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中立的保護貿易政策
Sterilization In Protective Trade Policies

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Abstract：
Under a government budget constraint export subsidies automatically sterilize distortions caused by import tariffs, i.e., without the cost of the trade policy implementation the policy mix of export subsidies and import tariffs with budget constraint makes the economy effective.

キーワード：貿易政策の不胎化、輸入関税、輸出補助金
Key Word：Sterilization of trade policies, import tariffs, export subsidies

1. Introduction

Any trade policies in the theory of protection make distortions[1]. The government implements protective trade policies for domestic pressure groups as described by Bhagwati, Brecher, and Srinivasan (1984), Magee, Brock, and Young (1989), and others. The authors who try to provide the framework for endogenous trade policy theory overlook export subsidy as an instrument of protection for export industries.

Bhagwati, Brecher, and Srinivasan (1984) defines directly unproductive profit-seeking (DUP) activities as ways of making a profit (i.e., income) by undertaking activities that are directly (i.e., immediately, in their primary impact) unproductive, in the sense that they produce pecuniary returns but do not produce goods or services that enter a conventional utility function or inputs into such goods and services, and considers the implications of different DUP categories for positive analysis and address welfare or normative implications.

Magee, Brock, and Young (1989) takes a major step toward giving us a real understanding of why we observe restrictive protectionism despite the free-trade arguments advanced by economists for more than two centuries and provides the theoretical microfoundations for the subject of endogenous foreign trade policy.

This note shows that under the government budget constraint the export subsidies automatically sterilize the distortions caused by the import tariffs.

2. The model

For simplicity's sake, we assume that a small open economy consists of two industries, export and import competing, and each industry has a union which supports a protective trade policy. The union of the import competing industry desires to put a tariff on their products and to obtain the tariff revenue as a negative tax while the union of the export industry desires to gain export subsidies and to impose tax on the import competing industry for sources of subsidies. Assume for simplicity that the unions are shortsighted with respect to the effects of the policies so that the Stolper-Samuelson Theorem does not

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work[2]. In this so-called Ricardo-Viner model the import competing industry benefits gain from tariffs whereas the people who are engaged in the export industry are faced with higher prices and therefore reduce their welfare. In contrast to this the export industry benefits gain directly from subsidies while the people busied in the import competing industry lose their money directly through raising tax for subsidy and are faced with higher prices so that their welfare levels deteriorate.

Suppose that there are a number of voting districts, in some of which the parties to the export industry compose the majority and in others the parties to the import competing industry form the majority. So, in the former voting districts the protection of the export industry will be an election pledge while in the latter districts the protection of the import competing industry will be a pledge. After the election both pledges are fulfilled.

3. The result

We imagine a small open economy producing two kinds of goods, exportable and import competing. The domestic production of each good is denoted by S_e and S_i, the domestic demand for each good D_e and D_i, the domestic price of each good P_e and P_i, and the given international price of each good $P_e{}^*$ and $P_i{}^*$, respectively. The government gives the export industry subsidies,

$$(S_e - D_e)\ (P_e - P_e{}^*),$$

and collects tariffs,

$$(D_i - S_i)\ \ (P_i - P_i{}^*),$$

from the imports. Then, the government budget constraint is given as follows:

$$(P_e - D_e)\ \ (P_e - P_e{}^*) = (D_i - S_i)\ \ (P_i - P_i{}^*).$$

Also, the trade balance is given as follows:

$$(S_e - D_e)\ P_e{}^* = (D_i - S_i)\ P_i{}^*.$$

Thus, we obtain the following relation:

$$(S_e - D_e)\ P_e = (D_i - S_i)\ P_i,$$

which implies the equality between the internal and the external marginal rates of substitution such that

$$P_e\ /\ P_i = P_e{}^*\ /\ P_i{}^*.$$

The equation above shows that under the government budget constraint export subsidies automatically sterilize distortions caused by import tariffs, i.e., the policy mix of export subsidies and import tariffs with budget constraint makes the economy effective.

4. Concluding remarks

In order to sterilize the effect of import tariffs and to balance the budget, the government should set the following tariff rate t_i and subsidy rate t_e:

$$t_i = (P_i - P_i{}^*)\ /\ P_i{}^*,$$
$$t_e = (P_e - P_e{}^*)\ /\ P_e{}^*.$$

Under the government budget constraint,

$$(S_e - D_e)\ t_e P_e{}^* = (D_i - S_i)\ t_i P_i{}^*,$$

the two rates must be equal because of the trade balance.

By the same token the effect of export tariffs is sterilized by the import subsidies. In this sterilization the government budget constraint is given as follows:

$$(S_e - D_e\,)\ \ (P_e{}^* - P_e) = (D_i - S_i)\ \ (P_i{}^* - P_i),$$

where the export tariff rate t_x and the import subsidy rate t_m are defined as

$$t_x = (P_e^* - P_e) / P_e^*,$$
$$t_m = (P_i^* - P_i) / P_i^*.$$

If we define the export tariff rate as

$$t_x' = (P_e^* - P_e) / P_e,$$

as in Lerner (1936), it is not equivalent to the import subsidy rate, however.[3]

References

Bhagwati, J.N., "The generalized theory of distortions and welfare," in Bhagwati, J.N., R.W. Jones, R.A. Mundell, and J. Vanek, eds., *Trade, Balance of Payments, and Growth: Papers in International Economics in Honor of Charles P. Kindleberger,* (Amsterdam, North-Holland Publishing Company), (1971), pp.69-90.

Bhagwati, J.N., R. Brecher, and T.N. Srinivasan, "DUP activities and economic theory," in Colander, D., ed., *Neoclassical Political Economy: The Analysis of Rent-Seeking and DUP Activities*, (Cambridge, MA, Ballinger), (1984), pp.17-32.

Corden, W.M., *Trade Policy and Economic Welfare,* (Oxford, Clarendon Press), (1974).

Lerner, A.P., "The Symmetry between Import and Export Taxes", *Economica,* Vol. 3, pp. 306-13, (1936).

Magee, S.P., W.A. Brock and L. Young, *Black Hole Tariffs and Endogenous Policy Theory: Political Economy in General Equilibrium,* (Cambridge, Cambridge University Press), (1989).

Stolper, W.F., and P.A. Samuelson, "Protection and real wages," *Review of Economic Studies,* Vol. 9, pp.58-73, (1941).

1 As for brief survey, see Bhagwati (1971) and Corden (1974).

2 The Stolper-Samuelson Theorem is known as a relationship that a rise in the relative price of labor-intensive industry must unambiguously raise real wages and just as unambiguously lower the real return to capital. See Stolper and Samuelson (1941).

3 Lerner (1936) shows that there is a clear symmetry between import tariff and export tariff.