a) can be subtracted from this estimate to obtain an estimate of the margin of preference, D_j :

$$D_j = m_j G_j - M_j^a. \quad (1)$$

The first such estimates of this sort were carried out by Baldwin (1970). In 1958 the US government spent \$161 million on imported goods (1.1% of its purchases of non-agricultural traded commodities, excluding construction and ordnance). Assuming the government's import propensity in each sector was the same as the economy's as a whole, this analysis generates an estimate of \$262 million as the non-discriminatory level of US government purchases. The difference \$101 million gives the aggregate magnitude of distortion. In addition, Baldwin calculated the marginal contribution to the tariff (Δt) implied by discrimination as follows: Let the hypothetical, non-discriminatory imports be: $M_j^h = m_j G_j$; if the difference between actual and hypothetical is D_j , and η_j is the price elasticity of demand for imports (taken to be -2 for Baldwin's analysis), then

$$D_j = M_j^h \eta_j \frac{\Delta \tau}{1 - \tau} . \quad (2)$$

If the tariff on government imports is initially zero, we can write:

$$\Delta \tau_j = \frac{D_j}{\eta M_j^h} . \quad (3)$$

Baldwin estimates that this would be approximately the effect of a 20% tariff. However, netting out petroleum, which was not covered by the Buy American Act, reduces the actual expenditures to \$37 million and the hypothetical to \$231 million, implying a duty of 42%. Baldwin then attempts to estimate the increased cost to the government as a result of such discrimination. The estimates range from \$5 million to \$50 million in additional costs.

Lowinger (1976) replicates Baldwin's approach for 1963. Actual government imports were \$160 million, estimated non-discriminatory imports were \$1,131 million, giving a difference of \$971 million. The estimate of the implicit tariff was virtually identical to that estimated by Baldwin, 42%. Lowinger's estimate of the DWL of this policy is \$121 million.

$$I^d = \frac{M^h}{M^a} \times 100 . \quad (4)$$

Lowinger also estimates an *index of discrimination*:

From Baldwin's data, this was 624% in 1957, which can be compared to Lowinger's 1963 estimate of 707%, suggesting a modest increase in discrimination. In addition, Lowinger

provides evidence that imports as a share of private procurement grew faster than imports as a share of government procurement over the period 1959-1965. This is hardly surprising since this is the period in which the US instituted much stronger local preference, especially in Defence procurement, as a balance of payments measure. Lowinger also provides evidence suggesting that in Europe the degree of preference declines over the period 1959-1965 by showing that the growth of government imports exceeds the growth of private sector imports.

Baldwin and Richardson (1972) and Richardson (1972) carry out a more detailed and more explicit counter-factual analysis based on an imperfect substitutes version of the model sketched in the first part of this section. Using data from the 1963 US Input-Output tables, Baldwin/Richardson estimate that the Buy American program (excluding agricultural commodities, minerals, and armaments) reduced total imports in 1963 by between \$76 million and \$110 million from a base of actual imports of approximately \$20 billion.³² In terms of Baldwin's simple framework, $M^a = \$61$ million and $M^b = \$76$ million, so $D = \$15$ million and $I^d = 125\%$. That is, taking into account the market adjustments to changes in government purchasing, the impact of US procurement policies were estimated to be considerably smaller than those Lowinger produced for the same period using the Baldwin procedure. Richardson (1972) also estimates the implicit subsidy effect to domestic producers finding it to be small and negative in the short-run and small and positive in the long-run.

the overall pattern of purchasing

We now turn to the current structure of the U.S. procurement market. The pattern of government procurement is illustrated in Figures 2 and 3. Data are provided in Table 1. In 1991, purchasing by federal, state, and local authorities amounted to over \$US 1.1 billion.

³²The difference in estimates derives from whether short- or long-term supply elasticities are used.

equalling roughly 19 percent of GDP. Out of this, federal procurement was \$450 billion. By 1993, total government purchases had risen to \$1.4 billion. However, this growth was due to purchases at the state and local level. At the federal level, purchases fell slightly, to \$444 billion. Given the current federal budget climate, we can expect this trend, of a falling share of federal purchases in total procurement, to continue.

Figures 2 and 3 also provide a breakdown of the pattern of procurement. Clearly, the biggest single item at all levels is compensation for employees. Excluding these amounts, the most important category of non-defense purchases at the federal level is services. Not surprisingly, durable goods (such as tanks, aircraft carriers, ballistic missiles, and the like) are a particularly important aspect of defense purchases. At the state and local level, in contrast, the dominant category is actually structures.

We next turn to measures of overall preference margins, similar to those reported earlier in the literature. Tables 2 and 3 present estimates of effective preference margins for 1992, based on equation (3). The estimates presented in Table 2 are for all government purchases, and are based on social accounting data for 1992 (Gelhar et al, forthcoming). Table 2 details estimates for core government purchases. From Table 2, the estimated tariff equivalent for U.S. purchases is 16.3 percent. In contrast, preferences in Western Europe and Australasia range from 38.9 percent to 49.5 percent, while aggregate Japanese preference margins are 18.2 percent. Canadian purchases, by this aggregate measure, are relatively unbiased.³³ The overall U.S. value of 16.3 percent is somewhat lower than Baldwin and Richardson's earlier estimate of 20 percent.

Turning to Table 3, we find a similar breakdown for "infrastructure" services, meaning post, telephone, transportation, and utility services. These sectors are subject to varying ranges

³³ These estimates are all based on variations of equation (3), with data from Gelhar et al (1996).

of public ownership and control across countries and regions. The detailed breakdown provides some sense of where purchasing biases appear to be concentrated within particular countries and regions. Hence, in the United States, there appear to be some bias, in the utility sector, toward domestic services and manufactures. In Western Europe, the transport and telecommunications sectors exhibit a relatively strong bias toward domestic suppliers of goods other than machinery, while utilities are biased toward European service providers. In terms of goods, the most significant domestic bias is in Japan, where both infrastructure service categories exhibit strong preferences toward domestically supplied machinery and equipment. In fact, the Japanese bias toward domestic machinery stands in sharp contrast to the relative preferences of comparable European and American service providers.

A decomposition of total government demand for imports is provided in Table 4. This decomposition represents a very crude attempt to take account of defense purchases, which tend to be nationally biased, and which are largely exempt from multilateral procurement disciplines. In the table, we have simply assumed that all defense purchases are of domestic goods and services. Under this assumption, we can see that the apparent overall margin for non-defense purchases is around 10 percent, substantially lower than the 16.4 percent estimate for all purchases. Perhaps surprisingly, this is actually within the range of statutory preference margins. Under both sets of calculations in Table 4, there is no apparent bias in government purchases of services. Rather, in aggregate the greatest bias is concentrated in goods. This result does not hold up when we disaggregate service sectors. Rather, it is a result of sectoral preferences hiding behind the veil of aggregation. For business and other private services, there is a decided bias in U.S. procurement patterns, as revealed in Table 2.

a more detailed assessment

In economic terms, how important are the various regulations and agreements covering procurement for particular markets? To answer this question, we turn to a different set of estimates, based on detailed U.S. data on the input-output structure of the U.S. economy. (BEA 1994). The detailed input-output data give us a detailed picture, for approximately 2-digit 85 industry categories, of the pattern of U.S. government purchases relative to the overall level of U.S. demand in those industry categories. This detailed analysis allows us to answer a possibly more relevant question than how big government contracts are -- Do government purchasing restrictions really matter to the overall conditions of market access for particular markets?

Our basic approach is as follows. We have first calculated the relative importance of government purchases, by 2 digit category, as a share of total demand. Total demand is defined as including not only purchases for final consumption and investment, but also purchases by firms for use in production. These share have been further disaggregated by type of public purchase, such as defense, education, and public enterprises. The results of these calculations give us some sense of the significance of public procurement in various markets.

The results are summarized in Tables 5 through 13. In the tables, we present the top 20 categories, ranked by government purchases as a share of total demand. On the basis of all government entities (Table 5), purchases are often a substantial share of total demand. For example, government accounts for over 80 percent of demand for ordnance and accessories, and over 40 percent of demand for aircraft and parts. In a number of other categories, such as scientific equipment, transport equipment, and computers, the government accounts for between 15 and 30 percent of total demand. On this basis, therefore, procurement regulations are potentially quite important for a number of markets.

The picture changes substantially once we exclude defense purchases. It turns out that much of the government demand for goods like aircraft, transport equipment, and scientific and controlling instrument is defense-based. Since the emphasis of the Agreement is basically non-defense spending, we should focus on those aspects of purchasing outside of defense. On this basis (Tables 7, 10, 11), services like construction, maintenance and repair, and computer and dataprocessing services are some of the most dominant purchase categories. This means that the implications of the Procurement Agreement will also hinge on the schedule of services concessions, an issue we return to shortly.

It is worth noting that, beyond 5 categories, Federal government demand (outside of defense) quickly drops below 5 percent of overall demand. To the extent that markets are relatively fungible, this means that government regulations on purchasing are not likely to be significant, in any event, for most markets, from the point of view of foreign suppliers. In terms of our earlier discussion related to Figure 1, they may affect the distribution of suppliers between public and private sources of demand. However, they are not likely to have any significant effect, in most cases, on the overall conditions of market access.

The next set of tables provides a further breakdown of purchases by subentities. At this level, the relatively small presence of government demand is even more striking. In the case of Federal non-defense demand, for example, in no case (outside of ordnance and accessories) do federal purchases account for even 5 percent of total demand. In most cases, they account for less than 2 percent. Beyond the top ten 2-digit categories, federal purchases represent 1 percent or less of total purchases. This also holds for federal enterprises.

Where government does have a significant presence is at the state and local level (Tables 9-11). In particular, state and local entities have a significant presence in the construction and maintenance and repair market, as well as the market for ophthalmic and photographic

equipment (photocopiers and the like). Again though, apart from a few leading categories, government at this level accounts for typically less than 5 percent of demand. The same holds true for state and local educational purchases, and for state and local enterprises.

Overall, the pattern we see is one of significant public presence in only a few sectors, and relatively insignificant public presence in most others. Outside of defense purchases, it is clear that the most important purchasing categories tend to be services, and particularly construction and maintenance and repair services at the state and local level. From Table 2, these are also the ones with the greatest government bias. The cumulative government presence as a share of demand also appears to be important for computer and data processing services.

A measure related to share of total demand is the importance of public purchases as a share of total domestic production. This tells us, in the extreme case of 100% of government purchases going to domestic producers, whether or not the results mean that government is somehow propping-up sectors that would otherwise go away. In terms of Figure 1, this approach may identify sectors where, potentially, government preferences have led to a reduction in imports. (Tables 12 and 13). Again, apart from a number of service sectors and the ubiquitous ophthalmic and photographic equipment sector (i.e. photocopiers), even under this extreme assumption non-defense government rarely account for over 10 percent of demand. Hence, apart from these key sectors, while procurement policies may prop up particular producers, they are unlikely to have much effect on the overall conditions of market access.

In our view, therefore, a critical factor for market access in many of these "significant" sectors is the services agreement, which is recognized to be, largely, a standstill agreement. In construction, for example, the U.S. schedule only allows for movement of mid-level managers. Hence for the market where non-defense government purchases clearly have the

greatest presence, there is no guarantee of improved overall access because of the overlap of the services and procurement agreements.

stylized facts and stylized hypotheticals

Our cursory tour of the pattern of U.S. public purchases has led to the following observations. First, while the size of public purchases may be large (\$440 billion), when we exclude employee compensation we find that it tends to be concentrated in a few sectors. This leads to our second observation. Apart from a few sectors, regulations on government purchases are unlikely to lead to substantive changes in effective market access, from the perspective of foreign suppliers. The exceptions are concentrated in the service sectors, certain scientific and photographic equipment, and defense-related purchases. The most significant of these are defense-related, and can be expected to be exempt from any Code-related disciplines. The most significant non-defense sectors are concentrated in the service sectors, where the services agreement also becomes relevant.

We next turn to a comparison of the situation in the United States with that of the European Union. In particular, in contrast with certain EU states, the United States does not have a PTT monopoly, state-owned airlines, or full state ownership of utilities. As a result, while U.S. companies have lobbied heavily for better access to the EU market for telecommunications equipment, electrical generating equipment, and civilian aircraft, conditions of access in these sectors are much better for counterpart EU producers selling in the United States. This point is illustrated by Table 14. In the table, we have produced "constructed" government demand, on the assumption that state ownership and/or control extended to the telecommunications, air transport, and utility sectors. All sectors with a constructed government demand share of at least 5 percent of total demand are listed.

The results in Table 14 show that, on this basis, the differences between the structure of public/private ownership in the United States and European Union mean that, in key markets, procurement rules largely matter on one side of the Atlantic. In the table, it is clear that EU-type public ownership would imply a significant government presence in the markets for engines, turbines, transportation equipment, communications, pipelines, air transport services, communications equipment, and a number of utility-related sectors. The difference in the pattern of ownership underlies the differences in relative conditions of access in the two markets. The U.S. negotiating position has been difficult precisely because, relative to more closed and state-controlled markets, the U.S. has effectively liberalized already.

4. CONCLUDING REMARKS

In most of the OECD market economies, the public sector represents a substantial share of intermediate and final demand. For example, in the United States, purchasing by federal, state, and local authorities amounted to over \$US 1.1 billion in 1991, or almost 20 percent of national income. Federal procurement accounts for over 40 percent of this total. Based on sheer size, therefore, we expect that government preferences, like any other import restraint affecting a comparable share of the national economy, could potentially have a significant impact on efficiency and national income.

There is, however, a difference between potential and actual impact. Because of the concentrated nature of U.S. procurement patterns, the potential impact of preferences on overall conditions of market access is relatively limited. In particular, for most of the merchandise sectors we have examined, government typically accounts for less than 5 percent of total demand. However, for certain key sectors, and particularly for key service sectors, it is clear that government preferences can and most likely do affect overall market access. This includes

construction and maintenance and repair services. However, these same sectors are affected by overlap with the GATS (General Agreement on Trade in Services). For these reasons, for most of those sectors we have flagged as important in terms of procurement practices, future liberalization will likely have to involve both expansion of the Procurement Agreement *and* of relevant commitments under the GATS.

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Figure 1

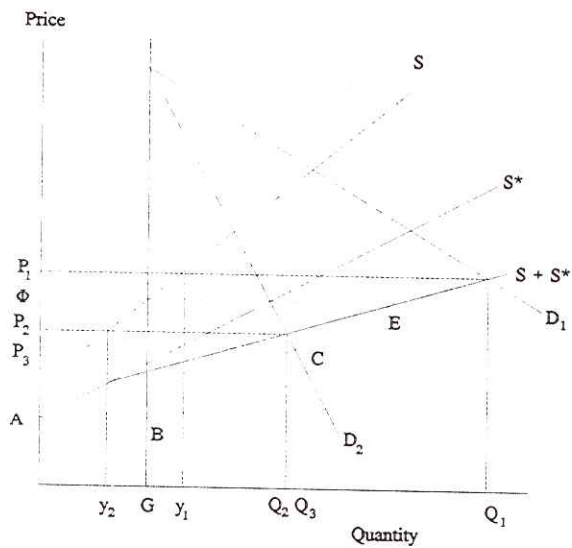


Table 1
Government purchases, billions of dollars

	1992	1993
Federal	449.0	443.6
National Defense	314.2	302.7
durable goods	80.9	70.6
nondurable goods	10.2	9.5
services	217.8	218.1
compensation of employees	135.9	135.8
military	90.2	88.3
civilian	45.8	47.5
other services	81.8	82.4
structures	5.3	4.5
Nondefense	134.8	140.9
durable goods	6.6	7.2
nondurable goods	7.7	7.2
CCC inventory changes	-0.6	-0.3
other nondurables	8.4	7.6
services	109.9	114.8
compensation of employees	63.6	67.9
other services	46.3	47.0
structures	10.5	11.7
State and Local Government	676.3	704.7
services	486.2	505.6
compensation of employees	461.7	483.0
other services	24.5	22.6
structures	94.5	99.6
nondurables	59.9	62.6
durables	35.7	36.9

Table 2**Estimated preference margins, 1992 – core government procurement
Baldwin/Richardson method**

	Machinery	Other Goods	Trade, transport, & communicatio	Utilities	Other services	Total
Canada	*	*	*	*	39.6	*
United States	18.4	17.9	*	18.8	42.6	16.3
Western Europe	*	9.2	13.7	14.9	48.3	47.8
Japan	*	32.0	26.2	34.0	46.6	18.2
Australia	49.8	49.7	*	*	41.5	38.9
New Zealand	13.9	19.7	49.8	*	50.0	49.5
Korea	30.6	20.8	*	*	48.2	48.2

* denotes a preference margin calculated as less than or equal to zero.

Table 3**Estimated preference margins, 1992 – infrastructure services
Baldwin/Richardson method**

	Machinery	Other Goods	Trade, transport, & communicatio	Utilities	Other services
United States					
PTT and transporta	10.7	16.0	*	9.6	29.6
Utilities	12.5	34.6	35.0	*	29.2
Western Europe					
PTT and transporta	15.0	23.8	*	6.2	*
Utilities	17.4	14.4	11.4	*	35.1
Japan					
PTT and transporta	41.6	26.9	0.7	*	22.6
Utilities	24.0	*	37.4	*	*

* denotes a preference margin calculated as less than or equal to zero.

Table 4**Adjusted U.S. preference margins, 1992**

	Actual imports	Non-discriminatory imports	implied margin
Total imports	35417.00	52499.00	0.163
Goods	24848.00	50317.00	0.253
Services	3529.15	2179.77	*
Imports, non-defense 1/	35417.00	31585.61	*
Goods	24848.00	29610.09	0.080
Services	3529.15	1975.51	*

imports in millions of dollars

1/ based on assumption that all defense purchases are of domestic origin.

* denotes a preference margin calculated as less than or equal to zero.

Table 5**All government purchases, as a share of total demand****top 20 two-digit categories**

Industry I-O category		share
13	ordnance and accessories	0.825
60	aircraft and parts	0.420
61	other transportation equipment	0.341
62	scientific and controlling instruments	0.337
12	maintenance and repair construction	0.280
63	ophthalmic and photographic equipment	0.205
11	construction	0.195
50	miscellaneous machinery, except electrical	0.170
43	engines and turbines	0.167
73c	other business and professional services, except medical	0.159
73a	computer and data processing services	0.150
56	audio, video, and communication equipment	0.147
57	electronic components and accessories	0.129
68a	electric services (utilities)	0.122
31	petroleum refining and related products	0.119
51	computer and office equipment	0.114
29a	drugs	0.106
26b	other printing and publishing	0.099
58	miscellaneous electrical machinery and supplies	0.098
65a	railroads and related services; passenger ground transport	0.097

Table 6**Defense purchases, as a share of total demand****top 20 two-digit categories**

Industry I-O category		share
13	ordnance and accessories	0.735
60	aircraft and parts	0.405
61	other transportation equipment	0.294
62	scientific and controlling instruments	0.280
82	general government industry	0.232
43	engines and turbines	0.132
50	miscellaneous machinery, except electrical	0.130
57	electronic components and accessories	0.124
56	audio, video, and communication equipment	0.122
58	miscellaneous electrical machinery and supplies	0.076
73c	other business and professional services, except medical	0.075
51	computer and office equipment	0.065
73a	computer and data processing services	0.044
46	materials handling machinery and equipment	0.043
73b	legal, engineering, accounting, and related services	0.042
63	ophthalmic and photographic equipment	0.038
65c	water transportation	0.029
65d	air transportation	0.027
12	maintenance and repair construction	0.025
65b	motor freight transportation and warehousing	0.024

Table 7

Federal non-defense purchases, as a share of total demand

top 20 two-digit categories

Industry I-O category	share
13 ordnance and accessories	0.086
77b educational and social services, and membership organizations	0.041
73c other business and professional services, except medical	0.023
63 ophthalmic and photographic equipment	0.023
65b motor freight transportation and warehousing	0.021
73a computer and data processing services	0.020
62 scientific and controlling instruments	0.018
11 construction	0.018
61 other transportation equipment	0.018
60 aircraft and parts	0.015
51 computer and office equipment	0.012
66 communications, except radio and TV	0.012
43 engines and turbines	0.012
12 maintenance and repair construction	0.011
65a railroads and related services; passenger ground transport	0.010
26b other printing and publishing	0.010
70b insurance	0.010
29a drugs	0.009
26a newspapers and periodicals	0.009
2 other agricultural products	0.009

note: excludes government enterprises

Table 8**Federal enterprises, as a share of total demand
top 20 two-digit categories**

Industry I-O category	share	
7	coal mining	0.044
65a	railroads and related services; passenger ground transport	0.015
65b	motor freight transportation and warehousing	0.014
65d	air transportation	0.012
26b	other printing and publishing	0.006
31	petroleum refining and related products	0.005
19	miscellaneous fabricated textile products	0.004
59b	truck and bus bodies, trailers, and motor vehicles parts	0.004
41	screw machine products and stampings	0.003
58	miscellaneous electrical machinery and supplies	0.002
64	miscellaneous manufacturing	0.002
33+34	footwear, leather, and leather products	0.002
55	electric lighting and wiring equipment	0.002
61	other transportation equipment	0.001
52	service industry machinery	0.001
78	federal government enterprises	0.011
75	automotive repair services	0.004
12	maintenance and repair construction	0.003
65c	water transportation	0.003
68c	water and sanitary services	0.003

Table 9**State enterprises, as a share of total demand
top 20 two-digit categories**

Industry I-O category	share	
12	maintenance and repair construction	0.093
7	coal mining	0.044
68b	gas production and distribution (utilities)	0.038
31	petroleum refining and related products	0.032
68a	electric services (utilities)	0.029
53	electrical industrial equipment and apparatus	0.022
50	miscellaneous machinery, except electrical	0.022
27a	industrial and other chemicals	0.013
73b	legal, engineering, accounting, and related services	0.012
68c	water and sanitary services	0.011
65a	railroads and related services; passenger ground transport	0.009
27b	agricultural fertilizers and chemicals	0.009
65c	water transportation	0.008
44+45	farm, construction, and mining machinery	0.008
55	electric lighting and wiring equipment	0.006
61	other transportation equipment	0.006
58	miscellaneous electrical machinery and supplies	0.005
4	agriculture, forestry, and fishery services	0.005
43	engines and turbines	0.004
73c	other business and professional services, except medical	0.004

Table 10**State and local education purchases, as a share of total demand**

top 20 two-digit categories		
Industry I-O category		share
63	ophthalmic and photographic equipment	0.055
26b	other printing and publishing	0.052
65a	railroads and related services; passenger ground transport	0.047
64	miscellaneous manufacturing	0.041
31	petroleum refining and related products	0.028
52	service industry machinery	0.022
22+23	furniture and fixtures	0.027
68c	water and sanitary services	0.036
12	maintenance and repair construction	0.034
68a	electric services (utilities)	0.029
11	construction	0.023
51	computer and office equipment	0.022
73a	computer and data processing services	0.022
26a	newspapers and periodicals	0.020
73c	other business and professional services, except medical	0.020
30	paints and allied products	0.019
55	electric lighting and wiring equipment	0.017
66	communications, except radio and TV	0.016
24	paper and allied products, except containers	0.015
65d	air transportation	0.012

Table 11**State and local non-education purchases, as a share of total demand**

top 20 two-digit categories		
Industry I-O category		share
11	construction	0.137
12	maintenance and repair construction	0.114
63	ophthalmic and photographic equipment	0.087
29a	drugs	0.080
73a	computer and data processing services	0.059
72a	hotels and lodging places	0.052
44+45	farm, construction, and mining machinery	0.050
68a	electric services (utilities)	0.046
78	federal government enterprises	0.040
59a	motor vehicles (passenger cars and trucks)	0.035
73c	other business and professional services, except medical	0.034
70a	finance	0.033
62	scientific and controlling instruments	0.032
4	agriculture, forestry, and fishery services	0.032
31	petroleum refining and related products	0.031
64	miscellaneous manufacturing	0.026
26b	other printing and publishing	0.022
22+23	furniture and fixtures	0.022
66	communications, except radio and TV	0.019
43	engines and turbines	0.019

note: excludes government enterprises

Table 12**All government purchases, as a share of domestic output****top 20 two-digit categories**

Industry I-O category	share
13 ordnance and accessories	0.811
60 aircraft and parts	0.409
62 scientific and controlling instruments	0.332
61 other transportation equipment	0.325
12 maintenance and repair construction	0.280
63 ophthalmic and photographic equipment	0.201
11 construction	0.195
50 miscellaneous machinery, except electrical	0.169
43 engines and turbines	0.165
73c other business and professional services, except medical	0.159
73a computer and data processing services	0.149
56 audio, video, and communication equipment	0.146
57 electronic components and accessories	0.127
68a electric services (utilities)	0.122
31 petroleum refining and related products	0.116
51 computer and office equipment	0.113
29a drugs	0.102
26b other printing and publishing	0.097
58 miscellaneous electrical machinery and supplies	0.096
65a railroads and related services; passenger ground transport	0.096

Table 13**Non-defense purchases, as a share of domestic output****top 20 two-digit categories**

Industry I-O category	share
12 maintenance and repair construction	0.255
11 construction	0.178
63 ophthalmic and photographic equipment	0.163
68a electric services (utilities)	0.111
73a computer and data processing services	0.106
31 petroleum refining and related products	0.097
26b other printing and publishing	0.091
65a railroads and related services; passenger ground transport	0.089
29a drugs	0.089
13 ordnance and accessories	0.089
7 coal mining	0.086
73c other business and professional services, except medical	0.084
44+45 farm, construction, and mining machinery	0.061
78 federal government enterprises	0.061
68b gas production and distribution (utilities)	0.060
62 scientific and controlling instruments	0.056
65b motor freight transportation and warehousing	0.055
4 agriculture, forestry, and fishery services	0.053
51 computer and office equipment	0.049
61 other transportation equipment	0.045

Table 14

**Constructed total non-defense purchases, as a share of total demand
assumed government ownership of telecommunications, airlines, and utilities**

all two-digit categories with over 5 percent of total demand

Industry I-O category	share
7 coal mining	0.635
68b gas production and distribution (utilities)	0.392
12 maintenance and repair construction	0.380
66 communications, except radio and TV	0.264
65e pipelines, freight forwarders, and related services	0.263
8 crude petroleum and natural gas	0.233
65a railroads and related services; passenger ground transport	0.217
31 petroleum refining and related products	0.207
11 construction	0.178
63 ophthalmic and photographic equipment	0.174
73a computer and data processing services	0.167
68c water and sanitary services	0.122
68a electric services (utilities)	0.118
65d air transportation	0.110
26b other printing and publishing	0.109
73c other business and professional services, except medical	0.101
43 engines and turbines	0.099
29a drugs	0.094
13 ordnance and accessories	0.090
61 other transportation equipment	0.085
78 federal government enterprises	0.085
56 audio, video, and communication equipment	0.079
53 electrical industrial equipment and apparatus	0.068
62 scientific and controlling instruments	0.063
65b motor freight transportation and warehousing	0.063
70a finance	0.063
44+45 farm, construction, and mining machinery	0.062
64 miscellaneous manufacturing	0.058
60 aircraft and parts	0.055
4 agriculture, forestry, and fishery services	0.055
50 miscellaneous machinery, except electrical	0.053
55 electric lighting and wiring equipment	0.052
22+23 furniture and fixtures	0.052
65c water transportation	0.052
51 computer and office equipment	0.051
27a industrial and other chemicals	0.051
58 miscellaneous electrical machinery and supplies	0.051

note: includes state and local purchases

Figure 1

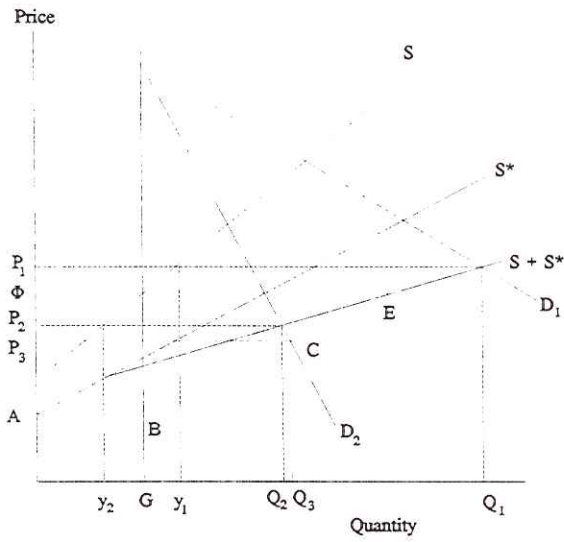


Figure 2: Government purchases, 1993
billions of dollars

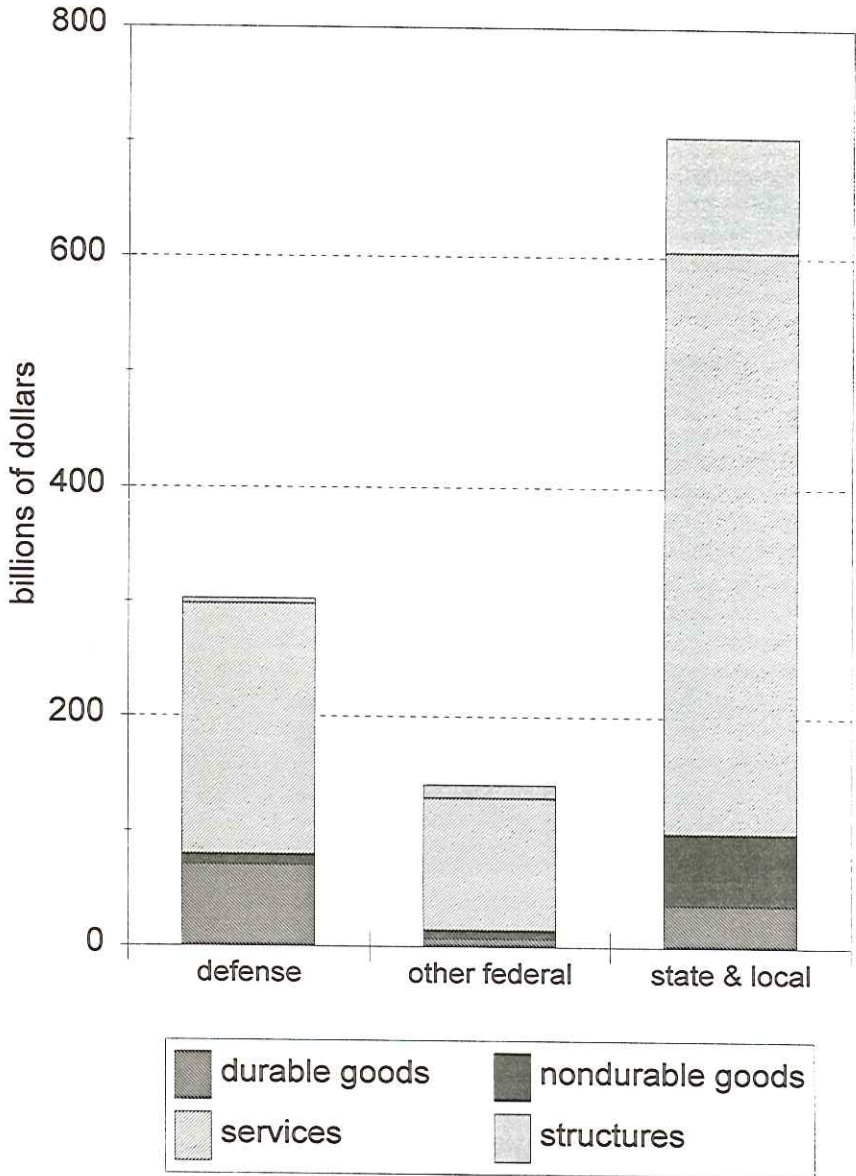
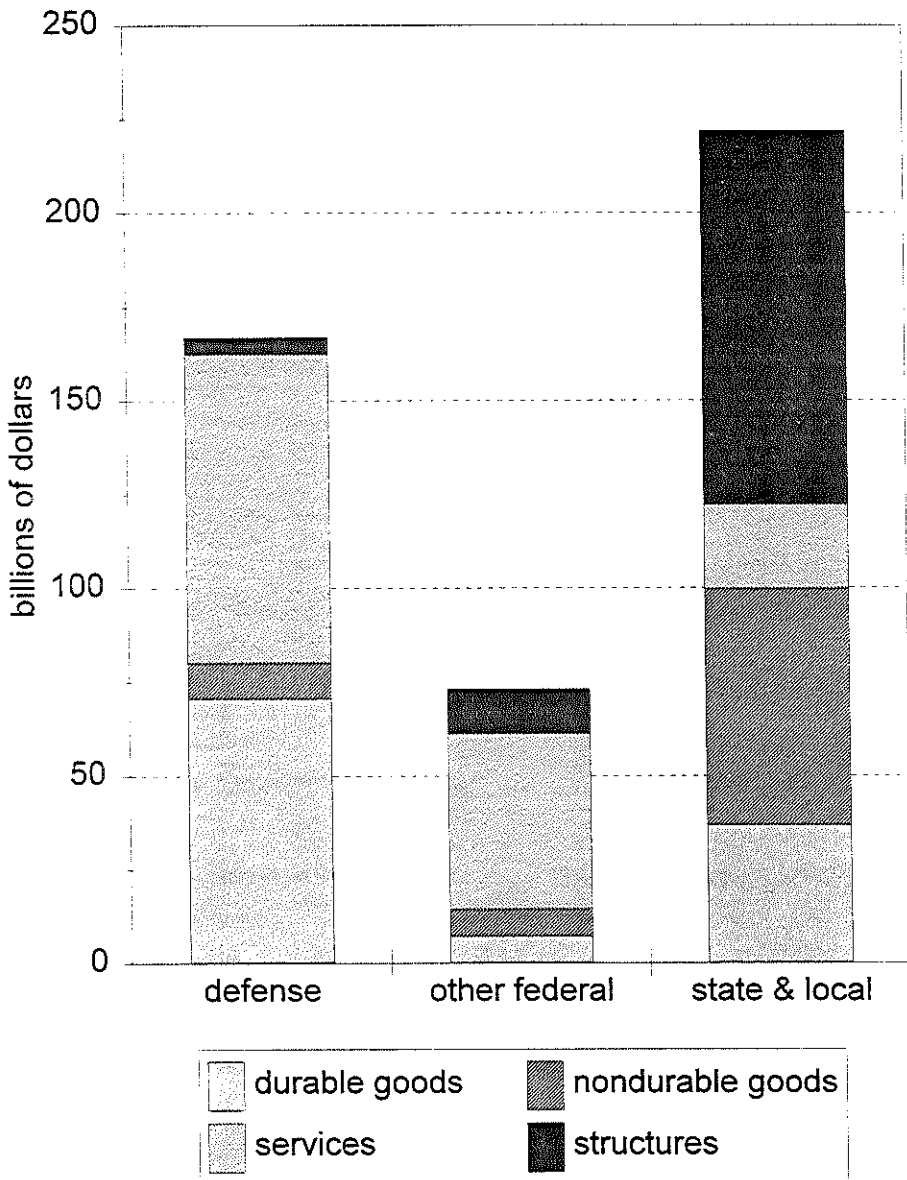


Figure 3: Government purchases, 1993
excluding employee compensation



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