

**LOCAL GOVERNMENT MANAGERS NET REVENUE CRITERIA
WHEN CONTEMPLATING A 'BUY AMERICAN' POLICY**

Henry G. Rennie

LOCAL GOVERNMENT MANAGERS NET REVENUE CRITERIA WHEN CONTEMPLATING A 'BUY AMERICAN' POLICY

HENRY G. RENNIE

PROFESSOR OF BUSINESS ADMINISTRATION & ECONOMICS
DIRECTOR OF GRADUATE STUDIES IN BUSINESS
HEIDELBERG COLLEGE

ABSTRACT

BUY AMERICAN POLICY ALLOWS A LOCAL GOVERNMENT TO PAY MORE FOR AMERICAN THAN FOR IDENTICAL FOREIGN GOODS. THIS RESULTS IN HIGHER LOCAL GOVERNMENT COSTS; HOWEVER, IF THE AMERICAN GOODS PURCHASED ARE LOCALLY PRODUCED, THEN THE LOCAL GOVERNMENT GAINS ADDITIONAL TAX REVENUE. THIS PAPER, USING PARTIAL EQUILIBRIUM ANALYSIS, DEVELOPS NET REVENUE CRITERIA FOR LOCAL GOVERNMENT MANAGERS BEFORE ADOPTING A BUY AMERICAN POLICY. CONDITIONS UNDER WHICH A LOCAL GOVERNMENT BUDGET WILL BE HARMED OR HELPED WITH SUCH A POLICY ARE DEVELOPED.

THE PAPER DETERMINES THAT THE LOCAL NET REVENUE GENERATED BY A "BUY AMERICAN" POLICY IS A FUNCTION OF THE LOCAL MULTIPLIER, PROPORTION OF FOREIGN GOODS PRODUCED LOCALLY, THE PROPORTIONAL ADDITIONAL COST OF AMERICAN GOODS, THE PROPORTION OF FOREIGN GOODS PRODUCED IN THE U.S., AND THE LOCAL TAX RATE.

THE PAPER CONCLUDES THAT: LOCAL GOVERNMENT NET REVENUE CHANGE FROM A BUY AMERICAN POLICY WILL BE POSITIVE (NEGATIVE) IF THE PROPORTIONAL ADDITIONAL COST OF BUYING AMERICAN GOODS IS LESS (MORE) THAN THE TAX REVENUE GENERATED LOCALLY. THIS CONDITION IS UNLIKELY TO BE MET GIVEN THE DIVERSE NEEDS OF LOCAL GOVERNMENT.

I. INTRODUCTION¹

"Buy American" laws at the local level appear to have their origins in the Great Depression.² However, the U.S. has been more or less committed to the dismantling of protectionist measures since 1934. A particular note of importance was sounded by then U.S. Undersecretary of State Eugene Rostow when he said: "States and cities with exporting industries and port facilities have a large stake in our foreign trade and could be losers if retaliatory action is taken against U.S. products."³ In addition, it has been stated that the American Association of Port Authorities has said:

"... that increasing pressures were being put on state legislators to restrict imports. The port officials recognized that these efforts could bring swift retaliation from foreign governments against U.S. exports. Foreign governments often justify their existing "Buy-national" restrictions, to the frustration of our negotiators, by pointing to the trade barriers erected in many of our states. Whether it takes the form

of retaliation or a refusal to lower foreign barriers, the inevitable result is to injure the exports and marine commerce of the United States.⁴

The economic theory of comparative advantage concludes that countries which trade those goods in which they have a comparative advantage both gain. Each country, with trade, can consume *more* than they individually could produce in the absence of trade. Thus, restrictions on the free-flow of goods and services results in a lower available supply and hence leads to a higher price. The imposition of a tariff increases the price of the foreign good and allows a higher price to be charged for the domestic good. This results in an increase in sales of the domestic good and a decrease in sales of the foreign good.

The analysis of whether a "Buy American" policy, which discriminates against foreign goods and services, helps or hinders the U.S. is clear as stated above. Less clear, however, is whether the "Buy American" policy helps or hinders the local economy. This is the case because if a high enough proportion of the "Buy American" goods and services are locally produced, the local economy can be a net gainer. This is, of course, based on a partial equilibrium analysis. For example, it excludes retaliation of the types quoted above. Also, see [Smith, p. 845, p. 439, and pp. 845-850] on the incentives to smuggling.

II. A 'BUY AMERICAN' MODEL OF LOCAL GOVERNMENT NET REVENUE

The objective of the formal "Buy American" model developed in this article is to determine the conditions under which a local government budget will be harmed or helped with such a policy. Let G_{LOC}^{GS} be local government spending on goods and services and let g be the proportion of goods which local government buys from foreign suppliers. Thus, local government spending on goods and services from foreign producers is:

$$C^{F_{LOC}} = gG^{GS_{LOC}}$$

Let f be the proportion of goods which local government buys from foreign suppliers which could have been supplied by U.S. producers. Thus,

$$C^{F_{LOC}} = fgG^{GS_{LOC}} = fC^{F_{LOC}}$$

If we let c be the increased cost that local government actually would pay to buy American, we can then compute the cost, C , of local government buying American instead of foreign goods and services as:

$$C = (1+c) C^{FLOC} = (1+c) f C^{FLOC}$$

However, we must also recognize that there is a benefit to local government from buying American. This is the benefit which accrues to local government from higher income taxes paid to the City. Clearly, this benefit only accrues to local government if the American goods are produced locally and generate income locally. Let b be the proportion of foreign goods purchased by local government (C^{FLOC}) which could be purchased from local producers.

$$C^{FbLOC} = b G^{GSLOC} = b C^{FLOC}$$

If local government switched and purchased these goods locally they would be spending an additional $(1+c)C^{FbLOC}$ locally which would generate an additional income in the community, using the local multiplier m ,

$$Y^{FbLOC} = m(1+c) C^{FbLOC}$$

This would generate local taxes of

$$T^{FbLOC} = t Y^{FbLOC} = tm(1+c) C^{FbLOC} = tmb(1+c) C^{FLOC}$$

We can compute this benefit as:

$$T^{FbLOC} = tmb(1+c) C^{FLOC}$$

The important economic point which City Council must determine is whether the net economic benefit is positive or negative. What we really want is the relationship between the additional cost of buying American and the additional benefit of buying American which are, respectively,

$$\nabla C = cf C^{FLOC}$$

$$\nabla T = tmb(1+c) C^{FLOC}$$

We can compute the net economic benefit as:

$$NB = \nabla T - \nabla C = [(mtb)(1+c) - cf] C^{LOC}$$

This implies that it pays local government to "Buy American" if and only if⁵ $mtb(1+c) > cf$. Rearranging the inequality, it pays local government to "Buy American" if and only if:

$$b > \frac{cf}{[m(1+c)]}$$

In words, the proportion of foreign goods which are produced locally must exceed the ratio of the increased national cost to the tax revenue generated for the U.S. locally.

III. SIMULATIONS WITH THE 'BUY AMERICAN' MODEL

Whether the above criterion will be met in practice is an empirical question which we now address by simulating the above model using reasonable parameters to determine the implications for the feasibility of a buy American policy. For purposes of the simulation, we assume that imports from foreign countries into the U.S. have similar distributions for Toledo as they would for other U.S. cities.

Thus, let $(\frac{M}{GNP})_{US}$ be the proportion of foreign imports into the U.S. of GDP. Let G_{LOC} be local government spending on goods and services⁶ and let $(\frac{G_{non-payroll}}{G})_{LOC}$ be the fraction of local government spending which is non-payroll as a proportion of total current local government spending.⁷ Thus, we have an estimate of the dollar amount that local government spends on foreign goods and services as:

$$F_{LOC} = [(\frac{M}{GNP})_{US} (G_{LOC}) (\frac{G_{non-payroll}}{G})_{LOC}]$$

As a first approximation for f , we use the ratio of U.S. imports to (U.S.) gross domestic product which is 10.94%. Using the estimate of m in [Rennie] of 1.75,⁸ and using the City Income Tax rate as

1.5%, this means that the "Buy American" policy will pay the City of Toledo, if and only if, $c < 2.6\%$. The ultimate decision is, of course, a political decision and can be stated as follows: "If there is a conflict, should the city do what is best for the city or what is best for the country?"

IV. CONCLUSIONS

Whether a buy American policy is "proper" is subject to debate. The criterion for making a decision is not generally agreed to and much of the debate makes an appeal to "patriotism". The question posed by this article is much more narrowly focused on the costs and revenues to a local government of such a policy. The conditions affecting costs and revenues are stated and their implications are derived. This paper was directed towards local government managers and their advisers who may be contemplating a "Buy American" policy. We developed a model which encompassed six parameters and four variables relevant to the decision. The partial equilibrium model compared the local economic effects of changes in incomes, taxes, and costs. Net revenue criteria were then deduced from this model. The conclusion was:

Local government net revenue change from a "Buy American" policy will be positive (negative) if the proportional additional cost of American goods is less (more) than the ratio of the local multiplier times the local income tax rate to the proportionate cost of foreign goods purchaseable locally. This condition is unlikely to be met given the diverse needs of local government.

Simulations of the model using estimated and imputed values led to the conclusion that, under reasonable conditions, the proportion of foreign goods also produced locally would have to be exceptionally high. Thus, even at the partial-equilibrium level the adoption of a "Buy American" policy would, with rare exceptions, be sub-optimal.

ENDNOTES

1. This paper evolved from notes originally prepared for the *Faculty Seminar on Economic Development Policy* held at the University of Toledo, April 16, 1992, concerning a Buy American Resolution passed by Toledo City Council. I wish to thank Peter Silverman, then a member of City Council, and Dr. David Davis for bringing the issue to my attention and to seminar participants for their comments. For comments on this paper, I wish to thank Dr. James Chudzinski, Dr. Jeremy Cripps, Dr. Gary Keener, Kurtis Swope, and referees of this *Journal*. I alone am responsible for the results.
2. See *State Buy American Policies*, United States-Japan Trade Council, November 1967 which was used as a source for this section.
3. As quoted in *State Buy American Policies*, United States-Japan Trade Council, November 1967.
4. *ibid*, p.7.
5. We assume the local economy is at less than full employment and that local production costs are unaffected by the "Buy American" policy.
6. Expenditure estimates for the City of Toledo for 1992 total \$289,029,820. See Proposed 1992 Operating Budget, City of Toledo, Ohio, November 14, 1991, p. xi. This total is broken into the following sub-categories: General Fund, 57.1%; Assessed Funds, 7.9%; SCM&R Fund, 3.0%; Utilities, 19.0%; Parking Fund, 0.7%; Capital Improvement funds, 4.3%; Internal Services, 3.8%; and Other Funds, 4.2%.
7. Personal services total \$147,744,120 (see p. xxiii.)
8. The value of the multiplier varies with the "economic extent of the market" [see Rennie].

REFERENCES

1. United States-Japan Trade Council, *State Buy American Policies*, November 1967.
2. City of Toledo, *Proposed 1992 Operating Budget*, November 14, 1991.
3. Rennie, H.G. *Simulating the Economic Effects of a Plant Closing: Jeep of Toledo*. Business Research Center, the University of Toledo, July 1986.
4. Smith, Adam. *An Inquiry into the Nature and Causes of the Wealth of Nations*. Originally published in 1776. Cannan edition. New York: The Modern Library, 1937.