

TRADE  
THEORY  
AND POLICY



ALI M. EL-AGRAA

# TRADE THEORY AND POLICY

Some Topical Issues

Ali M. El-Agraa

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# Preface

My aim in writing this book is to invite a rigorous discussion of three important issues which are vital for the future prospects of the world economy. The first is concerned with 'international cooperation'. The second is about 'international economic integration'. The third is concerned with the modern revival of 'protectionism'. Of course, international economic (and political) cooperation and international economic integration are not necessarily mutually exclusive policy options; indeed, it could be argued that they are mutually supporting. However, protectionism is certainly in direct contradiction to them. In a world plagued by severe recession, it is of the utmost importance that these policies should be subjected to a serious reappraisal, particularly since the official British opposition party has endorsed withdrawal from the European Community before considering either the implications of the decision or what policies Britain should adopt after withdrawal, although import controls are taken for granted as the obvious alternative.

The book is technical, since familiarity with the theory of international trade is a necessary prerequisite for the reader. However, those with a good knowledge of microeconomics and macroeconomics should be able to follow its general drift.

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Leeds

A. M. E.-A

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# 1 General Introduction

The history of the world economy has, during the past two decades or so experienced two interesting developments. On the one hand, there has been a tremendous drive for international economic integration. Indeed, there are more schemes under that heading than could reasonably be discussed in a single large book (see El-Agraa, 1982c). On the other hand, there has been a revival of protectionism – see the various publications by the Cambridge Economic Policy Group setting out the economic rationale for their protectionist stance, and Page (1979) for a global empirical assessment. These might not seem like contradictory tendencies for those who believe that ‘free trade areas’, ‘customs unions’, ‘common markets’, etc. are essentially inward-looking groupings which discriminate against the relevant ‘outsiders’. However, this point of view needs to be examined with a great deal of caution: economic integration promotes free trade among the participating nations; under the rules of the General Agreement on Tariffs and Trade (GATT), such groupings are not allowed to erect a common tariff barrier *in excess* of the average pre-integration tariff level; and the world has experienced general reductions in the level of tariffs under the Dillon and Kennedy Rounds of tariff negotiations conducted under the auspices of GATT. It is, therefore, vital that a thorough reappraisal of these developments be undertaken.

## INTERNATIONAL ECONOMIC INTEGRATION

Although the European Community (EC) is the most widely recognised example of international economic integration, in reality it was proposed for political reasons even though the arguments popularly put forward in its favour were expressed in terms of possible economic gains (see El-Agraa, 1980, 1982c and 1983a). However, regardless of the motives for international economic integration, it is still necessary to analyse the economic implications of such regional groupings.



At the customs union level (member nations remove *all* trade impediments among themselves and establish a common external tariff policy subject to the reservations stated above), the possible sources of economic gain can be attributed to:

- (i) enhanced efficiency in production made possible by increased specialisation in accordance with the law of comparative advantage;
- (ii) increased production levels due to better exploitation of economies of scale made possible by the increased size of the market;
- (iii) an improved international bargaining position, made possible by the larger size, leading to better terms of trade;
- (iv) enforced changes in economic efficiency brought about by enhanced competition; and
- (v) changes affecting both the amount and quality of the factors of production due to technological advances.

At the economic union level (a customs union which allows for free factor mobility between the participating nations) and beyond, further sources of gain become possible due to:

- (vi) factor mobility enhancing a better allocation of resources;
- (vii) the coordination of monetary and fiscal policies; and
- (viii) the goals of near full employment, higher rates of economic growth and better income distribution becoming unified targets.

Hence, international economic integration has both 'static' and 'dynamic' effects. The former relate to the reallocation of resources in accordance with the law of comparative advantage, while the latter relate to the numerous means by which economic integration may influence the rate of growth of GNP of the participating nations – these ways include: scale economies due to the increased size of the market for both firms and industries operating below optimum capacity before integration occurs; economies external to the firm and industry which may have a downward influence on both specific and general cost structures; the polarisation effect, by which is meant the cumulative decline either in relative or absolute terms of the economic situation of a particular participating nation or of a specific region within it due either to the benefits of 'trade creation' (see Chapter 8) becoming concentrated in another region or to the fact that some other area may develop a tendency to attract factors of production; the influence of the location and volume of real investment; and the effect on economic efficiency and the smoothness with which

trade transactions are carried out due to enhanced competition and changes in uncertainty.

## PROTECTIONISM

Although protectionism is not a new phenomenon, its modern revival is entirely due to the present recession and to the policy recommendations propagated by the Cambridge Economic Policy Group, most particularly by Professor Wynne Godley, Director of the Department of Applied Economics at the University of Cambridge. The Cambridge revival has an interesting twist to it in that it is presented as a panacea for 'ailing economies' such as the United Kingdom and the United States of America. The idea is that these economies suffer from Kaldorian (Kaldor, 1966) 'premature maturity': a rejuvenation of industry is entirely dependent on the notion that all the necessary conditions for 'infant industries' are prevalent in these, and similar, countries. Moreover, the economic rationale for this neo-protectionism is presented in Keynesian macroeconomic terms with unemployment at the very heart of the model and neo-classical concepts thrown out of the window in no uncompromising terms. Therefore, the reader, although assumed to be familiar with the economic analysis of tariff imposition (and similar trade impediments), is distracted by this new formulation and different set of assumptions. Finally, a further distraction is introduced in that protectionism is presented as an alternative policy to devaluation, when the world monetary system is now operating a freely flexible exchange rate regime, albeit a managed one.

## INTERNATIONAL COOPERATION

A serious examination of these two directly opposed developments leads to a general option which is in a sense consistent with international economic integration but in direct conflict with protectionism. To explain this option meaningfully, consider the case proposing Britain's withdrawal from the EC. This policy recommendation has been advanced as a cure for our British ills without a thorough analysis of its consequences. However, if the UK does adopt such a policy, it will have three options open to it: (i) to try to secure an industrial free trade agreement with the EC with regard to industrial commodities along the lines of the present EC-EFTA (European Free Trade Association)

arrangements; (ii) to adopt a protectionist stance; or (iii) to go for a Thirlwall (1979, 1980 and 1982) 'export-led growth' alternative (see Holt (1983) for a thorough discussion of these alternatives). The first possibility is 'castles in the air' since the EC-EFTA arrangement was entirely due to Britain's withdrawal from EFTA to join the EC. Protectionism, as we shall soon discover, depends entirely on the good faith of the international community, hence any retaliation by the outside world may have the consequence of economic disaster *all round*, and there is more to it than just that. Export-led growth is possible *either* within the confines of the legal rules of GATT, in which case it can be promoted irrespective of whether Britain is a member of the EC, or by adopting measures to promote exports which are against the general rules of GATT, in which case the question of our membership of GATT would have to be faced with the obvious consequences for us of confronting a very hostile world, a hostility which would be due entirely to our own irresponsible actions. Therefore, whichever way one looks at the practical alternatives, there is no option other than *international economic cooperation*, and, of course, international political cooperation. Whether it is export-led growth, protectionism, or whatever, a feasible option can be implemented only if it has the backing of a *large and influential* part of the world; needless to add that a 'group' with which a country is *seriously* associated may be particularly useful in this respect: it strengthens that country's international bargaining position.

#### ABOUT THIS BOOK

It follows from the above introduction that this book is about protectionism (Chapters 3–5), international economic integration (Chapters 8 and 9), and international cooperation (Chapters 6 and 7). Chapters 1 and 2 are by way of introduction and practical information. The common underlying theme is that cooperation at the international level is best for all and that economic integration, if properly conceived, is not only a good 'second-best' alternative but may also be the *only* means of promoting 'international economic cooperation'.

The level of exposition requires an understanding of international economics. Those whose knowledge of economics does not extend beyond an intermediate level in macroeconomics may be able to follow the argument of Chapter 3, while those with a good background of microeconomics may be able to appreciate the analysis in Chapters 2 and

5, but the remaining chapters are essentially for those with a particular interest in the theory of international trade.

#### ACKNOWLEDGEMENTS

This book relies heavily on articles published by myself either in economic journals or in the Leeds Discussion Papers series. I am, therefore, extremely grateful to the editors of these publications for copyright permission. I am also very grateful to professors John Black and Peter Robson of the Universities of Exeter and St Andrews respectively for reading a first draft of the book and making incisive comments with regard to both its contents and presentation. I must hasten to add that this by no means suggests that they concur with the analysis presented here, therefore I alone remain responsible for the views expressed.

## 2 Protection: a General Background

It is an established proposition of trade theory that free international trade, given certain restrictive assumptions, is the best regime for the world in that it increases countries' potential welfare. It is therefore pertinent to ask why it is that nations erect impediments on their trade. To answer this question one needs to be familiar with the branch of trade theory generally referred to as the theory of trade (commercial) policy.

It should be stressed from the start that trade impediments take a variety of forms: the imposition of tariffs, import quota restrictions, export subsidies, differing industrial standards, etc. (see Baldwin, 1971). To simplify discussion such impediments can be reduced to: tariffs, quotas and 'other' instruments (usually referred to as hidden trade barriers). Furthermore, all trade restrictions except tariffs are known as non-tariff trade distortions.

However, most discussion of this subject has been conducted in terms of tariffs. The reason is that tariffs are the device most widely used for regulating trade flows. Moreover, except under very special circumstances, tariffs are practically the only measure of trade regulation permitted by GATT. Finally, tariffs operate via the price mechanism, hence the analysis of tariffs can easily be extended to incorporate any trade impediments that operate via the price mechanism.

### REASONS FOR TARIFFS

In one of his many formidable contributions to the theory of tariffs, the late Professor Johnson (1965a) stated that the arguments as to why countries impose tariffs on trade fall into three general categories: economic arguments; non-economic arguments; and non-arguments. By non-economic arguments one means socio-political considerations and similar rationales – for instance, a country may deem it necessary for its

long term survival (the preservation of a certain way of life; military independence; security of food supplies; etc.) to be less dependent on trade by being more autarkic. Amongst economic arguments is the existence of a divergence between private and social costs and benefits; the rationale for free international trade is provided in terms of *private* costs and benefits only. Finally, non-arguments simply refer to fallacies or misconceptions regarding the economic consequences of tariff imposition.

The aim of this chapter is to provide the reader with a brief survey of the issues involved, particularly those of especial relevance to this book; those interested in a more detailed discussion should consult El-Agraa (1983b).

## EFFECTS OF TARIFFS

Before discussing the subject in some depth, it should be stressed that tariffs could be specific, *ad valorem* or a combination of the two (compound duties). A specific tariff is simply what it says, for example £*x* collected as a duty per car imported irrespective of the total number of cars, while an *ad valorem* tariff is levied as a percentage of the total value of the imported item. Since a specific tariff can easily be calculated as a percentage rate, the analysis here will be conducted entirely in *ad valorem* terms.

To analyse the economic effects of tariff imposition, consider a partial equilibrium diagram (Figure 2.1) where  $P_w S_w$  ( $P = \text{Price}$ ;  $S = \text{Supply}$ ; and  $W$  stands for the rest of the world) is  $W$ 's perfectly elastic supply function for commodity  $C$  (i.e. at price  $OP_w$  consumers in country  $H$  can buy any quantity they wish),  $SS$  is  $H$ 's domestic supply curve and  $DD$  is its domestic demand curve. Under free trade conditions,  $H$  plans to consume  $Oq_4$ , produce (domestically)  $Oq_1$  and import the difference ( $q_1q_4$ ) from  $W$  at a total cost of  $q_1ABq_4$  ( $= q_1q_4 \times OP_w$ ).

Assuming that tariffs do not affect the terms of trade (i.e.  $H$ 's demand for and supply of commodity  $C$  have no effect on world prices) and that tariffs are completely translated into an increase in the price facing  $H$ 's consumers, the imposition of a tariff ( $t$ ) raises the domestic price to  $OP'_w$  (i.e. shifts  $W$ 's supply curve up to  $P'_w S'_w$ ). As a result planned consumption falls by  $q_3q_4$  (from  $Oq_4$  to  $Oq_3$ ), domestic production expands by  $q_1q_2$  (from  $Oq_1$  to  $Oq_2$ ) and the level of imports falls to  $q_2q_3$  (from  $q_1q_4$ ). Hence the tariff imposition is equivalent to a tax on the domestic consumer accompanied by a subsidy to the domestic producer.

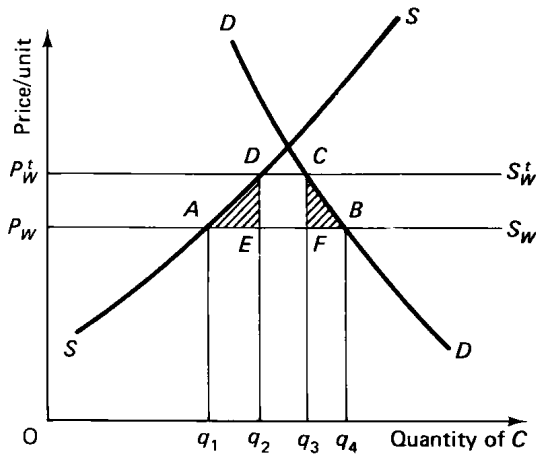


FIGURE 2.1

In partial equilibrium terms, these are the basic effects of tariff imposition, hence it is important to consider their implications carefully. For  $H$ , as a society of consumers, the fall in consumption from  $Oq_4$  to  $Oq_3$  results in a decrease in consumers' surplus by area  $P_w P_w^t C B$ . However,  $H$ , as a society of producers, experiences an increase in producers' surplus by area  $P_w P_w^t D A$  as a result of expanding domestic production by  $q_1 q_2$  – this is called the redistribution effect. Moreover, the quantity of imports from  $W$  after tariff imposition ( $q_2 q_3$ ) costs  $q_2 E F q_3$  but the domestic consumers pay  $q_2 D C q_3$  with the difference (area  $E D C F$ ) accruing to the government as tariff revenue. Assuming that the tariff revenue is spent by the government at the same marginal valuation as that at which the consumers give it up (i.e. there is no accusation that one can spend one's money better than the government), it follows that area  $E D C F$  is simply a transfer between the private and public sectors of the community without any significant welfare consequences. Hence, the balance sheet of effects is such that  $P_w P_w^t C B$  is a welfare loss part of which accrues to producers as surplus ( $P_w P_w^t D A$ ) and part ( $E D C F$ ) to the government as tariff revenue. Therefore, there is a dead-weight loss given by the shaded triangles ( $A D E$  plus  $F C B$ ). The tariff imposition, given the specified assumptions, therefore results in a net welfare loss for the country imposing it. Moreover, the tariff harms  $W$ , the country exporting to  $H$ , by reducing its exports by  $q_1 q_2$  plus  $q_3 q_4$ , but in partial-equilibrium terms

these are too insignificant to be noticed (see section on general equilibrium).

These dead-weight losses need careful consideration. The quantity  $q_1q_2$  can be bought from  $W$  at a cost of  $q_1AEq_2$  but to produce it domestically costs  $q_1ADq_2$ —the sum of the marginal costs depicted by  $SS$ . Hence, in order to attract the necessary resources to produce this extra domestic output  $H$  incurs a misallocation of resources at a cost of area  $ADE$ . The quantity  $q_3q_4$  gives the consumers a total welfare indicated by area  $q_3CBq_4$  but its cost to them is only  $q_3FBq_4$ . However, the tariff imposition, in reducing consumption by  $q_3q_4$ , results in welfare losses of that area ( $q_3CBq_4$ ) but consumers can spend the amount  $q_3FBq_4$  on another commodity, hence the dead-weight loss is the area  $FCB$  only.

Note that implicit in this analysis are the following assumptions: resources are fully employed all the time otherwise resources can be attracted into industry  $C$  at no opportunity cost; costless adjustment, in the sense that the transfer of resources from other sectors to industry  $C$  is smooth and requires no extra expenditures; homogeneous factors of production; perfectly competitive markets; and unaltered levels of consumer expenditure. Changes in these assumptions would result in drastically different conclusions (see Chapter 3).

Tariffs have another effect which is not of particular relevance here but which needs to be mentioned. It was stressed earlier that tariffs reduce the level of imports by  $q_1q_2$  plus  $q_3q_4$ . The previous cost of these imports was  $q_1AEq_2$  plus  $q_3FBq_4$  which had to be paid in foreign currency equivalent. Hence, these sums represent savings in foreign exchange and may, therefore, be of great significance for a country with a severe balance of payments constraint. They are, therefore, referred to as the balance of payments effects of a tariff.

Finally, it should be apparent that the extent of the dead-weight losses is determined by the slopes of  $SS$  and  $DD$ , i.e. by the price elasticities of  $H$ 's supply and demand curves, given  $S_w$ . The more elastic these curves, the less the welfare losses due to tariff imposition.

To recap, tariffs, given the analysis conducted so far, have: (i) a consumption effect; (ii) a production effect; (iii) a revenue effect; (iv) a redistribution effect; and (v) an import effect. In short, tariffs benefit the producers and the government and penalise the consumer and the foreign producer—a tariff is equivalent to an excise duty on the consumer, the revenue from which is received by domestic producers with the residual accruing to the government.



## IMPORT QUOTA RESTRICTIONS

Analysing the welfare effects of import quota restrictions is also straightforward. Starting from the free trade position depicted in Figure 2.1, an import quota of  $q_2q_3$  can be effectively introduced only if the world price ( $P_w$ ) diverges from the domestic price ( $P_w^t$ ) by a percentage which results in that quota. In other words, the quota produces an implicit difference between world and domestic prices that generates the specified quota. Once the domestic price rises to the level that makes that quota restriction possible, the analysis follows the same pattern as that of a tariff. Hence, in this sense, tariffs and quotas are equivalent in their effects.

There is one basic difference though. With a tariff, the area  $EDCF$  is a tariff revenue for the government, but what happens to that area in a quota system depends on the assumptions made regarding the way in which the quota is administered and the competitive nature of importers and exporters. If the government decides to issue the quota itself, it will be able to generate a revenue from this activity equal to area  $EDCF$ . If the importers operate as a cartel to administer the quota and face perfectly competitive  $W$  suppliers they can reap area  $EDCF$  as excess profits. However, if  $W$ 's exporters act as a cartel facing perfectly competitive  $H$  importers,  $W$  will reap that area as excess profits.

Of course, more complicated situations can be envisaged. For example, what if both importers and exporters organise themselves into cartels? It is then possible to envisage a monopoly versus monopsony outcome where the relative strength of the two countries determines what percentage of  $EDCF$  each acquires. In short, quotas create problems with regard to the area previously analysed as tariff revenue accruing to the government.

## EQUIVALENCE OF TARIFFS AND QUOTAS

Given the qualification regarding the organisation and distribution of the quota, it was demonstrated that tariffs and quotas are equivalent in their effects in that they produce the same production, consumption, revenue, distribution and import effects. However, that conclusion was reached by assuming that: (i) the foreign supply was competitive; (ii) there was perfect competition in domestic production; and (iii) there was perfect competition among the quota holders with one implication being that the full quota was used. It is of interest to know what qualifications to that