

**MULTILATERAL TRADE  
NEGOTIATIONS  
THE URUGUAY ROUND**

RESTRICTED

MTN.GNG/NG7/W/54  
12 October 1989

Special Distribution

---

Group of Negotiations on Goods (GATT)  
Negotiating Group on GATT Articles

A BRIEF REVIEW OF THE LITERATURE ON THE TRADE EFFECTS  
OF ARTICLE XXIV TYPE REGIONAL AGREEMENTS

Note by the Secretariat

1. This note has been prepared in response to a request from the Negotiating Group on GATT Articles, asking the Secretariat to prepare a brief review of the literature on the trade effects of regional agreements under Article XXIV (MTN.GNG/NG7/9). The focus is on the key concepts that have been developed and analysed in the principal contributions to the literature in the past four decades. It is not intended as an exhaustive review of what is, in fact, a vast literature.

I. Introduction

2. The economic literature on free trade areas and customs unions is part of the more general literature on the economic effects of discriminatory trade policy regimes. Generally, this literature has concentrated on those elements of the regimes that are amenable to quantitative analysis (mainly tariffs on merchandise imports), leaving aside the institutional and non-merchandise related elements of such arrangements. Two basic approaches have been taken: partial equilibrium and general equilibrium. In each case, three issues in particular have motivated the analysis: (i) the effects on overall consumer welfare within the customs union/free trade area; (ii) the effects of free trade areas and customs unions on individual members; (iii) the effects of free trade areas and customs unions on the welfare of the rest of the world (third parties). Generally speaking, customs unions have received much more attention in the literature than have free trade areas.

3. Traditionally, the analysis of the trade effects of customs unions and free trade areas has focused on the trade creation and trade diversion effects. In simple terms, the former refers to situations in which inefficient production in one member is replaced by the efficient production of another member, while the latter refers to situations in which efficiently produced imports from third countries are replaced by inefficiently produced imports from a partner country. As is explained in more detail below, the more recent literature - while not abandoning the concepts of trade creation and trade diversion - reveals a growing interest in the implications of regional integration for the realization of scale economies, the degree of competition in member countries, and certain key institutional/procedural arrangements; the latter include in particular,

provisions for anti-dumping and countervailing duties, and dispute resolution. Increased attention is also being paid to the issue of removing barriers to trade in services among the partner countries, as well as other possible areas of liberalization.

## II. The concepts of trade creation and trade diversion

4. Modern customs union theory dates from Viner's (1950) article which introduced the concepts of trade creation and trade diversion. Viner's main contribution to the customs union question lay both in his careful re-statement of the fundamental question of whether a customs union represented movement away from protection towards freer trade, and in the propositions he advanced for establishing systematically the specific economic and trade consequences of a customs union for partner and non-partner countries. In analysing the economic consequences of a customs union, Viner developed the concepts of trade creation and trade diversion to set out the classic welfare costs and benefits of complete or partial preferential removal of duties. Two opposite forces would result from such a policy change: a trade-creating force generated by the elimination of protection of domestic producers against their counterparts in partner countries; and trade diversion resulting from the preferential access granted to partner countries vis-a-vis more efficient third-country producers. Viner showed that no general presumption could be made regarding the net impact of a customs union on the economic well-being of either the participating countries or the world as a whole. Net trade and welfare effects would depend on the specific circumstances. From a world perspective, a customs union raised welfare to the extent that it created trade by diverting demand from higher-cost domestic to lower-cost partner products, and reduced welfare through the diversion of trade from lower-cost foreign to higher-cost partner sources.

5. Krauss' (1972) survey of customs union theory details a number of early efforts to refine and extend Viner's work, including those of Meade (1955), Lipsey (1960), Cooper and Massell (1965), Corden (1965) and Massell (1968). The developments in customs union theory which drew Krauss' attention mainly concerned the European Common Market: the entry of Britain; the Market's proposed enlargement from six to ten members; and the trading relationships between the European Communities and developing countries.

6. A basic criticism of the partial equilibrium approach used in the initial work in this area is that it is only appropriate for small changes in trade policies. When more extensive trade liberalization is involved, the re-allocation of resources across industries has an important effect on real income and the pattern of trade. Thus it becomes important to take into account economy-wide repercussions of the change in trade policies. Furthermore, if the economy in question is relatively large, the effects of its trade liberalization on trading partners may be significant, in which case it becomes necessary to explicitly model the interdependences between countries in the world economy. In these cases, general as opposed to partial equilibrium models are used for both theoretical and empirical work.

7. In the classical general equilibrium model, many of the standard results of Viner's partial equilibrium analysis continue to hold. For example, it continues to be true that world welfare is maximized by each country maintaining free trade with their trading partners. It is also true that the welfare effects of customs union formation on partner and non-partner countries depends on the particular circumstances governing the customs union's external trade policy. Mention should also be made of the literature on the subject of potential terms-of-trade effects of customs unions, which is part of the "optimal tariff" literature.

8. While general equilibrium analysis is well developed in its vast theoretical literature, the application of these techniques to the practical task of empirical measurement has been much more problematic. Generally speaking, theoretical results in general equilibrium analysis require a number of simplifying assumptions. Thus there is a considerable distance between the hypothetical, abstract situation modelled and the real world.

### III. Other effects

9. One of the key assumptions made in the classical general equilibrium literature, that of perfect competition between firms, has been challenged as lacking in realism. A similar criticism has been leveled at the assumption that firms have already achieved all available economies of scale prior to the formation of the free trade area or customs union. Models in which additional economies of scale are explicitly modelled imply a much greater specialization in international trade and suggest much greater real income gains from trade than do models which exclude scale economies. The effects on the world volume of trade are also much greater. A country that becomes more specialized in domestic production by concentrating its available resources on several industries to obtain efficient scales of operation relies more on international trade to obtain the diversity of products demanded by its consumers. Additional export earnings and real income gains finance the higher demand for imports. The corollary is that protection is much more costly for an economy in terms of foregone income gains than is predicted by classical models. This obviously is a more significant issue for small countries, since the internal markets of large countries offer more scope for capturing economies of scale.

10. Another important supply effect of trade liberalization is the pro-competitive effect obtained from the entry of new firms, which reduces monopoly rents and associated inefficiencies. Unfortunately, the technical difficulties of incorporating the scale economy and competitive effects into theoretical models have not yet allowed a full scale analysis of discriminatory trade policy regimes. This limitation spills over into quantitative analysis, where a number of simplifying assumptions concerning the nature of unexploited scale economies and firm pricing are required to generate results.

11. It is evident from the preceding paragraphs that trade creation and trade diversion are only two of several mechanisms helping to determine the size, structure and incidence of the trade flow effects of economic integration. Lipsey (1977) has suggested that the formation of a trading area may result in changes in the world economy arising from five principal sources: (i) the specialization of production according to comparative advantage, the basis of the classical case for the gains from trade; (ii) economies of scale; (iii) a change in the terms of trade; (iv) forced changes in efficiency due to increased foreign competition; and (v) a change in the rate of growth.

IV. Tariff discrimination: empirical analysis and estimation of trade effects.

12. A first group of studies, produced mainly between 1950 and 1965, were essentially ex ante, predictive models. Verdoorn's (1954) analysis, which estimated the size, significance and incidence of trade and welfare gains and losses, is typical. Not surprisingly, the European Communities (EC) and the European Free Trade Association (EFTA) figured prominently in these early studies (see Balassa's (1974) survey). Ex ante studies face the double problem of, first, characterising in fairly concrete terms the pre-integration situation; and, second, constructing a model of the processes determining international trade which would enable the "post-integration" situation to be concretely defined and the effects of integration predicted (it is worth recalling that initial GATT working parties on regional arrangements operate ex ante).<sup>1</sup>

13. Williamson and Bottrill (1971) provided estimates of the impact of the formation of the EC on trade in manufactures. While acknowledging the wide variation in the results in other studies, they concluded that "intra-EC trade in 1969 was something like 50 per cent greater than it would have been if the EC has not been created"; that this was due to trade creation rather than trade diversion; and that "the harm done to other countries' exports by diversion was largely offset by positive external trade creation" (p.342). Miller's (1971) estimates include the static balance-of-payments and welfare costs of a customs union. Sellekaerts (1973) examined the objectives, conceptual framework, and the substantive and technical problems in estimating trade creation and diversion effects with alternative models, and proposed specific solutions. Mayes' (1978) critical analysis of the models and methods in estimating the effects of economic integration on trade focused on an even wider range of variables. Pomfret (1986) offers no firm estimates, but argues that because trade

---

<sup>1</sup> Although not directly relevant to this paper, mention should also be made of a category of studies which includes both ex ante and ex post estimates of the trade effects of preferential arrangements other than full free trade areas or customs unions. These include the generalized system of tariff preferences (GSP), the European Communities' ACP/Lomé preferences, and other trade cooperation arrangements.

creation was thought to be quite large in EC/EFTA studies, a persistent bias has emerged which underestimates trade diversion. Winters (1987) looked specifically at various attempts to estimate ex post trade effects, broader in scope than static trade creation and diversion, of Britain's accession to the EC.

14. Estimates of the net welfare gain from the static effects of integration are often small, especially when expressed as a per cent of GNP (Miller and Spencer's (1977) general equilibrium model of the static economic effects of United Kingdom's accession to the EC produced estimates of welfare gains of one tenth of one per cent of UK GNP).<sup>2</sup> Mayes (1978) summarizes in a useful table other estimates of predicted trade creation and trade diversion in the EC from over a dozen studies done between 1964 and 1974 (Table 1). There is considerable variation in most estimates. Several often quite technical and not easily summarized explanations for this variation have been advanced by Sellakaerts (1973), among others, and recently by Winters (1987). They include problems in the choice of appropriate base-dates and base-rates; the exact specification of the pre-integration situation, the inevitably hypothetical characterisation of international trade patterns in the absence of integration; the degree of comprehensiveness in the identification and choice of explanatory variables; product categorisation and disaggregation; and the choice of demand and supply elasticity estimates.

15. Three views of the empirical work in this area are worth noting. The first notes that the static resource allocation effects of free trade areas and customs unions are typically quite small, at least relative to GNP, and argues that the effects of increased competition and economies of scale - not usually captured in conventional quantitative analyses - are the more important effects. Second is the contention that the problem lies less in the relatively small size of estimated trade effects, and rather more in economists' inability to measure the full range of effects with reasonable precision. Third, the feeling appears to have gained ground that, as Mayes claims, sophisticated model-building is unlikely to yield measurably better results than simpler methods of analysis. Winters (1987), however, is more optimistic on this last point. He concludes that "future research marrying sound data and sensible theory could make significant improvements to our current state of knowledge."

---

<sup>2</sup> Miller (1971) also reviewed various estimates of the static BOP and welfare costs of British entry into the EC at the end of the transitional period, and made a generally critical review of the assumptions behind various empirical trade estimates.

Table 1  
Estimates of trade creation and trade diversion in  
the European Communities  
(Billions of US dollars)

Author	Period covered by estimate	Trade creation	Trade diversion
Aitken (1973)	1959	0.9	...
	1960	1.6	...
	1961	2.3	...
	1962	3.2	...
	1963	4.7	...
	1964	5.7	...
	1965	6.9	...
	1966	8.6	...
	1967	9.2	...
Lamfalussy (1963)	1962	...	0.5
Waelbroeck (1964)	1962	1.0	...
Truman (1969)	1964	4.5	-1.6
Balassa (1964)	1970	11.4	0.1
Balassa (1967)	1965	1.9	0.1
Clavaux (1969)	1965	5.0	...
EFTA (1972)	1965	1.7	0.6
	1966	2.2	0.7
	1967	2.3	0.9
Resnick-Truman (1974)	1967	1.8	3.0
Truman (1972)	1967	9.2	-1.0
Verdoorn-Schwartz (1972)	1967	10.1	...
Major-Hays (1970)	1968	10.8	-2.9
Williamson-Bottrill (1971)	1969	9.6	0.0
Prewo (1974)	1970	18.0	-3.1
Kreinin (1972)	1969-70	20.8	-4.0

Source: David Mayes (1978)

V. The literature on the Canada-United States Free Trade Agreement (FTA)

16. The debate which preceded the free trade agreement between Canada and the United States stimulated a great deal of research into the likely economic effects of such an agreement. As such, it provides a good overview of the "current state of the art" of analysing regional integration. A review of this extensive literature reveals that the discussion centred primarily on the following topics: (i) bilateral trade creation; (ii) the gains in economic growth in Canada and in the United States; and (iii) special features of the FTA, not specifically related to the movement of goods. Little explicit mention of the possible trade

diversion effects of the agreement on third countries was found, and no quantitative estimates provided. One reason for this may be that third-country trade is a relatively small consideration for Canada (where much of the research was carried out) because over three-quarters of its trade in goods and services is with the United States. Another reason is that the FTA is widely viewed in the academic literature as an agreement covering aspects of economic relations - disputes, bilateral and multilateral cooperation, services - which economists have more difficulty quantifying.

17. A common view of the basic objectives of Canada and the United States in negotiating a free trade arrangement, echoed in the literature, is summarized in the following statement:

"For the United States, the objectives included, inter alia, the establishment of new rules to govern services and investment, which would preclude a return to the more interventionist investment policies of the past in Canada and could serve as building blocks for broader multilateral agreements; and the resolution of nagging trade and investment problems in sectors such as autos and energy. Given the dependence of the Canadian economy on exports to the United States, the Canadian objective had a more singular focus: to attain greater security of access to the US market, particularly through reforms of US trade remedy laws." (Schott, 1988:a, p. 1).

18. The FTA may be divided into several basic areas - liberalization of trade in goods and services, investment, bilateral auto trade, provisions concerning subsidy/countervail and anti-dumping cases, administration and dispute settlement, promotion of multilateral cooperation, and factor mobility. Within these areas, only trade liberalization in goods, and provisions concerning automobile trade, have some effects which are amenable to quantitative analysis. The others have effects mostly of a non-quantifiable kind, including those that have an impact on bilateral and international economic relations (so-called systemic effects).

19. In the area of trade liberalization, most authors agree that given the current relatively low average tariff barriers, the trade gains in the aggregate from the FTA tariff cuts are not likely to be dramatic (Schott (1988), Easton (1989)). Sectors where tariffs are above-average may, however, experience more significant effects on trade. Liberalization of government procurement will result in expanded trading opportunities because the threshold of the contract value drops to \$25,000 for bidders from the United States and Canada (Schott (1988)). However, bidding for contracts whose value exceeds SDR 150,000 (currently about \$171,000) remains subject to rules provided for in the GATT Procurement Code. In energy trade - involving electricity, natural gas, uranium and crude petroleum and products - minimum export prices are abolished and other border restraints are reduced. For at least one important product, electricity, only cross-border exchange is feasible and third country effects insignificant (perhaps with the exception of Mexico). In the case of trade in crude petroleum, the provisions are primarily concerned with "security of access", for example assurances that supplies will not be interrupted in an arbitrary fashion (Verleger (1988)).

20. The FTA alters certain provisions of the Auto Pact (1965) and other elements of the complex arrangements governing trade and trade-related investment in road motor vehicles and related products. No quantitative estimates of the effect of these changes on bilateral or third country trade flows are available. Several commentators suggested that the major effect of the provisions on auto trade was to defuse a major area of past and future potential conflict between the United States and Canada (Wonnacott (1988) and Schott (1989)).

21. Estimates of gains in real economic activity for Canada and the United States from trade liberalization were undertaken using several different types of general equilibrium modelling techniques. For Canada, the maximum real income gain - in the range of 9 per cent - was derived from a model incorporating scale economies and pro-competitive effects of trade liberalization (Harris (1985); however, this is a partial over-estimate because the data set included pre- and not post-Tokyo Round tariff levels).<sup>3</sup> In models which do not incorporate scale economies and pro-competitive effects, the gains are less pronounced. For the United States, the estimates of real income gains are even more modest (Brown and Stern (1988)).

22. One reference to third parties was located:

"Some trade diversion will occur as a result of the FTA. US exports to Canada, and Canadian exports to the United States, should grow at the expense of goods from Japan, Germany, and other countries that will still face tariff and non-tariff barriers. The overall trade-creating effect of the FTA should compensate third countries for at least some of these losses, however. In other words, the FTA should result in an expanded economic pie: the FTA preferences should enable U.S. and Canadian firms to capture a greater share of the expanding markets, but third countries, though they may lose market share, may still be able to maintain or even expand sales in absolute terms." (Schott, 1988:a, p.6)

This statement summarizes the common view of such arrangements, that is, that while some trade diversion may take place in the short-term, it will eventually be compensated for by the trade-creating effects of higher real economic growth. Note, however, that this conclusion is not based on quantitative analysis.

23. Apart from liberalization in the area of merchandise trade, the FTA contains a number of other features. The provisions concerning dispute settlement in various areas (applying to antidumping and countervailing duty cases (Chapter 19), to financial services (Chapter 17), and to all

---

<sup>3</sup> Wonnacott and Wonnacott (1967) calls into question some orthodox economies of scale arguments in an early study of free trade between the United States and Canada. See also a recent study on "EC 1992" by the London Business School (1989).



other disputes arising under the FTA (Chapter 18)) may result in a lowering of the number of trade disputes, as well as more expeditiously resolve others (Horlick, Oliver and Steger (1988); Parker (1989)). There are new rights and obligations on direct investment in goods-related production (which may have some trade effects) and financial services (Schott and Smith (1988); Bierman and Fraser (1988)). Due to well-known methodological problems, effects of liberalized trade in services are particularly difficult to quantify. Another area in which the FTA makes specific provision includes the right of residents in Canada and the United States to temporarily reside in either country for business purposes.

24. Many of the commentators on the FTA have suggested that the major effect of the provisions discussed in the preceding paragraphs is to improve the economic and political relations between Canada and the United States. By their nature, these so-called systemic effects do not have directly quantifiable costs and benefits to the parties involved, including third countries.

#### VI. Summary

25. Three of the more important points that emerge from this brief review of the literature on the trade effects of the free trade areas and customs unions are:

- Both partial and general equilibrium models have important limitations for the analysis of practical situations insofar as many simplifying assumptions - some of which can be rather extreme - must be made in order to obtain specific quantitative results regarding changes in welfare or in the pattern of trade. Quantitative analyses of the trade effects of customs unions and free trade areas suffer from these methodological limitations, as well as the necessity of making essentially ad hoc assumptions about the nature of the relevant supply and demand conditions both in partner countries and in third countries.
- More recent theoretical and quantitative work has concentrated on extending the traditional models by explicitly allowing for scale economies and the impact of increased competition. While there is no question that many results of the traditional analysis are altered and sometimes even reversed, these newer models suffer from as many or more practical limitations as the earlier work.
- As tariff liberalization has progressed in many countries, the problem of dealing adequately with (i) reductions in non-tariff barriers, (ii) liberalization in such areas as services and investment, and (iii) arrangements regarding institutional/procedural issues (especially countervailing duties, anti-dumping duties, and dispute settlement), has become increasingly important. The need for such analysis is evident from the fact that the more recent regional arrangements have been predominantly concerned with policy changes in these nontraditional areas. However, these are precisely the areas in which quantitative analysis ranges from being very difficult to being irrelevant.

26. In summary, the recent literature on customs unions and free trade areas appears relatively less concerned with trade diversion and trade creation than with other issues which are even less amenable to quantitative analysis. Moreover, there is still no simple, single comprehensive conceptual framework for analysing the trade effects, even in the case of less complex forms of customs unions and free trade areas. As a result, this remains an area in which there is an absence of fully reliable quantitative estimates of the effects of changes in trade policies. This means that qualitative analyses and "informed intuition" drawing on basic economic principles will continue to play important rôles.

Selected Bibliography

- Aitken, N.D. (1973) "The effect of the EEC and EFTA on European Trade: a temporal cross-section analysis", American Economic Review, 63, No. 5.
- Balassa, B. (1967), "Trade creation and trade diversion in the European Common Market", Economic Journal, pp. 1-17.
- Balassa, B. (1974) "Trade creation and trade diversion in the European Economic Communities: An appraisal of the evidence", Manchester School of Economics and Social Studies, 42, No. 2, pp. 99-135.
- Bhagwati, J. (1971) "Customs unions and welfare improvement", Economic Journal, pp. 580-587.
- Bierman, L. and Fraser, D.R. (1988) "The Canada-United States Free Trade Agreement and U.S. Banking: Implications for Policy Reform", Virginia Journal of International Law, 29, No. 1.
- Brown, D.K. and Stern, R.M. (1988) "Computable general equilibrium estimates of the gains from U.S.-Canadian trade liberalization", mimeo.
- Clavaux, F.J. (1969) "The import elasticity as a yardstick for measuring trade creation", Economia Internazionale.
- Cooper, C.A. and Massel, B.F. (1965) "A new look at customs union theory", Economic Journal, 75, pp. 742-747.
- Corden, W.M. (1965) "Economies of scale and customs union theory", Journal of Political Economy, 89.
- Deardorff, A.V. and Stern, R.M. (1981) "A disaggregated model of world production and trade: an estimate of the impact of the Tokyo Round", Journal of Policy Modelling, 3, No. 2, pp. 127-151.
- Easton, S.T. (1989) "Free trade, nationalism, and the common man: the Free Trade Agreement between Canada and the United States", Contemporary Policy Issues.
- EFTA Secretariat (1972) The Trade Effects of EFTA and the EEC, 1958-1967, Geneva.
- External Affairs Canada (1987) The Canada-US Free Trade Agreement.

- Harris, R.G. (1985) "Summary of a Project on the General Equilibrium Evaluation of Canadian Trade Policy", in John Whalley, (ed.), The Canada-United States Free Trade, Toronto, University of Toronto Press for the Royal Commission on the Economic Union and Development Prospects for Canada.
- Horlick, G., Oliver, G.D., Steger D. (1988) "Dispute Resolution Mechanisms", in Jeffrey J. Schott and Murray G. Smith, (eds.), The Canada-United States Free Trade Agreement: The Global Impact Washington: The Institute for International Economics.
- Howlett, M. (1989) "The Threat of U.S. Protectionism and the U.S.-Canada Free Trade Agreement Reconsidered", World Competition, Law and Economics Review, 12, No. 4.
- Johnson, H.G. (1962) "The economic theory of customs union", in Money, Trade and Economic Growth, Allen and Unwin, pp. 46-73.
- Johnson, H.G. (1965) "An economic theory of protectionism, tariff bargaining and the formation of customs unions", Journal of Political Economy, 73, pp. 256-283.
- Kemp, M.C. and Wan, H.Y. (1976) "An elementary proposition concerning the formation of customs unions", Journal of International Economics, pp. 95-97.
- Krauss, M.B (1972) "Recent developments in customs union theory: an interpretive survey", The Journal of Economic Literature.
- Kreinin, M.E. (1972) "Effects of the EEC on imports of manufactures", Economic Journal.
- Lamfalussy, A. (1963) "Intra-European trade and the competitive position of the EEC", Manchester Statistical Society.
- Lipsey, R.G. (1957) "The theory of customs unions: trade diversion and welfare", Economica, 24, pp. 40-46.
- Lipsey, R.G. (1960) "The theory of customs unions: a general survey", Economic Journal, No. 279, pp. 496-513.
- London Business School (1989) 1992: Myths and Realities, Centre for Business Strategy Report Series.
- Major, R.L. and Hays, S. (1970) "Another look at the Common Market", National Institute Economic Review.
- Massel, B.F. (1968) "A reply and further thoughts on customs unions", Economic Journal, 78, pp. 479-82.

- Mayes, D.G. (1978) "The effects of economic integration on trade", Journal of Common Market Studies, 18, No.1, pp. 1-21.
- D.L. McLachlan, A. Apuzzo and W.Kerr (1988) "The Canada-U.S. Free Trade Agreement: A Canadian Perspective", Journal of World Trade, 22, No.4.
- Meade, J.E. (1955) The Theory of Customs Unions, North Holland, Amsterdam.
- Middlebrook, K.J. (1978) "Regional organizations and Andean economic integration, 1969-75", Journal of Common Market Studies, No.1, pp. 62-82.
- Miller, M.H. (1971) "Estimates of the static BOP and welfare costs compared", in Pinder, J., (ed.), The Economics of Europe.
- Miller, M.H. and Spencer, J.E. (1977) "The static economic effects of the UK joining the EC: a general equilibrium approach". Review of Economic Studies, 14, pp. 71-93.
- Morici P. (1989) "The Canada-U.S. Free Trade Agreement", The International Trade Journal, III, No. 4.
- Ohyama, M. (1972) "Trade and welfare in general equilibrium", Keio Economic Studies, 9-2, pp. 37-73.
- Robert P. Parker (1989) "Dispute Settlement in the GATT and the Canada-U.S. Free Trade Agreement", Journal of World Trade, 23, No. 3.
- Pelkmans, J. and Gremmer, H. (1983) "The empirical measurement of static customs unions effects", Revista Internazionale di Scienze Economiche e Commerciali, 30, pp. 616-622.
- Pomfret, R. (1986) "The trade-diverting bias of preferential trading arrangements", Journal of Common Market Studies, 25, No. 2, pp. 109-118.
- Prewo, W.E. (1974) "Integration effects in the EEC: an attempt at quantification in a general equilibrium framework", European Economic Review, 3.
- Resnick, S.A. and Truman, E.M. (1974) "The distribution of West European trade under alternative tariff policies", Review of Economics and Statistics, 56, No. 1, pp. 83-91.
- Sellekaerts, W. (1973) "How Meaningful are Empirical Studies on Trade Creation and Diversion ?", Weltwirtschaftliches Archiv, Band 100, Heft 4, 1973, pp. 519-553.

- Schott, J.J. and Smith, M.C. (eds.), (1988) The Canada-United States Free Trade Agreement: The Global Impact, Washington: The Institute for International Economics.
- Schott, J.J. (1988:a) "United States-Canada Free Trade: An Evaluation of the Agreement", Policy Analyses in International Economics, Washington: Institute for International Economics, No. 24.
- Stern, R.M. (1973) "Tariffs and other measures of trade control: a survey of recent developments", The Journal of Economic Literature, XI, No. 3, pp. 857-888.
- Stern, R.M., Francis, B. and Schumacher, B. (1976) Price Elasticities in International Trade: Annotated Bibliography, Macmillan, London.
- Stern, R.M., (1976) "Evaluating Alternative Formulae for Reducing Industrial Tariffs", Journal of World Trade Law, 10, No. 1,
- Truman, E.M. (1969) "The European Economic Community: trade creation and trade diversion", Yale Economic Essays, Spring.
- Truman, E.M. (1972) "The production and trade of manufactured products in the EEC and EFTA: A comparison", European Economic Review, 3, pp. 271-90.
- Verdoorn, P.J. (1954) "A customs union for Western Europe: advantages and feasibility", World Politics, 6, Princeton, N.J.
- Verdoorn, P.J. and Schwartz, A. (1972) "Two Alternative Estimates of the Effects of EEC and EFTA on the Patterns of Trade", European Economic Review, 3, pp. 291-335.
- Verleger, P.K. (1988) "Implications of Energy Provisions", in Schott and Smith, (eds.), op. cit.
- Viner, J. (1950) The Customs Union Issue, Ithaca, New York.
- Waelbroeck, J. (1964) "Une nouvelle methode d'analyse des matrices d'échanges internationaux", Cahier Economiques de Bruxelles, 21, 1.
- Whalley, J. (ed.), (1985) Canada-United States Free Trade, Toronto, University of Toronto Press for the Royal Commission on the Economic Union and Development Prospects for Canada.
- Williamson, J. and Bottril, A. (1971) "The impact of customs unions on trade in manufactures", Oxford Economic Papers, 23, No. 3, pp. 323-351.

Winters, A. (1987), "Britain in Europe: a survey of quantitative trade studies", Journal of Common Market Studies, 25, No. 4, pp. 315-336.

Wonnacott, P. (1988) "The Auto Sector", in Schott and Smith, (eds.), op. cit.

Wonnacott, R.J. and Wonnacott, P.G. (1967) Free Trade Between the United States and Canada: The Potential Economic Effects, Cambridge, Massachusetts.