

Mohr, Ernst

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## Strategic trade policy: Ex post aye, ex ante nay

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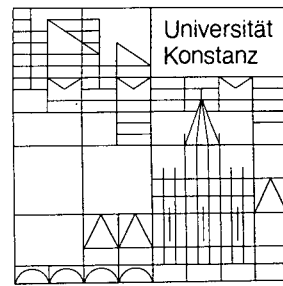
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**Sonderforschungsbereich 178**  
**„Internationalisierung der Wirtschaft“**

Diskussionsbeiträge



Juristische  
Fakultät

Fakultät für Wirtschafts-  
wissenschaften und Statistik

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Ernst Mohr

**Strategic Trade Policy:  
Ex Post Aye, Ex Ante Nay**

STRATEGIC TRADE POLICY:  
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Ernst Mohr

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## 1. Introduction

Welfare improving rent shifting is considered a prominent argument in favour of strategic trade intervention. In this paper it is argued that the appropriate approach to evaluating strategic trade intervention is an ex-ante criterion that takes into account rational behaviour of all agents, firms and governments, at all stages of the decision process, before and after market entry. This criterion leads to markedly different policy recommendations compared to an ex-post criterion of strategic trade evaluations, frequently used in the literature. In particular, it is shown that there are cases where strategic trade intervention is welfare improving according to the ex-post criterion while it is detrimental to welfare if the ex-ante criterion is employed. Applying the ex-ante criterion furthermore shows that countries may have an incentive to join international institutions that foster free trade even if other countries prefer to free-ride on the benefits accruing from such institutions.

## 2. The Ex-post Criterion of Intervention Evaluation

The general argument justifying strategic trade intervention for the sake of rent shifting may be exemplified as follows. Consider a foreign quantity setting monopolist supplying a quantity  $q$  on a domestic market. If the inverse demand function is given by  $P_f(q)$ , marginal revenue by  $MR_f$  and marginal costs by  $MC$ , the free trade equilibrium is the standard monopoly solution  $q_f$  with the associated monopoly price  $p_f$  (see Figure 1). Given zero fixed operating costs, the free trade monopoly rent,  $R_f$ , is determined by the quadrangle  $CDEP_f$ .

Now suppose strategic trade intervention takes place to shift (part of) the foreign monopoly rent to domestic consumers. To that end a fraction  $t$  ( $t=1-OB/OA$  in Figure 1) of the sales price is levied as a tariff per unit of imports. The demand and marginal revenue functions, relevant for the monopolist's output decision shift downwards from  $P_f(q)$  and  $MR_f$  to  $P_t(q)$  and  $MR_t$ , respectively, so that the monopolist's supply will be  $q_t$  under the tariff. The monopoly rent,  $R_t$ , now is given by the quadrangle CFGH which is smaller than  $R_f$ . Furthermore the consumer rent has declined from the triangle  $P_fEA$  to  $P_tKA$ . If the tariff revenue, the quadrangle HGK $P_t$ , is transferred back to consumers as a lump sum payment, the optimal, domestic welfare maximizing tariff rate,  $t^*$ , is given by the largest difference between the size of the quadrangle HGL $P_f$  and the triangle LEK.

Variations of this rent shifting argument are ample and have been put forward amongst others in BRANDER and SPENCER (1981), SPENCER and BRANDER (1983) and ITOH and ONO (1984). DIXIT (1987) has voiced some concern against this argument in the context of international R&D competition. It can be seen as part of a more general issue that may be coined the ex-post vs. ex-ante problem of strategic trade intervention.

### 3. The Ex-ante Criterion of Intervention Evaluation

The outlined justification for intervention is based on an ex-post criterion because it tacitly presumes that foreign firms already are in the domestic market and are caught by surprise by domestic intervention. But what are the welfare implications of trade policy if foreign firms rationally anticipate intervention before entering a domestic market? This is the question that is answered if an ex-ante criterion of strategic trade evaluation is employed.

To see that the distinction between ex ante and ex post is important, in particular to see that adherence to the ex-post criterion may result in erroneous welfare judgements and policy recommendations consider again the above example.

Suppose the foreign monopolist operates in several national markets and considers entering another one. If the monopolist has to pay a fixed entry fee,  $\beta$ , and if entry is for good, under free trade the monopolist will enter into a national market if  $\beta < R_f (1+r)/r$ , where  $R_f$  is the single period monopoly rent under free trade and  $r$  is the constant market discount rate. However, anticipating the optimal tariff rate,  $t^*$ , once it has paid  $\beta$ , the monopolist will stay clear of that market if  $\beta > R_{t^*} (1+r)/r$ . In that case both, consumer rent and tariff revenue is nil, implying a per period welfare loss of (potential) trade intervention equal to the size of the free trade consumer surplus. Hence for  $R_{t^*} (1+r)/r < \beta < R_f (1+r)/r$  the welfare implication of rent shifting is reversed if the ex-post criterion is replaced by the ex-ante criterion.

The hypothesis of rationally forward looking firms, underlying the ex-ante evaluation of intervention, seems to be a more sensible assumption than the one underlying the ex-post criterion. It would only be the rare exception that both would lead to the same evaluation of strategic trade policy. Whenever markets are evolving, strategic trade policy potentially affects the number of market participants, R&D activity, product variety, quality and so forth, all of which is ignored under the snap shot analysis based on the ex-post criterion.

Furthermore, the observation that market entry, or choice of variety and quality has already taken place is not a sufficient condition for applying the ex-post criterion. For it may well be

the case that these parameters have been set in the past by the foreign firm in rational anticipation of intervention at a later stage. In such cases the ex-post criterion neglects all of the welfare effects of decisions influenced by anticipated policy discretion.

It should be borne in mind that the critique of an ex-post evaluation of strategic trade policy also extends to those cases where foreign firms decide ex-ante on market entry, product quality and the like, but where this decision is made vis-à-vis an existing, ex-post non-optimal policy of trade intervention. Because based on a given trade policy it may be worthwhile for a foreign firm to enter into a market, and the welfare effect of intervention could be positive for the importing country. But after the firm has entered, it is locked in and the government has an incentive to revise its policy to the effect that it may have been better for the firm to stay clear of that market.

A correct evaluation of the welfare effects of strategic trade intervention therefore must be based on a "no regret" condition on behalf of all decisionmakers. Participants do not regret their own past decisions if their actions are subgame perfect. In the context of the present problem, under subgame perfect behaviour, firms condition their decisions at the earliest stage of the decision process on that particular trade intervention which is optimal for the government given the earlier decision of the firm. The ex-ante criterion of strategic trade policy evaluation therefore must be based on rational behaviour of firms and policymakers at all stages of the decision process.

#### 4. Incentives and International Institutions

The distinction between the ex-ante and ex-post criterion also sheds light on an ongoing discussion concerning the incentives to form and join international institutions which foster free trade. The conventional wisdom is that although there is a clear collective benefit from the preservation of free trade, each individual country has an incentive to free-ride on such institutions and impeach on free trade through a policy of intervention.

The present paper reveals that the problem is a more subtle one and that the prospects for free trade are less gloomy. Because contrary to the conventional view, a country may have ex ante an incentive to arrange for a self-binding contract that eliminates its policy discretion ex post in order to avoid the welfare reducing effects of strategic trade intervention. The incentive to form and join international institutions that help make a country's present trade policy credible prevails with respect to sectors where trade intervention is detrimental to welfare, even if other countries themselves abstain from joining these institutions.

#### 5. Conclusion

A policy recommendation emerging from the literature states, that it may be in the best interest for a country to shift rent away from foreign firms through strategic trade intervention. This paper enters a caveat against this policy recommendation. For it shows that even in cases where trade intervention can improve welfare compared to free-trade, intervention may nevertheless be second best to non-intervention if a country can commit itself to



free-trade in advance. The policy recommendation from the literature on strategic trade intervention in a sense is thus reversed. And the problem of finding suitable instruments for intervention is replaced by the problem of creating institutions that alleviate commitment.

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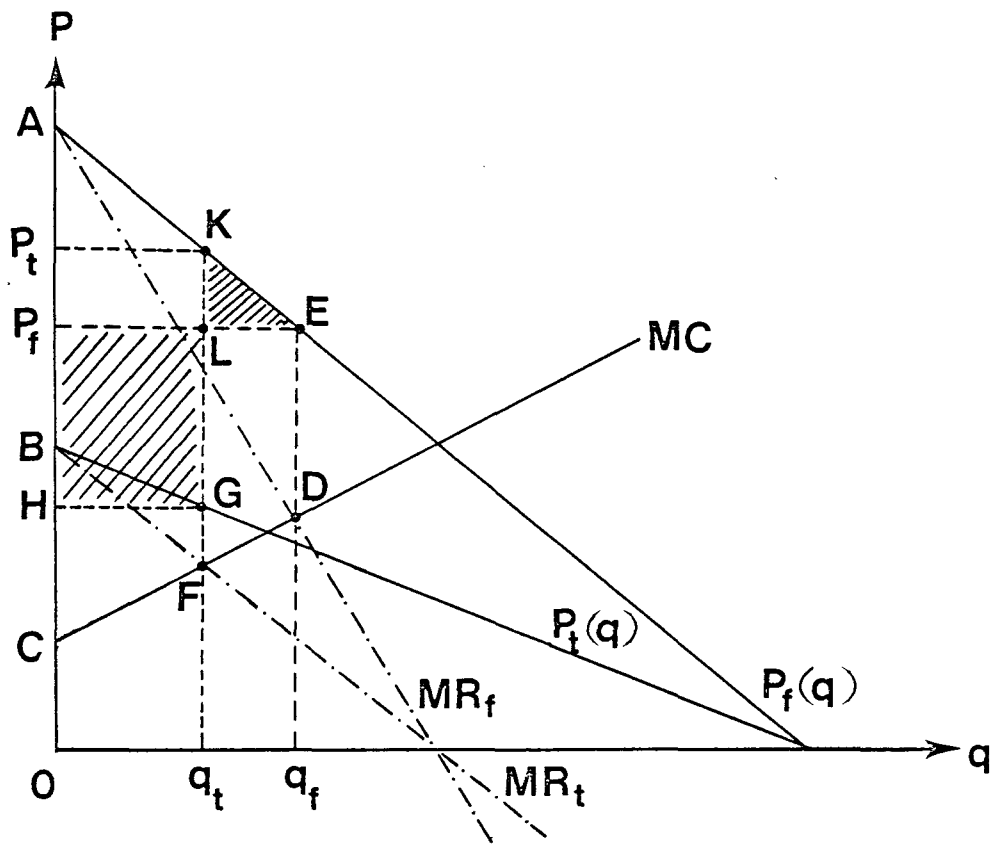


Figure 1