BOOK REVIEW

The Structure of Protection in Developing Countries by Bela Balassa and Associates, Baltimore and London, Johns Hopkins Press for the International Bank for Reconstruction and Development and the Inter-American Development Bank, 1971, xviii+375 pp.

Since its explicit formulation around the years 1965 and 1966, the theory of effective protection has attracted an unusual degree of interest both from international trade theorists and international institutions primarily concerned with trade and development policies (the OECD, the World Bank, and the GATT among others). In the meantime, the focus of the discussion of policy implications of the theory has shifted considerably. Initially, apart from providing arguments for across-the-board tariff negotiations, the concept of effective protection served to demonstrate how severely the exports of processed and manufactured products of developing countries are restricted by some seemingly low tariffs in the industrialized countries by virtue of the cascaded tariff structure. The theory suggests that in combination with zero or low tariffs on inputs, these low tariffs on products tend to represent a considerably higher protection for the productive activities in question. However, economists soon directed their attention to the resource-allocative effects of tariff protection, and application of the theory has been focused on the structure of tariff protection in the developing countries themselves in the context of a re-examination of the policy of industrialization through import substitution. The interests of the international organizations in the present problem are closely related to this shift in emphasis.

As indicated by the contributions to the Geneva conference sponsored by GATT and the Graduate Institute of International Studies in December 1970,[1] the theoretical issues are still far from being settled. Parallel with theoretical refinements of the concepts, however, a number of empirical studies have been undertaken on the structure of industrial protection in developing countries.[2] The present volume represents an important addition to the collection and analysis of the relevant empirical data pertaining to the six developing countries (Brazil, Chile, Mexico, West Malaysia, Pakistan, and the Philippines) and one developed country (Norway). The sponsorship by the World Bank and the Inter-American Development Bank testifies to the keen interest the international financing organizations bring to research on the structure of protection for project appraisals. The objectives of the research are perhaps less ambitious than those of the OECD studies of industrialization and trade policies, but Part I and Appendix A of the present volume include some important pointers for the current theoretical and methodological controversies. Part II is devoted to reporting an analysis of individual country data.

[1] H. G. Grubel and H. G. Johnson, eds. and comps., *Effective Tariff Protection* (Geneva, 1971).

[2] Among others, I. Little, T. Scitovsky, and M. Scott, *Industry and Trade in Some Developing Countries: A Comparative Study* (London: Oxford University Press for the Development Centre of the OECD, 1970), and the accompanying country studies on India, Pakistan, Taiwan, the Philippines, Brazil, and Mexico, all published in the same series.

The theory asserts that, *under certain assumptions,* the direction of resource flows induced by tariffs should be properly evaluated not from nominal tariffs on products, but rather on the basis of effective protection provided to particular production processes. Balassa is fully aware of the severity of the assumptions that must be made in order to measure effective rates of protection in a partial equilibrium framework: zero elasticity of substitution among inputs, constant returns to scale, unchanged factor prices, no transport costs (meaning the absence of non-traded goods), perfect competition, and infinite foreign demand and supply elasticities. Apart from obvious deficiencies in economic and technical data for developing countries, these arbitrary assumptions would impair the relevance of the estimated measures of effective rates of protection for policy discussions. Balassa's main effort in this volume is, in fact, directed to examining the implications of removing some of the restrictive assumptions and adjusting actual estimates accordingly. Herein lie the major contributions by the authors to the conceptual and methodological issues of effective protection. Unfortunately, the improvements and corrections in actual estimates have been partial in nature and perhaps less than are required to meet fully the criticisms raised by theorists.

The direction of the methodological advances can best be seen in the context of estimating the cost of protection to the national economy. Estimates of the static (or resource-allocative) cost of protection, representing excess costs plus above-normal factor incomes in activities that would cease under free trade, are generally low—in the range of under 2 per cent of GNP. Relying on a rather arbitrary classification of industries in terms of competitiveness, Balassa now defines the excess costs in industries that would survive under free trade as the "dynamic cost of protection"—a concept that has very little to do with what is usually understood under dynamic implications of changes in trade policy. In actual estimates, the dynamic cost of protection exceeds the allocative cost by a considerable margin in almost all cases (p. 81). But, if the assumption of infinite foreign demand elasticities (the small country assumption in international trade theory) is dropped, the total cost of protection in Malaya, for example, becomes negative, because the adverse terms-of-trade effects of freeing trade more than offset the inefficiencies of resources allocation due to protection (p. 82). In the context of typical developing countries, of course, elasticity of export supply must also be assumed to be rather low, entailing increasing costs of free trade. Balassa adds a voice of caution that "the method applied is subject to various limitations and hence the results obtained are indicative only of general magnitudes" (p. 82). Apart from the arbitrariness of the division of industries into two groups, the difficulty appears to be related to the conceptual problem of identifying value added as cost elements: value added may involve a considerable degree of inter-factoral and inter-firm income transfer.

The effective rate of protection by definition depends on tariffs on inputs and products, as well as on the share of value added in the product price. The choice of the input-output coefficients to be used for estimation assumes great importance, since the possibility cannot be disregarded that tariffs or other protective measures might induce producers to increase or reduce the amount of material inputs per unit of output in response to changes in product and factor prices. The available domestic input-output tables, however reliable their data may be, can give information only on the relative proportions of material inputs and value added under protection. In the absence of any guide to estimate the direction and magnitude of protection-induced input substitution, Balassa opts for accepting the actual input-output relations of

Belgium and the Netherlands as hypothetical free trade coefficients to be applied to the developing countries under review. In view of the very different factor endowments and industrial structures, however, the practical relevance of this procedure is, to say the least, highly questionable. As Balassa himself notes, the theoretical presumption is that, in the presence of significant input substitutions, estimates derived by using domestic coefficients will be overestimates, and those calculated on the basis of free trade coefficients underestimates, of the "true" value of the effective rate of protection (p. 333). However, the estimates actually made by the authors have yielded the opposite results: in the majority of industries in the countries under study, the use of free trade coefficients gave higher effective rates of protection than the application of domestic input-output coefficients did (p. 53). This casts some doubt on the advisability of using data for small developed countries in the analysis of the structural problems of developing countries, large and small. Balassa, however, is inclined to minimize the possible extent of error in estimation due to input substitution and refers to some empirical studies which gave evidence of little substitution between primary factors and material inputs in response to price changes (p. 335). This, of course, does not answer the conceptual question of the importance of input substitution for resource-allocative conclusions to be derived from the measured effective rates of protection.

Closely related to the types of economic adjustments induced by the removal of protection is the question of the interdependence of tariff protection and exchange rates. It is obvious that, with tariff protection or export subsidies, the actually observed exchange rate tends to overvalue the domestic currency as compared with the free trade situation. Currency devaluation is an effective substitute for tariff protection or export subsidies. Effective rates of protection estimated at the prevailing exchange rates under protection will thus necessarily overstate the extent of protection provided to individual activities, and there is need to adjust the estimated values of the effective rates for the overvaluation of the exchange rates. As Balassa is fully aware (p. 8), what is termed "overvaluation" is not a monetary phenomenon pure and simple; it reflects the whole range of problems relating to structural changes, which is more than a simple summation of all effects of relevant elasticities. However, the adjustments undertaken in the present volume seem to be limited to the consideration of elasticities of foreign demand for, and domestic supply of, the country's exports, and of domestic demand for the country's imports (pp. 325–27). These adjustments have resulted in a considerable reduction in the values of effective rates of protection. As far as the studies included in this volume are concerned, however, it is not clear to what extent structural changes in comparative advantage due to variations in exchange rates have been considered in the calculations. At least Balassa's collaborators for the study on Pakistan reported earlier that in their case the adjustment for overvaluation had been only partial in nature, these structural changes having not been taken into full account.[3]

The crucial problem remains of how to cope with the existence of non-traded goods and services. That there are certain groups of goods which do not enter international trade either because of prohibitive transport costs or because of their physical nature is a commonplace which does not create any special problem in defining value added in the domestic context. This fact presents, however, a conceptual difficulty of the first order to the theory of effective protection, because for the theory to be valid value

3 S. R. Lewis, Jr. and S. E. Guisinger, "Measuring Protection in a Developing Country: The Case of Pakistan," *Journal of Political Economy*, Vol. 76, No. 6 (November–December 1968), p. 1183.

added and material inputs must be evaluated not only in terms of prevailing domestic prices, but also in terms of world market prices. The idea behind evaluation at world market prices is to broaden the scope of alternatives in defining opportunity costs and is intended to focus on gains from trade in the static sense. However, to the extent that the presence of an important group of "domestic goods" or "C goods" in Harrod's sense gives rise to a significant deviation of the national structures of relative prices from world market prices, the theory of effective protection runs into difficulties over the questions of how to treat non-traded goods and how to equate tariff protection and existing price differentials.

As a technical matter in estimation, two alternative solutions have been suggested for dealing with non-traded goods: either to treat them as part of the value added (the so-called Corden method) or to treat them as inputs without effective protection (the so-called Balassa method). In the present volume no attempt has been made to clarify the issue any further; Balassa simply admits that the possibilities of transition between importables and exportables or of non-traded inputs "could not be taken into account in the present study" (p. 17). Although comparisons have been made between alternative calculations, Balassa has decided to use the first alternative in the main body of his study because of the computational convenience in adjusting the estimated values for overvaluation of the currency (p. 18).

The basic difficulty is that, in most developing countries where there are significant sectors of non-traded goods, the differences between world market and domestic prices are not primarily determined by tariffs or other protective measures, but deeply rooted in structural differences in factor endowments and technologies, reflecting different levels of economic development achieved. There is the theoretical presumption that the domestic structure of relative prices must deviate from the structure of world market prices to a considerable extent, at least as far as "home goods" in the sense of international trade theory are concerned. A firm facing these domestic prices cannot be expected to choose techniques of production which would be appropriate to a different set of international prices. By contrast, however, the theory of effective protection starts from the assumption that tariffs and other protective measures represent the extent to which the structure of domestic prices diverges from international relative prices. For it is only under this assumption that the procedure of evaluating value added at international prices can claim some relevance in judging the rationality of the observed resource flows. The effective rate of protection shows the margin of protection on value added in particular production processes; it is defined as the percentage excess of domestic value added over world market value added. Logically, this consideration would suggest that only domestic flows of import-competing inputs and outputs should properly be deflated by the full differentials between international and domestic prices.[4]

In cases where price differentials deviate from tariffs, it is not possible to arrive at measures of protective rates from tariff data; resort must be made to direct comparisons of domestic and world market prices. This yields what Balassa terms "effective implicit protection," as distinguished from "effective tariff protection." But, what are the logically defendable implications of such price comparisons for resource allocations? To begin with, Balassa admits that there is only an extremely tenuous relationship between tariff and implicit protection, either nominal or effective (p. 52). The relevant consideration is not only the prevalence of non-tariff protection, as is often

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[4] S. R. Lewis, Jr. and S. E. Guisinger, *op. cit.*, p. 1177.

argued by the supporters of the effective protection theory. The formation of individual prices may be affected by other factors of real significance, such as changing conditions of supply and demand and a host of circumstances which determine factoral income distribution. Unless the universal validity of perfect competition is assumed, the relevance of effective rates of protection for resource-pull effects of the price system is rather limited. There is conclusive evidence in the typical situation of developing economies that apparently high protection rates are results of the rational maximizing behavior of entrepreneurs in monopolistic positions rather than a reflection of ineffi- ciencies in resource allocation. It has also been conclusively demonstrated that, in the presence of a significant degree of input substitution, it will be no longer possible to judge the direction and magnitude of resource-allocative effects from any measure of effective protection.[5] In short, the derivation of effective rates of protection itself is subject to rather restrictive assumptions, but "even with these assumptions . . . it is not possible from the scale of effective rates to predict resource movements within the traded goods sector."[6]

All these conceptual and theoretical difficulties in the theory of effective protection have not escaped the attention of an economist of Bela Balassa's standing. If he attempts to derive some general guidelines for industrial protection policy in the developing countries, as he does in the present volume, he must also have been fully aware of the limited relevance of policy conclusions. In general, however, Balassa's policy conclusions would appear to be very much less dogmatic than the rigid policy recommendations put forward by the three authors of the parallel study undertaken under the aegis of the Development Centre of the OECD.[7] Whereas the latter are as a matter of principle opposed to the "protection," as distinct from "promotion," of industries in developing countries which have grown out of the infant stage, Balassa seems to accept the principle of protection of mature industries as such. For example, he advocates for developing countries the principle of escalation of nominal tariff rates according to the stage of fabrication which is in conformity with the practice generally followed by the developed nations (p. 97). This is interpreted as the first step towards the equalization of effective rates of protection among industries.   (Hiroshi Kitamura)

5 V. K. Ramaswami and T. N. Srinivasan, "Tariff Structure and Resource Allocation in the Presence of Factor Substitution," in Trade, Balance of Payments, and Growth, ed. J. N. Bhagwati, R. W. Jones, R. A. Mundell, and J. Vanek (Papers in International Economics in Honor of Charles P. Kindleberger, Amsterdam, 1971), pp. 291–99.
6 W. M. Corden, The Theory of Protection (Oxford: Clarendon Press, 1971), p. 239.
7 I. Little, T. Scitovsky, and M. Scott, op. cit.