Export-promoting Protection: Endogenous Monopoly and Price Disparity

JAGDISH BHAGWATI*

This note shows that protection-induced export promotion can arise even in the absence of economies of scale, which have been long analysed as factors sliding an import-substituting industry up the scale of comparative advantage and turning it into an exporter eventually. Even with an upward-sloping marginal-cost curve, a domestic monopolist can be protected and could then charge discriminatory prices in domestic and export markets, thus becoming an exporter whereas free trade would have destroyed the monopoly and led to imports instead.

INTRODUCTION

That an industry, once protected, may slide up the scale of comparative advantage and become eventually an exporter is not a novelty. This sequence, when it occurs, is likely to reflect a successful maturing of an infant industry, though anyone familiar with the scope of interventions in the form of direct and indirect export subsidies in certain countries may be forgiven for not immediately jumping to the conclusion that this sequence, described by Japanese economist Akamatsu as the "flying geese pattern", is a result simply of the operation of market forces reflecting the industry's having attained to successful adulthood.

But can protection improve export performance even if we were to rule out learning and other dynamic externalities that may turn an import-substitute into an export activity eventually? The answer is in the affirmative if we deploy a model in which protection, invoked in the presence of domestic monopoly, permits price discrimination between domestic and foreign markets. This is demonstrated in

Section I, where it is shown that the protection-induced export promotion will be characterized by a "price disparity": the domestic price will exceed the export price. Such price disparity is indeed observed in several developing countries which use prohibitive or nearly prohibitive tariffs or QRs on imports of items that are exported.

Section II then shows that if a protective duty, explicit or implicit, is matched by an export subsidy (as is roughly done in countries that practise the export-promoting EP trade strategy),[1] the price disparity will be accompanied by a yet further expansion of exports.

Section III offers concluding observations.

SECTION I

Conventional Thesis

The conventional wisdom, critical of the impact of protection on exports, is reflected in Figure 1. The model in it is of the familiar partial-equilibrium variety. S_F $(AR_F = MR_F)$ represents the infinitely elastic foreign-supply curve with constant average and marginal revenues. AR_D and MR_D are the domestic average- and marginal-revenue curves. The domestic monopolist's marginal-cost curve is MC.
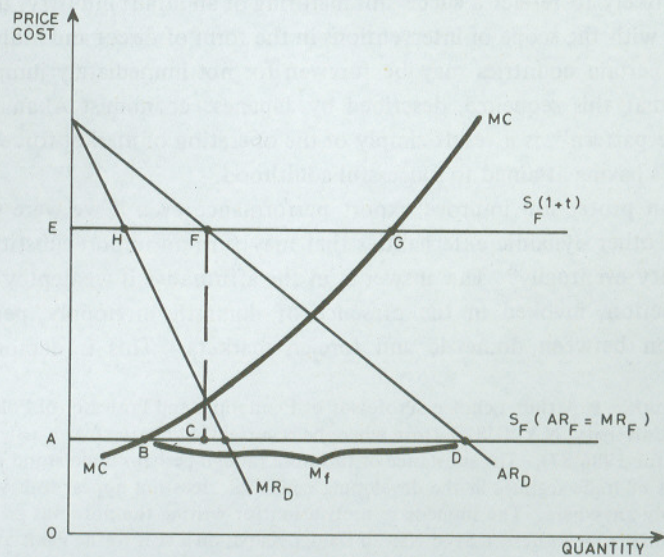

Figure 1.

If there is free trade, the monopolist's monopoly is eliminated by foreign competition. In this case, the monopolist produces AB while BD is the level of free-trade imports, M_f.

Now let a tariff be imposed at rate t, so that OE = OA (1+t). The domestic monopolist can then charge domestic price OE while producing AC (at c, his marginal cost equals marginal revenue in domestic sale) for domestic consumption.

Thus, relative to free trade, protection increases domestic production (from AB to AC), raises domestic price (from OA to OE), and diminishes imports (from BD to zero).

This configuration is probably what is widely understood to be the effect of protection in the presence of domestic monopolies which, while exogenous in origin, are endogenous to the trade policy itself. It is not surprising, therefore, for economists to believe that, even in the presence of monopoly, protection will have an adverse impact on trade, exactly as it does in conventional competitive arguments.

Alternative Thesis

Consider, however, the different configuration of prices and costs in Figure 2.[2]

In free trade, the domestic monopolist loses his monopoly and produces AC (at C, his marginal cost equals marginal revenue), domestic price is OA, and domestic
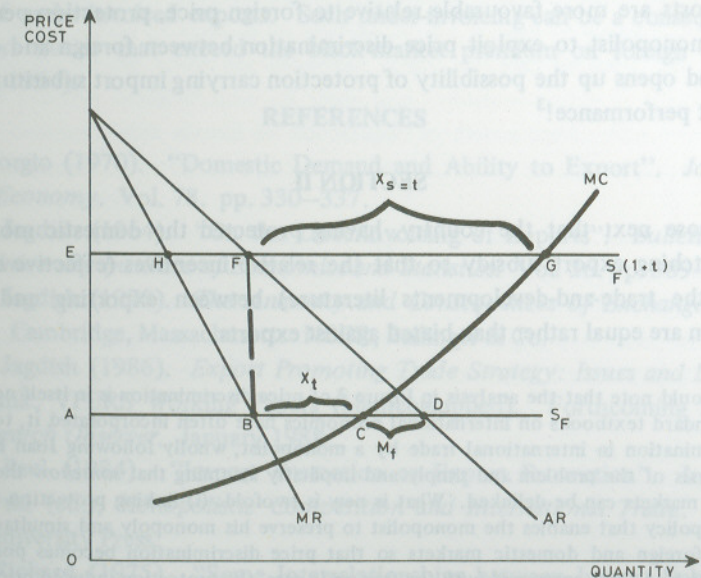

Figure 2.

demand is AD. CD represents, therefore, the attendant imports under free trade, M_f.

Replace free trade now by a tariff at rate t. The domestic price then will be OE, with the import supply curve, S_F, now turning into $S_F(1+t)$. At price OE, the domestic monopolist can·successfully maximize his profits by producing AB for the domestic market and charging OE for it, selling BC for export at price OA instead, and using the import tariff at rate t to prevent arbitrage and to facilitate the market segmentation that permits this price discrimination between the home market and the foreign market.

Thus, protection-induced exports, X_t, contrast with free-trade-induced imports, M_f. Evidently, by facilitating price discrimination, protection has led to export promotion.

It is important to note that this remarkable result has nothing to do with economies of scale (the marginal-cost curve is upward-sloping), externalities, or export subsidies. It is an elementary result of protection interacting with domestic monopoly to create price discrimination.

However, where Figure 1 produces the orthodox result, Figure 2 produces the *protection-induced export-enhancement* paradox. The reason is manifest in the behaviour of marginal cost. In the former case, the marginal costs being high relative to foreign price, protection simply shuts off imports. In the latter case, where the marginal costs are more favourable relative to foreign price, protection permits the domestic monopolist to exploit price discrimination between foreign and domestic markets and opens up the possibility of protection carrying import substitution over into export performance![3]

SECTION II

Suppose next that the country, having protected the domestic monopolist, gives a matching export subsidy so that the relative incentives (effective exchange rates, in the trade-and-developments literature) between exporting and import-substitution are equal rather than biased against exports.

[3]I should note that the analysis in Figure 2 of price discrimination is in itself not original. In fact, standard textbooks on international economics have often incorporated it, to illustrate price discrimination in international trade by a monopolist, wholly following Joan Robinson's classic analysis of the problem and simply and implicitly assuming that *somehow* the domestic and foreign markets can be delinked.·What is new is twofold: (i) linking protection to imports as the key policy that enables the monopolist to preserve his monopoly and simultaneously to delink the foreign and domestic markets so that price discrimination becomes possible; and (ii) demonstrating that, *compared with the free-trade case*, the protection-induced price discrimination leads to export promotion. Richard Pomfret has pointed out to me that point (i) has been made earlier by Basevi (1970), though in the context of exploitation of scale economies. See also the important early article by Pomfret (1975), which also anticipates the later, interesting article by Paul Krugman (1984) in demonstrating that scale economies can make a tariff lead to export promotion.

In this event, in Figure 2, the export incentive at rate s = t is also reflected by $S_F(1+t)$ rather than by S_F. Then, equilibrium production by the domestic monopolist shifts to EG, with EF produced for the home market and FG sold as export $(X_{s=t})$.[4] Protection helps export performance; matching subsidization helps it yet further.

SECTION III

But while these results are interesting and match the observed reality in several cases, the reader must be warned that they do *not* imply that protection is good. Indeed, by sustaining domestic monopoly, such protection will be contributing more losses tò the usual deadweight loss from protection.

Moreover, note that the case analysed in the text is likely to apply particularly to countries (such as India) where the creation of domestic monopoly is buttressed by restrictions on domestic entry through investment licensing. By contrast, in countries of the Far East, it appears that domestic entry is much easier and hence domestic monopoly is often not a suitable assumption to make.

Finally, the presence of price disparity *in itself* need not be explained in terms of the price-discrimination model. Thus, for instance, an observed price disparity, such that the export price is below the domestic price, may simply reflect the phenomenon of under-invoiced exports. Such under-invoicing can be a consequence of high ·export duties that exceed the black-market premium on foreign exchange (Bhagwati, 1964).

REFERENCES

Basevi, Giorgio (1970). "Domestic Demand and Ability to Export". *Journal of Political Economy*. Vol. 78. pp. 330–337.

Bhagwati, Jagdish (1964). "On the Underinvoicing of Imports". *Bulletin of the Oxford University Institute of Economics and Statistics*. Vol. 26. pp. 389–397.

Bhagwati, Jagdish (1978). *The Anatomy and Consequences of Exchange Control Regimes*. Cambridge, Massachusetts: NBER, Ballinger & Co.

Bhagwati, Jagdish (1986). *Export Promoting Trade Strategy: Issues and Evidence*. World Bank, VPERS Working Papers (Memeographed). Forthcoming in *World Bank Research Observer*. January 1988.

Krugman, Paul (1984). "Import Protection as Export Promotion". In Henryk Kierzkowski (ed.), *Monopolistic Competition and International Trade*. Oxford: Oxford University Press.

Pomfret, Richard (1975). "Some Interrelationships between Import Substitution and Export Promotion in a Small Economy". *Weltwirtschaftliches Archiv*. Band III, Heft 4. pp. 714–727.

[4]Any domestic sale less than EF would mean that the domestic price would exceed OE, which is impossible under the stated assumptions.