
Ireland in the European Community: Performance, Prospects and Strategy

NATIONAL ECONOMIC AND SOCIAL COUNCIL

Constitution and Terms of Reference

1. The main task of the National Economic and Social Council shall be to provide a forum for discussion of the principles relating to the efficient development of the national economy and the achievement of social justice, and to advise the Government, through the Taoiseach, on their application. The Council shall have regard, inter alia, to:

- (i) the realisation of the highest possible levels of employment at adequate reward,
- (ii) the attainment of the highest sustainable rate of economic growth,
- (iii) the fair and equitable distribution of the income and wealth of the nation,
- (iv) reasonable price stability and long-term equilibrium in the balance of payments,
- (v) the balanced development of all regions in the country, and
- (vi) the social implications of economic growth, including the need to protect the environment.

2. The Council may consider such matters either on its own initiative or at the request of the Government.

3. Members of the Government will meet regularly with NESC on their initiative or on the initiative of NESC to discuss any matters arising from the terms of reference and in particular to discuss specific economic and social policy measures and plans and to explore together proposals and actions to improve economic and social conditions. Any reports which the Council may produce shall be submitted to the Government, and shall be laid before each House of the Oireachtas and published.

4. The membership of the Council shall comprise a Chairman appointed by the Government in consultation with the interests represented on the Council, and

- Five persons nominated by agricultural organisations,
- Five persons nominated by the Confederation of Irish Industry and the Irish Employers' Confederation,
- Five persons nominated by the Irish Congress of Trade Unions,
- Five other persons appointed by the Government, including two from the National Youth Council of Ireland,
- The Secretary of the Department of Finance, and Secretary (Public Service Management and Development) Department of Finance.

Any other Government Department shall have the right of audience at Council meetings if warranted by the Council's agenda, subject to the right of the Chairman to regulate the numbers attending.

5. The term of office of members shall be for five years. Casual vacancies shall be filled by the Government or by the nominating body as appropriate. Members filling casual vacancies may hold office until the expiry of the other members' current term of office.

6. The numbers, remuneration and conditions of service of staff are subject to the approval of the Taoiseach.

7. The Council shall regulate its own procedure.

NATIONAL ECONOMIC AND SOCIAL COUNCIL

Ireland in the European Community: Performance, Prospects and Strategy

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PREFACE

In May 1987, the Taoiseach requested the NESC to undertake a project on Ireland and the European Community. The terms of reference for the project were:

- (i) to undertake an in-depth study of Ireland's comparative performance in the EC, incorporating an assessment of the impact on Ireland of membership of the Community;
- (ii) to assess the problems and opportunities inherent in unification of the internal market;
- (iii) to put forward and evaluate the policy options available to help mitigate the problems, capitalise on the opportunities and consider what countervailing measures may be necessary.

The report is divided into four parts. Part I provides background information on the current phase of European integration and the theories of economic integration which are drawn upon later in the report. Part II, entitled 'Historical Performance: The Impact of EC Membership on Ireland', contains five chapters which address the first item of the terms of reference. The conclusions which emerge from this analysis of Ireland's experience in the EC are presented in Chapter 7 and form an important background to the rest of the report.

Part III of the report is concerned with the implications for Ireland of the current phase of European economic integration and, specifically, with the implications of the completion of the internal market by 1992. In this part the threats and opportunities faced by the manufacturing and services sectors in Ireland are assessed (Chapters 8, 9 and 10). Another chapter analyses how the completion of the internal market will affect the regions of Europe (Chapter 11). Finally, the implications of the removal of frontiers and the approximation of indirect tax rates in EC member states are assessed (Chapter 12).

Part IV of the report addresses the policy issues to which these threats and opportunities give rise at national and Community level. In this final part the Council outlines its position on many specific issues and, most importantly, on Ireland's strategic approach to European economic integration.

Thematic Structure of the Report

Above, we have outlined the structure of the report as it is formally presented.

Parts III and IV can also be seen as having a structure built around two major themes or tracks.

The first, more general, track starts from an assessment of the regional effects of integration (Chapter 11) and progresses to examine the ability of the EC's Structural Funds to create economic convergence (Chapters 11 and 15). The limitations of the Structural Funds suggest that a range of policies for achieving economic convergence be considered, and that the merits and demerits of different levels of integration be evaluated (Chapters 13 and 15). The analysis of different levels or degrees of economic integration suggests the strategic approach to European integration which Ireland should adopt (Chapter 13).

The findings of these general analyses form the core of the report and reflect the Council's role as an advisor on the *principles* which should guide the formation of policy.

The second track consists of more specific and detailed studies. It starts from a detailed assessment of the threats and opportunities facing the Irish manufacturing and service sectors and the public finances (Chapters 8, 9, 10 and 12). It then progresses to consideration of the necessary response to these and to policy recommendations (Chapters 10, 12, 14, 15 and 17). Not surprisingly, these two tracks are closely related to one another. The connections between the general principles and analysis, on the one hand, and the particular studies, on the other, will emerge as the report proceeds.

ACKNOWLEDGEMENTS

The Council and the Secretariat of the NESC acknowledge the co-operation and assistance of many individuals and organisations in the preparation of this report. Members of staff of various institutions offered valuable comments on draft chapters, in particular: Kieran Kennedy, Eoin O'Malley and John FitzGerald of the ESRI; Dermot McAleese and Alan Matthews of TCD; Brendan Walsh of UCD; Tom Boylan of UCG; Liam Kelleher and Mary Bateman of CTT; and Tom Arnold of the Department of Agriculture.

Mr. W. Kirwan of the Department of the Taoiseach and Mr. S. Dorgan of the Department of Industry and Commerce participated in the Council's deliberations on the report.

Submissions were invited and received from the following Government departments: Agriculture and Food, Education, Industry and Commerce, Marine, Tourism and Transport. A background paper on the economics of monetary unions was received from the Central Bank of Ireland.

The Council retains full responsibility for the contents of the report.

The administrative staff of the Council's Secretariat, in particular Ms. J. O'Connor, provided invaluable and patient support in the production of the various drafts of the report.

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PART I

BACKGROUND

THE CURRENT PHASE OF EUROPEAN INTEGRATION

1. BACKGROUND

This report is concerned with the economic implications of Ireland's membership of the European Community.* Investigation of this subject was prompted by the opening of a new phase of European economic integration. This chapter briefly explains why this new phase of integration was initiated and what it entails. Later chapters will discuss specific new measures and proposals in much greater detail.

(i) The Early Years

The Treaty of Rome, signed by Belgium, France, Germany, Italy, Luxembourg and the Netherlands in 1957, expressed the determination to "lay the foundations of an ever closer union among the peoples of Europe". The means chosen to pursue this aim was the establishment of a European Economic Community.** The central element of this was to be the creation of a common market — an integrated market without obstacles to the movement of goods, persons, services and capital. Another important feature of the Treaty was agreement to adopt a common policy in the spheres of agriculture and transport, and to devise a system to ensure that competition in the common market was not distorted. In addition, it was agreed that member states would approximate their laws and co-ordinate their economic policy to the extent necessary to ensure the proper functioning of the common market and to attain other objectives of the Treaty. Finally, it was agreed to establish a European Social Fund in order to improve employment opportunities for workers and to contribute to the raising of their standard of living.

Progress towards establishment of the common market was initially rapid — with the abolition of tariffs and quotas being achieved ahead of schedule. This coincided with a period of strong economic growth in Europe. During the late 1950s and the 1960s the growth of industrial production and trade within the Community was particularly marked.

*Following discussions in the Council, the successive drafts of this report were prepared in the Council's Secretariat. The principal contributor was Rory O'Donnell. Gerry Danaher and Tony McCashin also contributed a number of chapters.

**Throughout this report we refer to the European Economic Community, the European Coal and Steel Community and the European Atomic Community as simply the European Community and we frequently abbreviate this to EC.

(ii) The Crisis of the Community

In the early 1970s the economic climate deteriorated sharply following the break-up of the international system of monetary management and the first oil crisis. The Community was enlarged in 1973 to include Ireland, Britain and Denmark. In the late 1970s and early 1980s further severe inflation and recession were experienced. In these circumstances progress on European economic integration came to a halt. While the basic customs union — ensuring no tariff barriers to trade in goods — was preserved, the obstacles to the movement of persons, services and capital were not removed. The Treaty of Rome had set out these objectives clearly but had not established a detailed programme and relied, in many cases, on the necessary decisions being taken by unanimous agreement among the member governments. In the 1970s and the early 1980s such agreement was not forthcoming. Indeed, even free movement of goods and undistorted competition in industrial production were eroded by governments' resort to state aids of various kinds in the face of severe industrial and employment crises. Not only was agreement not forthcoming on further progress of economic integration, but the Community became embroiled in continual and deep disputes on budgetary contributions and agricultural prices.

It is clear that a range of factors combined to create a serious malaise in the EC — and naturally opinions differ on the precise significance of each factor. Likewise, several factors had a role in encouraging widespread reflection on the EC's future and, eventually, action to restart the process of integration.

Three factors in particular prompted analysis of the Community's method and functioning. These were the EC's very poor economic performance (especially relative to the US and Japan), the further enlargement of the Community, and the difficulty in making and implementing clear decisions. In addition, the three Community institutions, the European Council, the Commission and the European Parliament, all played some role in the events which led to the restarting of European integration. We are not concerned with analysing the complex interaction of these elements between 1982 and 1986. Our intention, in what follows, is to familiarise the general reader with the background to the current phase of integration.

2. THE COSTS OF 'NON-EUROPE'

(i) Economic Failure

In 1982 the European Parliament commissioned a group of economists to draw up a report on the economic crisis affecting the European Community and on ways of bringing about a resumption of growth. The report, by Albert and Ball, confirmed that the economic performance of Europe in the 1970s and early 1980s was significantly worse than that of its major trading rivals Japan and the US. These economies showed an ability to recover from recession which had not been replicated in Europe. Furthermore, they argued that the relatively low

rate of investment in Europe in the 1970s would imply slower growth and lower productivity in the 1980s. What was significant was that in *analysing* these trends they argued that "the main obstacle to the economic growth of European countries is what we must call 'non-Europe'". By 'non-Europe' they meant the low level of co-operation between Community members and the weakness of common policies.* The members of the Community had responded to the slow growth and high inflation of the 1970s by *reducing* rather than increasing their co-operation.

In their view this took two main forms. States resorted to measures which, though they did not contravene the Community's rules, amounted to protection via non-tariff barriers. Important examples cited by Albert and Ball are the use made of state procurement and national technical and professional standards. Secondly, in the face of the economic problems of unemployment and inflation, member states altered their attitude to the Community — with the result that "Europe has for ten years been virtually paralysed by hair splitting and protracted disputes and interminable budgetary debates, all of ridiculously small importance compared with the major challenges facing it".

One of those major challenges was the wave of technological change and innovation. As a result of non co-operation between the different firms and states, Europe, though spending as much on research as Japan, was effectively being left behind — especially in the field of information technology.

In devising a strategy for recovery Albert and Ball laid great stress on two sets of measures. They advocated the creation of a unified internal market and new Community-level co-operation in a number of important fields — specifically high technology fields such as information technology, energy, biotechnology, aircraft and space research.

Despite much disputable and unclear analysis in their report, these two elements of the strategy proposed by Albert and Ball reflected preoccupations which came to be shared by all the Community's institutions (Scott, 1986). The fact that the Parliament, the European Council, and the Commission — while disagreeing to some extent on other factors which might explain Europe's poor economic performance — all agreed on the internal market and active co-operation in high technology may well explain why these two elements became the central thrust of the initiatives which culminated in the Single European Act.

(ii) Enlargement and Institutional Problems

The European Parliament also played a leading role in creating awareness of

*The second major cause of Europe's poor performance was, in the view of Albert and Ball, the tendency to respond to the first oil crisis by maintaining the level of real wages and increasing social welfare provision, thereby squeezing profits and reducing investment.

the need for institutional reform in the Community. The first elected European Parliament decided, by a large majority, in 1984 that a new Treaty was required for the Community. A Draft Treaty establishing European Union was agreed in February 1984. This Draft Treaty laid great emphasis on the resumption of progress in removing tariff and non-tariff barriers to the movement of goods, people, services and capital — a process that has become known as the 'completion of the internal market'. It also advocated the creation of monetary union — specifically calling for movement towards a European central bank.

But the Parliament's Draft Treaty was not confined to directly economic measures. A major, perhaps the major, element was proposals for institutional reform. The Draft Treaty provided for the Community's laws to be enacted, its executive appointed and its taxes as well as expenditure approved by a process of *co-decision* between the Parliament and the European Council, voting by majority. This institutional arrangement would apply to the existing field of Community competence together with, most importantly, the establishment of an economic and monetary union (Pinder, 1987; Schmuck, 1987; Matthews, 1985).

While the urgency of completing the internal market was widely agreed, the European Parliament's institutional reforms were not. The eventual content of the current phase of integration was determined by the reaction of the Commission and the European Council to the ideas of deepening and extending economic integration and co-ordination and reforming the Community's institutions.

3. COMPLETING THE INTERNAL MARKET

In 1985 the incoming Commission, adopted a Programme with the completion of the internal market as its centre piece. In June of that year the Commission presented a comprehensive White Paper to the European Council entitled *Completing the Internal Market*. While the measures set out in the White Paper will be discussed in more detail in Chapter 8, and analysed thoroughly throughout Part II of this report, it is important that its basic elements be noted here — since it is one of the central elements of the current phase of economic integration.

The White Paper did not make the case for the completion of the internal market — taking this as already accepted by the European Council. It explained that completing the internal market has three aspects:

- (i) welding together the twelve individual markets of the member states into one single market of 320 million people;
- (ii) ensuring that this single market is also an expanding market;

- (iii) ensuring that the market is flexible so that resources, both of people and materials and of capital and investment flow into areas of greatest economic advantage.

The contribution of the White Paper was to set out in great detail the measures necessary to achieve the first of these objectives and to adopt a timetable for the legal enactment of these measures.

The White Paper grouped the 300 measures necessary to complete the internal market under three headings:

- (a) the removal of physical barriers;
- (b) the removal of technical barriers;
- (c) the removal of fiscal barriers.

The most obvious example of physical barriers are customs posts at frontiers. It was proposed that customs posts be abolished both to reduce delays at frontiers and to remove the most visible sign of the continued division of the Community. But customs checks exist because of the different indirect tax regimes and different technical and safety standards in different member states. Consequently, removal of physical barriers (frontier checks) requires the removal of fiscal barriers. It is for this reason that the Commission's internal market programme includes proposals for the approximation of indirect taxes across the Community (see Chapter 12).

In the White Paper all other obstacles to the movement of goods, services, persons or capital were grouped into the remaining category of *technical barriers*. The most obvious technical barriers are the different standards for individual products adopted in different member states for health or safety reasons, or for environmental or consumer protection. These clearly protect certain producers and limit competition across frontiers. Another set of technical barriers are the national rules and regulations which restrict the provision of services across national boundaries. These are closely related to rules which restrict the movement of labour and the professions. It was proposed to remove all obstacles arising from these sources.

An important innovation in 1985 was the adoption by the Commission of a 'new approach' to the removal of technical barriers. Up to that point the attempt to remove technical barriers to trade had taken the form of complete harmonisation of all countries' technical standards. This proved to be an extremely lengthy and difficult process. The 'new approach' moves away from the concept of harmonisation to that of mutual recognition. Under this principle the task of setting safety or other standards can be delegated to national authorities. The principle of mutual recognition means that member states must allow products which satisfy these (national) requirements free

access to their markets. They can impose different or more burdensome regulations on their own producers if they wish, but cannot use these as a basis for excluding other products (Kay, 1989). Under this approach the definition of European standards need not go beyond the basic objectives of consumer protection.

Another set of very significant barriers to trade and competition are those which arise because of the nature of government procurement. In principle, public bodies were already forbidden to discriminate between suppliers from Community countries when purchasing many goods or services and were required to advertise major contracts throughout the Community. In practice, public procurement in all EC countries favoured national companies wherever possible. In addition, very important areas, such as telecommunications, water, energy and transport, were exempt from the Community's requirements for open tendering. The White Paper proposed that existing regulations for open competition would have to be enforced and that these exemptions would be eliminated. These are, potentially, very significant measures because one of the central economic arguments for completion of the internal market was that European firms in advanced products such as telecommunications, energy and transport were, as a result of the fragmentation of the market, too small to compete with major non-European producers.

Overall then the 300 measures listed in the Commission's White Paper *Completing the Internal Market* have three immediate economic objectives (Kay, 1989). They aim to facilitate trade by reducing the obstacles to the efficient and economical distribution of goods within the EC. They intend to eliminate many of the non-tariff barriers to trade and thereby increase market access and reduce the segmentation of the market. Finally, they plan to liberalise public procurement practices which should also reduce market segmentation.

The second major feature of the White Paper was the setting of a definite timetable for the adoption of the 300 measures necessary to complete the internal market. Following the European Council, the Commission stated that the internal market must be completed by 1992. Given that Community legislation takes some time to pass into national legislation this target implied an extremely demanding schedule of proposals by the Commission and discussion and adoption by the European Council and the various Council of Ministers.

While the Commission's White Paper was concerned mainly with the completion of the internal market it did link this to three other approaches which also turned out to be of some significance in the current phase of European integration. First, it stressed that the suspension of internal borders must be accompanied by actions which strengthen the research and

technological base of the Community's industry. Second, it argued that the integration of national markets must be accompanied by a strengthening of the co-ordination of economic policies and the European Monetary System (EMS). Third, the Commission noted the risk that, by facilitating the movement of resources to areas of greatest economic advantage, the completion of the internal market could widen the existing discrepancies between regions of the Community. In the Commission's view this enhanced the importance of the Community's Structural Funds.

4. THE SINGLE EUROPEAN ACT

The three themes which emerged from the stagnation of the Community in the late seventies and early eighties, and the reflection to which this gave rise, were the completion of the internal market, institutional reform, and the development of new Community policies in new fields. The European Council rejected the Parliament's idea of a completely new Treaty and opted instead for revision of the existing Treaty of Rome. Each of the three themes discussed above were reflected in the revision of the Treaty enshrined in the Single European Act.

(i) The Internal Market

The Single European Act added new articles to the Treaty of Rome addressing explicitly the internal market programme. These new articles are of two types. The first group set December 1992 as the target date for establishing the internal market, defines the internal market as an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured, and provides for interim reports by the Commission on progress towards the internal market. The second group of new articles were added to the Treaty in order to make sure that the decisions necessary to complete the internal market are actually taken at the European Council. These provide for a move from unanimity to qualified majority voting on many issues related to the internal market.

However, the Single European Act (SEA) explicitly limited the extension of majority voting by stating that it shall not apply to fiscal and taxation matters, monetary co-operation, the free movement of persons, the rights and interests of employed persons, the environment, the level of finance for research and development, and the co-ordination of the Structural Funds.

(ii) Institutional Reform

The extension of majority voting was one major element of institutional reform designed to increase the effectiveness of the Community's decision-taking procedures. The European Council rejected the system of 'co-decision' (between the European Council and the Parliament) proposed by the European

Parliament in its Draft Treaty. Nevertheless, the Single Act did introduce some reform of the institutional arrangements between the Commission, the European Council and the Parliament.

Two reforms were undertaken. One redefines the way in which the European Council confers powers on the Commission and is hoped to contribute to a more efficient execution of Community business. The second reform provides for a 'co-operation procedure' between the Council of Ministers and the European Parliament. The new procedure defining the European Parliament's role in the discussion, amendment and final acceptance or rejection of new Community laws is complex and need not be discussed further here (see Corbett, 1987; Pinder, 1987).

(iii) New Treaty Aims and Policies.

Codification of Existing Policy

The Single European Act also introduced into the Treaty some mention of Community policies in areas which had up to that been pursued under the residual powers of the Community. Thus Community action in the fields of research, the environment, regional policy and some aspects of social policy will now have a stronger legal base in the Treaty.

Monetary Capacity

Although the Single Act gave Treaty status to the monetary capacity of the EC, by mentioning both the European Monetary System (EMS) and the European Currency Unit (ECU), it is not clear that it in any way extended the competence of the Community. It is clear that further institutional development in the monetary area will require further amendment of the Treaty.

Economic and Social Cohesion

We noted that in its White Paper *Completing the Internal Market* the Commission drew attention to the possibility that increased mobility of resources could widen the existing regional disparities in the Community. This concern was strongly expressed by several member states, including Ireland, and is reflected in the Single Act in the form of new Treaty articles dealing with 'Economic and Social Cohesion'. The Community objectives of cohesion and convergence will be discussed in considerable detail in Chapters 11, 13 and 15. Here we merely inform the reader of the provisions of the Single Act.

These articles state that Community action should strengthen its economic and social cohesion and, in particular, shall aim at reducing disparities between regions and the backwardness of the least favoured regions (Article 130A). The Act specified in a general way the means by which these objectives shall be pursued. It stated that both national and Community policy would further them and the Community would support their achievement through the Structural Funds. It was also laid down that in implementing common or

Community policies, including the internal market, account shall be taken of the objectives of economic and social cohesion and convergence (Article 130B).

Another important aspect of these new articles was the demand that the Commission submit a comprehensive proposal on how to increase the effectiveness of the Structural Funds. That proposal has been submitted and agreed by the European Council. It provides both for an increase in the Structural Funds and for changes in the rules governing their usage. In accordance with these changes the Government has recently submitted Ireland's *National Development Plan 1989-1993* to the Commission. We discuss the recent changes in the Structural Funds in detail in Chapter 15.

THE THEORY OF ECONOMIC INTEGRATION*

1. INTRODUCTION

In studying Ireland's experience in the European Community and its prospects and role in further European economic integration it is necessary to draw on theories of international trade and integration. Indeed, the reader will find that the conclusions that the Council have reached on both past performance and future prospects rest heavily on arguments which are both theoretical and empirical.

In general, where a particular theoretical concept or argument plays an important role in our analysis we outline that theory in the relevant chapter. Thus, in Chapter 3, which opens our study of the impact of EC membership on the Irish economy, we briefly set out some important hypotheses about the effects of integration on the pattern and nature of trade, the structure of production, economic welfare, the efficiency of production and the industrial structure. These are then used throughout Part II of the report in our assessment of the specific effects of EC membership on Ireland. In Chapter 8, which develops a framework for analysis of the effects of completion of the internal market on Ireland, we briefly state the processes set in train by reduction of non-tariff barriers — as understood in modern theories of trade and integration. These are then used in our analysis of the effects of 1992 on the manufacturing and service sectors in Chapters 9 and 10 respectively. Chapter 11, on the effect of market completion on the regions of Europe, consists very largely of an explanation and assessment of theories of regional convergence and divergence. Finally, in Chapter 13 we develop a strategic approach to European economic integration. In order to devise and defend this, we explain the theory of public finance in federal systems and outline some very significant recent developments in the theory of economic integration. Consequently, the reader will always find that the theoretical ideas used in our analysis are briefly explained in the relevant chapter and, in some instances, will find extended but nevertheless non-technical discussions of them.

However, detailed explanation of theoretical ideas can disrupt the flow of argument and obscure the basic findings from those without a knowledge of

*In writing this chapter, considerable use has been made of a survey of theories of trade and economic integration prepared for the Council by Eithne Murphy of the Rural Economy Research Centre, Teagasc.

economic analysis. In addition, there are certain theoretical ideas which are drawn upon again and again in this report. For these reasons, this chapter surveys some of the more important theoretical concepts and arguments explained more briefly in the chapters listed above. While we attempt, as far as possible, to avoid using professional economic terms, and try to explain highly technical arguments in everyday language, this chapter is certainly more technical than the rest of the report, and the general reader may find it advisable to skip over it. For the reasons given above, readers doing this will miss little of the essential argument.

In Section 2, we outline the orthodox or traditional theory of international trade, since this plays an important part in the economic analysis of integration. In Section 3, we explain briefly how this theory is applied in evaluating the costs and benefits of different stages or levels of integration. Section 4 explains some very important extensions to the theory of international trade. The introduction of the idea of economies of scale has led to the development of what has become known as the new trade theories. We draw heavily on the new trade theories, developed in recent years, in our analysis of Ireland's experience in the European Community, in Part II of this report, and in our analysis of the threats and opportunities likely to be created by the completion of the internal market, in Part III of the report. Consequently, in this chapter, we explain in some detail some of the main propositions emerging from theories of trade which take account of economies of scale. Section 5 considers the welfare gains and losses which may arise from trade in these circumstances and contrasts them with the gains and losses predicted by traditional theory. Finally, in Section 6, we briefly note some significant developments in the theory of economic integration. These developments are drawn upon, and further explained, in Chapter 13 — where we develop a strategic approach to European economic integration.

2. TRADITIONAL TRADE THEORY

The traditional theory of international trade consists of the application to the international economy of the orthodox or neoclassical theory of price, output and distribution. The theory produces predictions on three important subjects: the pattern of trade, the gains from trade, and income distribution. Here we briefly explain these predictions and the analysis which underlies them.

(i) The Pattern of Trade

The traditional or neoclassical theory is usually explained by reference to two countries each of which produces two products; indeed, many of the most important propositions were developed in this framework. Each country uses two inputs, capital and labour, known as 'factors of production' in economics. In both countries one good, requiring a lot of labour in its production, is called

labour-intensive, while the other good requires mainly capital and is, consequently, called capital-intensive. It is assumed that one country has more labour and the other more capital. These quantities of labour and capital are assumed *given* — and are known as the endowments of factors of production.

The theory mainly consists of a comparison of the economic outcome when there is no trade, called autarky, and when trade is allowed. Before trade, each country produces both goods, but because of the different relative abundance of labour and capital the two goods have different prices in each country. Specifically, the labour-intensive good is cheaper in the labour-rich country — reflecting the abundance and hence cheapness of the labour available to produce it. Likewise, wages are lower in the labour-rich country and returns to capital are lower in the country with abundant capital.

When international trade is allowed, the country with relatively abundant labour will find it advantageous to purchase the capital-intensive good abroad — where it is produced more cheaply — than to produce it itself. Likewise, the capital-rich country will find that it produces the labour-intensive good more expensively than the labour-rich country, and will purchase it abroad rather than produce it. Thus, each country exports that commodity that utilises best its most abundant input. Indeed, each country specialises completely in the product to which it is most suited — and acquires the other product through trade. Thus, the traditional theory of trade says that the pattern of trade reflects the differences between countries' endowments of labour and capital.

The important features of this analysis should be noted. First, the pattern of specialisation and trade is based on *comparative* or *relative* advantage not absolute advantage. Even where one country can produce *both* goods more cheaply than the other it will specialise in the production and export of one good and import the other. It will specialise in the good in which its relative or comparative advantage, based on endowments of labour and capital, is greatest. Second, the analysis is based on the same conception of markets and their operation which underlies orthodox economics. Consequently, it relies on the set of assumptions which are necessary to sustain the orthodox vision of a system of markets as a self-regulating mechanism. In addition, much of the theory of international trade assumes what is known as constant returns to scale. This term describes the idea that the cost of production of each good neither rises nor falls as quantity produced increases. Its significance will emerge presently.

(ii) The Gains from Trade

We noted that before trade, the labour-intensive good was cheaper in the labour abundant country and the capital-intensive good was cheaper in the capital-rich country. Once trade is allowed, the price of a given good must be the same in both countries; otherwise it would be profitable to buy it where it is cheap

and sell it where it is dear. Given the initial differences, the prices of both goods in both countries will change. In particular, the country specialising in the labour-intensive good will find that the new foreign demand for that good will increase its price. The country importing that good will still find it cheaper than it was when produced at home, using relatively scarce labour. Likewise, the new 'world' price of the capital-intensive good will be higher than it was in the capital-rich country, but lower than it was in the country with abundant labour.

These price changes play an important role in generating the gains from trade. The labour-rich country finds the price of its export good higher and the price of its import good lower. Similarly, the new 'world' price for the capital-intensive good benefits the capital-rich country. In addition, both countries alter their production pattern by specialising in the production of one good and, for both countries, the price of their speciality item is higher than it was in isolation. Consequently, each country can consume more by specialising in the production and export of the good in which it has a "relative advantage", which has become dearer, while importing the good in which the other has an advantage, which has become cheaper. Thus a fundamental result of the traditional or orthodox theory of trade is that, on the assumptions which underlie the analysis, countries will always gain from trade.

An important feature of this proposition is that it remains valid even if, before trade, one country can produce *both* goods more cheaply than the other country. The implication of the principle of comparative or relative advantage is that even if a highly productive country is more efficient than its trading partners in almost everything, it can still gain by specialising in its areas of *greatest relative* productivity while importing goods in which its productivity advantage is smaller than less productive, and hence lower wage, nations (Krugman, 1987b).

Having identified the gains from trade, we must note a possible cost or welfare loss. In the analysis outlined above, each country reallocated its labour and capital in the process of specialising in the production of one good. For example, in the labour-rich country specialisation involved building up the industry producing the labour-intensive good and running down the industry producing the capital-intensive good. This structural adjustment could be very large and is unlikely to be achieved instantaneously or costlessly. The disruption to the economy necessary to specialise has to be counted as a welfare loss from trade and must be subtracted from the gains mentioned above. However, it is important to note that in the traditional theory these adjustment costs are purely *transitory*. Specifically, it is *not* the case that either capital or labour could remain *unemployed* once the structural adjustment has been achieved. The reason for this is that traditional trade theory, like much of economics, embodies as its central element a vision of the economic system as a self-regulating mechanism which has a natural tendency to full employment of both labour and capital.

(iii) Distribution

Returns to Labour and Capital

A very important question is the effect of specialisation and trade on the distribution of income within each country. We have seen that in the capital-rich country, for example, the opening of trade will cause a contraction of the labour-intensive industry, since that country is relatively uncompetitive in that industry, and an expansion of the capital-intensive industry. In addition, the price of the capital-intensive good rises, and the price of the labour-intensive good falls. These changes, together, ensure that the return to capital increases and the wage of labour falls. This result can be easily grasped if it is remembered that in the neo-classical theory of distribution, the reward to labour and capital are determined mainly by their scarcity. The opening of trade has, effectively, *altered the scarcity* of labour and capital. Labour, which was fairly scarce in the capital-rich country, is no longer so scarce when the two countries are taken as a whole. Consequently, its wage in that country falls. Indeed, it is a general prediction of the traditional theory of trade that owners of factors of production which are scarcer in a particular country than they are in the world as a whole are likely to lose as a result of trade (Helpman and Krugman, 1985)*.

Not surprisingly, the opposite happens to the reward of capital in the capital-rich country. Before trade, capital was very abundant in this country. After trade, it is relatively less abundant, the capital-intensive industry has expanded and the price of the capital-intensive good has risen. As a result, income distribution moves in favour of capital. An opposite movement in income distribution will occur in the labour-abundant country. This has the interesting implication that the traditional theory of trade predicts that in countries with abundant labour and little capital, the opening of trade will shift distribution of income in favour of labour.

National Gains from Trade

This finding that trade tends to make some people within each country worse off and others better off, means that we must look again at the fundamental proposition that trade makes both countries better off. What was shown was that, on the assumption of the orthodox trade theory, the total consumption available to each country, taken as a whole, was increased by specialisation and trade. But if, within a country, some have lost and some have gained it is impossible to say that *the country* has gained. Instead, what the theory says is that as a result of the increased overall national income, the gainers will have gained sufficiently to be able to fully compensate the losers, and still be better off. Thus, the precise statement of the gains from trade in traditional theory is that trade will always produce a *potential* increase in national welfare.

*We stress again that although labour may have had to change from one industry to another, and although its real wage will be lower after trade, it will not be unemployed.

3. THE ECONOMIC ANALYSIS OF INTEGRATION

A large part of the economic analysis of integration consists of the application of conventional trade theory to different models or stages of integration. In this section we summarise some of the propositions which emerge from this analysis. We begin by briefly defining the stages of integration usually specified (Robson, 1987).

(i) The Stages of Economic Integration

The different forms or degrees of economic integration were defined by Balassa in his *Theory of Economic Integration* (1961). He defined five stages of integration which spanned the spectrum from autarky (complete self-sufficiency) to total economic integration. These five stages of integration are essentially a classification system and, as such, have become widely used. Here we briefly define each of these stages. We elaborate on these definitions and concepts in subsequent chapters, especially Chapter 13.

Free Trade Area

In a free trade area member countries agree to eliminate tariffs and quotas on trade in goods among themselves, but each country maintains its own tariffs and quotas against non-members.

Customs Union

Establishing a customs union involves, in addition to removal of barriers to trade between members, adoption of a common external tariff.

Common Market

A common market goes beyond a customs union in that it entails free movement of factors of production, capital and labour, as well as free movement of goods.

Economic and Monetary Union

This combines all the features of a common market with some degree of harmonisation of national economic policies, so as to reduce discrimination owing to disparities in these policies. This is likely to involve some harmonisation of taxation policy and some degree of monetary integration. Adoption of a single currency or irrevocably fixed exchange rates implies a high degree of co-ordination of macroeconomic policy.

Total Economic Integration

This means unification of a wide range of economic policies (monetary, fiscal and social) and their conduct by a supra-national authority.

Negative and Positive Integration

Early in the discussion of these stages of economic integration a distinction was

made between *negative* and *positive* integration (Tinbergen, 1954; Pinder, 1968). *Negative integration* refers to the *removal* of obstacles to the movements of goods, labour or capital. *Positive integration* refers to the *establishment* of common policies and institutions in order to achieve economic integration or to pursue other objectives of the group or union. For example, it used to be said that free trade areas, customs unions and common markets were examples of *negative* integration, because they involve primarily the *removal* of national obstacles to the free movement of goods, capital or labour, and that economic and monetary union and more advanced integration were examples of *positive* integration, in that they require the *establishment* of common policies and institutions.

The five stages of integration listed above have been widely used in economic analysis of the costs and benefits of integration — an analysis which we will consider presently. However, we will see in Section 6 of this chapter that Balassa's specification of the stages of integration has been the subject of serious and telling criticism in recent years. This criticism, and the associated development of the concepts of negative and positive integration, play an important part in our consideration, in Chapter 13, of Ireland's strategic approach to European economic integration.

(ii) The Economic Theory of Integration

The economic theory of integration largely consists of the application of traditional static trade theory (see Section 2) to the stages of integration outlined above. In reporting these we confine ourselves to two main points which need to be added to the ideas of conventional trade theory. Other points of relevance will be developed where necessary.

Trade Creation and Trade Diversion

The analysis of trade compared no-trade with complete free trade. The formation of a free trade area, a customs union or a common market is not a move to complete free trade since the countries forming the union exclude other countries by maintaining, or increasing, tariffs against them. This has the following effect on the analysis of the gains from trade. As well as 'trade created' as the member countries specialise, there is, against this, 'trade diverted' as trade with non-members is reduced or stopped altogether. For example, if Ireland had joined the EC when the British application was refused, both Ireland and the EC countries would gain by specialising in particular lines and this would imply new trade flows. But at the same time Ireland might now buy from France some products which were previously bought from Britain, and which would be cheaper to buy from Britain but for the new tariff against British goods. This new trade with France is 'diverted' and reduces the net gains from forming the customs union. Whether the formation of the customs union increases or decreases total welfare depends on the relative size of the 'trade created' and 'trade diverted' (Robson, 1987; Coffey, 1977). Economists have

developed techniques to try to measure these effects. In Chapter 3 we consider these techniques and assess the significance of trade creation and trade diversion in Ireland's membership of the EC.

The Most Beneficial Customs Unions

One question which was frequently asked was: what kinds of countries would gain most from forming a customs union? Would countries that have very different endowments of land, labour and capital (and are therefore complementary to one another) gain more from the formation of a union than countries that are economically similar (and therefore competitive with one another)? Traditionally, it was assumed that a customs union between complementary (different) economies would be more advantageous — and this idea has a clear basis in common sense. Viner, one of the major figures in the theory of economic integration, challenged this viewpoint and argued that the more competitive (similar) are the economies the greater the gain from the formation of a customs union (Viner, 1950).

The explanation for this conclusion lies in the nature of the orthodox analysis of trade and is, in fact, a revealing example of that analysis. Viner's argument was that two complementary (similar) economies will gain most from formation of a customs union because they will move from both producing both goods to one country specialising in each good. The *change* in the pattern of production and exchange will be large; it is precisely these changes in the pattern of economic activity which are counted as 'gains from trade' in the orthodox approach. To see this point consider the case of two countries which complement one another *totally* i.e. whose endowments of land, labour and capital are so different that they each produce a totally different range of goods. When they form a union they will trade their different kinds of goods — but there will be no rearrangement of their economies since no further specialisation is possible.

This argument serves to highlight a very important assumption in traditional trade theory. The common sense idea that very different (complementary) economies would gain a lot from forming a union has behind it the common sense idea that by specialising and extending their specialisation each country would become more and more productive, because it would increase its expertise in one direction. This would undoubtedly be a source of substantial welfare gains. But traditional trade theory excludes this possibility by its exclusion of the possibility of economies of scale. This limits the effects of trade and, consequently, the kinds of welfare improvements which are counted as 'gains from trade'. It is precisely the assumption that there are no economies of scale that is dropped in the new trade theories.

4. INTRODUCING ECONOMIES OF SCALE

(i) New Concepts and Models

The orthodox or traditional analysis is based on very strong assumptions. Among the most significant of these are the assumptions that no economic activity in any country displays economies of scale, that all countries have access to the same technology and that there is perfect competition in all markets. These assumptions play an important role in generating the predictions of orthodox theory concerning both the pattern of trade and the gains from trade.

Three Developments in the International Economy

Three developments in the international economy have prompted economists to analyse international trade using less restrictive assumptions. First, much of the world's trade is trade in manufactures between industrial countries with similar endowments of labour and capital and which, therefore, cannot easily be explained on the basis of traditional comparative advantage (Krugman, 1983). Indeed, much of this trade involves two way exchange of very similar goods. Such trade is known as intra-industry trade, because it occurs within a given industry and involves specialisation *within* industries rather than *between* them. Intra-industry trade plays a very important role in modern approaches to the study of international trade. Second, many of the industries most involved in trade are highly concentrated — with a small number of firms accounting for a very large percentage of production and sales. The level of concentration of modern industry provides *prima facie* evidence that the model of perfect competition is an inaccurate description of the real world (Venables and Smith, 1985). Third, it has become clear that much international trade is based on technological competition rather than on comparative advantage deriving from the relative abundance or scarcity of labour and capital (OECD 1987; Krugman, 1983).

These phenomena strongly suggest that economies of scale play a significant role in international trade. Economies of scale, or increasing returns to scale, refers to a situation where the cost of production of a commodity is *lower* the larger is the scale of production. The conventional approach to trade, and most orthodox economics, is premised on the assumption that cost of production is either constant or *increasing* as output increases. There are many reasons why a wide range of economic activities will display economies of scale, and few reasons why any activity should display diseconomies. Not surprisingly, therefore, there is much evidence to show that manufacturing and some kinds of agriculture experience economies of scale (see Bailey and Friedlaender, 1982).

Economies of scale play a central role in the new approaches to the analysis of trade developed in recent years. In fact, some economists have long been

aware that economies of scale were significant. However, until recently this knowledge had little impact. Krugman, one of the major authors of the new theories, explains the predominant attitude well:

The conventional case for the desirability of free trade rests, in part, on idealised theoretical models in which free trade can be shown to be perfectly efficient. Economists have always known that the conclusion that markets are efficient becomes suspect when one abandons some of the idealisations of these theoretical cases. Yet, they have tended to regard the idealised models as giving a basically correct view, with the deviations from the ideal adding only minor complications. This traditional faith in the efficacy of markets partly reflected a judgement about reality; equally it reflected a lack of any ability to describe precisely what difference deviations from perfect markets make (1987a).

Further Implications

Allowing the possibility of economies of scale has further implications for how we think about trade and integration. The orthodox analysis assumes, among other things, *perfect competition*. This amounts simply to the idea that there are very many producers in each industry — so many that none of them can influence the market price by holding back supply or flooding the market. This is clearly unrealistic — but especially so once we recognise the presence of increasing returns to scale. Each time a firm increases production it finds its unit costs lower and it can undercut its rivals. Each time it takes a rival's share of the market it can increase output and thus reduce costs again. The result is that industries with economies of scale tend to be highly concentrated i.e. dominated by a few large firms.

Once firms are acknowledged to have some market power, this in general implies that attention must be given to the structures of industries and markets. Consequently, in the new approaches to trade *industrial structure* and *market structure* play an important role.

Another concept of considerable significance in new approaches to trade is that of *product differentiation*. This arises when attempting to explain the way in which economies of scale give rise to intra-industry trade (Greenaway and Milner, 1986). For example, one obvious way in which economies of scale could stimulate intra-industry trade is the case where producers in relatively small countries can only reap economies of scale by concentrating on highly differentiated varieties of a given product. It is likely that each such producer could only sustain the efficient scale of production by relying on exports as well as the domestic market. Hence, there is pressure to develop both *product differentiation* and *intra-industry trade*. This emphasis on product differentiation plays an important role in the analysis of the role of technological competition and innovation in modern international trade (Krugman, 1983).

Innovation and technological competition are related to a final concept of some significance in the new trade theories — external economies. By an external economy economists mean a benefit from some activity that accrues to individuals or firms *other than those undertaking the activity*. Two important examples are the diffusion of knowledge arising from innovation and the benefits which arise from the agglomeration of many firms in a given region or industry (see Chapter 11 below).

These facts, economies of scale, the market power of firms, external economies and the dynamics of learning are traditionally referred to by economists as “market imperfections”. As Krugman says this term itself conveys the presumption that these are marginal to a system that approaches ideal performance fairly closely. A realistic view always indicated, and it is now surely unavoidable, that these “imperfections” are the rule rather than the exception (Krugman 1987a).

Inclusion of economies of scale, market power, external economies and the dynamics of learning in theoretical studies has implications for the major issues analysed by trade theory — the pattern of trade and the gains and losses from trade. In the following sections we outline what pattern of trade, and gains and losses from trade are predicted by the new approaches to trade theory.

(ii) Implications for Patterns of Production and Trade

Specialisation

The presence of economies of scale does not undermine the conventional prediction that trade will cause specialisation. However, the basis for and pattern of specialisation are different when economies of scale are significant. The pressure to specialise is very clear given that each country can lower cost of production by specialising and, therefore, producing at large scale.

Intra-Industry Trade

Where countries are fairly similar before trade — in terms of the abundance and scarcity of labour and capital and the pattern of goods produced — then specialisation after the opening of trade will tend to be *intra-industry* specialisation. In order to reap economies of scale each country will specialise in slightly differentiated versions of the same kind of products and sell these both at home and in the export market. Indeed, economies of scale are one of the major factors held to explain the extent of intra-industry trade (Greenaway and Milner, 1986).

In Chapter 3 we will outline a number of hypotheses concerning the conditions in which intra-industry will develop and some of its consequences. These hypotheses have played an important role in research on the development of the

European Community, and in Chapters 4, 5, 6 and 7 we undertake a preliminary assessment of their validity in the Irish case.

Increased Product Diversity

Another important effect of opening trade in the presence of scale economies and market power can be an increase in the diversity of products available. If there are large fixed costs necessary to start production of various goods, a common source of economies of scale, then without the possibility of exports it is often in a country's interest to constrain itself to the production of a narrow range of goods, but at least produce those in large quantities. In effect, the benefits of product diversity are outweighed by the high fixed costs of starting production of further goods. When trade opens, the country can trade some of its existing output for different goods produced elsewhere. In this case, the opening of trade has not increased the volume of home production and, therefore, has not reduced the cost of production. Instead, scale economies were limiting the number of goods consumed before trade, and consumers have "decided" to take the gains from trade in the form of having more products rather than having lower costs for their existing products (Markusen and Melvin, 1988).

This increased product diversity resulting from trade can go further, and involve the production, or invention, of goods which were not produced *anywhere* before trade opened, because no one country had a market sufficiently large to justify the investment of fixed costs. The opening of trade can also allow the production of more specialised intermediate inputs (Helpman and Krugman, 1985); this may have dynamic effects on technical change and the division of labour. In general, it can be argued that the increased competition associated with removal of tariff or non-tariff barriers will prompt firms to adopt strategies which avoid the implications of competition. Some of the most successful and significant of these strategies involve product differentiation and innovation (Geroski and Jacquemin, 1985; Geroski, 1988, 1989; and see Chapters 8 and 14 below).

The Direction of Trade

In the traditional theory, the direction of trade is related to underlying characteristics of the economy — in particular to the relative abundance and scarcity of labour and capital. We noted above that with scale economies, even two economies which have *identical* endowments of labour and capital will specialise and trade with each other. Comparative advantage, as traditionally defined, cannot determine the pattern of specialisation and trade — since there is no comparative advantage. One important, and often repeated, conclusion of the new approaches to trade theory is that there may be some inherent *arbitrariness* in the pattern of specialisation (Corden, 1972; Krugman, 1983; Robson, 1987; Markusen and Melvin, 1988). At least it is not possible to predict which country will produce what by reference to the features of the economy

conventionally referred to in trade theory. However, it is possible to identify some factors which are likely to influence the pattern of specialisation when there are economies of scale. We now note some of these.

History and Dynamic Factors

One implication of the result that the pattern of specialisation and trade can be arbitrary is that it may be determined by historical factors, such as which country entered an industry first (Markusen and Melvin, 1988). It should be clear that with economies of scale there can be a significant "first mover advantage". Indeed, one of the most potent sources of economies of scale is the fact of "learning by doing". Thus, firms or countries which enter an industry early may achieve not only low costs (due to economies of scale in production) but also technical expertise. This may be the factor which determines the pattern of specialisation when trade is opened.

Market Size and Geographic Concentration

Another factor which may resolve the arbitrariness in the pattern of specialisation is the size of the market in each country. Krugman notes that "theoretical models of strategic trade policy show that in industries subject to increasing returns, the size of the domestic market can be an important determinant of export performance" (Krugman, 1987b). Markusen and Melvin (1981) consider a case in which there are two sectors, only one of which has economies of scale. Before trade both countries produce both goods. After trade, the larger country produces and exports the good with increasing returns to scale, while the smaller country specialises in the other good.

Helpman and Krugman have provided analytical support for what they describe as "an important principle": that where there are transportation costs, economies of scale industries producing differentiated products will tend to concentrate in countries with large domestic markets and export to other markets. They deduce from this that "in effect a large domestic market serves as a base for exports — a proposition that has always seemed plausible to practical people but is hard to capture in formal models" (Helpman and Krugman, 1985).

In Chapter 3 we will consider some competing hypotheses concerning the pattern of specialisation which small countries will adopt as trade and integration develop.

Trade, Market Structure and Competition

We noted above that where economies of scale are significant, firms are likely to grow large and to wield considerable market power. This also has implications for how the opening of trade influences economic behaviour. A simple example which illustrates this is the case where, before trade, there is just one producer of a particular product in each country. When trade opens each

of these monopolists will find it advantageous to sell into each other's markets. Each will capture part of the other's market and, consequently, each will find its monopoly price forced down somewhat. This very simple example brings to light an important point: where there are economies of scale, and consequently firms have market power, the opening of trade alters the competitive structure of the market. Furthermore, other things being equal, it generally reduces the market power of existing firms.

However, there are further aspects of the changes in market structure which cannot be seen in the simple example of two monopolists. It is more likely that before trade, a given industry in each country will contain a range of firms of varying sizes and with varying degrees of market power. One widespread and important prediction of the new trade theories is that the opening of trade will not only expose each firm to additional competition (as in the simple example used above) but also bring about an expansion of some firms in each country and the disappearance of others. One explanation of this is that increased competition will force down price and profits but also induce firms to expand capacity and increase output. As a result, the "trading equilibrium will have fewer firms in each country, with each firm producing a higher level of output at lower average cost" (Markusen and Melvin, 1988; see also Venables, 1985, Helpman and Krugman, 1985).

Drawing on the fact that there are dispersions of the sizes of firms in each industry, Owen derives a logical explanation for increased concentration as trade barriers are reduced (Owen, 1983). The argument is based on the options facing the larger and therefore low-cost producers in increasing returns industries before and after the formation of the customs union. What Owen shows is that with the access to foreign markets provided by the formation of the customs union, the returns to driving out marginal producers by increasing capacity, and thereby lowering cost, are significantly increased. One important implication of Owen's approach, and one which seems to be confirmed by his study of trade in the European car, truck and white goods industries, is that relative costs become more and not less significant as integration proceeds — even where non-price aspects of competitiveness are important.

From this analysis Owen developed the following hypothesis. Particularly in the early stages of the Community, industries which achieve the greater average scale in their manufacturing operations will tend to secure trade advantages over their counterparts in partner countries. An equilibrium position will eventually be reached in which both trading partners operate on comparable scales; trade will have eliminated sub-optimal capacity in both countries. The trade balance will still favour the country whose industry first achieved superior scale, because more capacity will have been eliminated in the net importing country. *Ex ante*, scale shapes the trade position. *Ex post*, there may

be no observable relationship between scale and trade advantage. But, in the process of European integration taken as a whole, industrial structures will tend to change, with market leaders expanding at the expense of smaller producers.

In general, there are reasons to believe that the integration of the European market has increased and will increase firm size. Pryor found that the average size of industrial enterprises among nations is strongly correlated with market size (Pryor, 1972). He also found that concentration ratios in large European *national* markets were similar to those in the US. These findings alone would lead one to expect that establishment of a single European market should lead to noticeable increases in firm size. Pelkmans' conclusion is that "there are solid reasons to expect a customs union to lead to a rise in domestic producer concentration over time, while the number of sellers may or may not remain the same". He considers that this is so "both for markets with a high and low degree of product differentiation and whether one takes the perspective of the product cycle theory or not; there are differences of degree, not in kind. For advanced product markets the theory is in a state of flux and no clear answer has emerged yet" (Pelkmans, 1984)*

Empirical studies of the EC six after the formation of the Community seem to support these hypotheses concerning industrial concentration (Jacquemin and de Jong, 1977; Locksley and Ward, 1979). Owen's research shows that in the electrical appliance and car industries there was considerable upheaval after the formation of the EC (with production of refrigerators and washing machines ceasing in Belgium and the Netherlands) (Owen, 1983). More recent work shows that the growth of trade between 1963 and 1978 further increased the size of production units in Germany, Italy and the UK (Muller and Owen, 1985; Schwalbach, 1988). Empirical analyses for Canada have confirmed that trade liberalisation had the effect of rationalising the structure of manufacturing firms (Markusen and Melvin, 1988; Cox and Harris, 1985).

Very recently a somewhat different view has emerged. Geroski and Jacquemin dispute the idea that the next phase of European economic integration, the completion of the internal market, will induce, or at least *should* induce, an increase in firm and plant size (Geroski and Jacquemin, 1985; Geroski, 1989). We describe this as a *somewhat* different view because, as we have noted above, the new theories of trade can accommodate either an increase in firm size, because of economies of scale, or an increase in the range of products available. Geroski and Jacquemin's view is precisely that the latter is the more likely outcome of completion of the internal market. While these two views can be derived from the single theoretical approach there is a clear tension between them — and this reflects different opinions on the empirical significance of

*This is because when firms compete by innovation, market structure becomes endogenous and the outcome depends on the specific assumptions about the speed of imitation, the size of the innovator and the magnitude of scale economies various firms succeed in reaping.

scale economies and product differentiation. We discuss these two views in more detail when deriving our own framework for analysis of the internal market in Chapter 8.

Traditional Comparative Advantage

Many of the theoretical models used to analyse the implications of economies of scale, the market power of firms and product differentiation consider, for the purpose of analysis, two countries with *identical* endowments of capital and labour and identical technology. In these cases, trade arises purely to exploit economies of scale or widen the range of goods available, or both. It would be wrong to infer from this that once economies of scale are introduced trade based on relative scarcity and abundance of capital and labour is ruled out. In a more general theoretical framework it emerges that the new theories of trade supplement rather than replace the traditional theory.

Helpman and Krugman (1985) argue that for a wide variety of market structures, differences in the characteristics of countries are a major predictor of the pattern of trade. The theoretical models developed by them support a basic view in which trade patterns reflect comparative advantage — based on the relative scarcity of capital, labour or other inputs — plus additional specialisation to realise scale economies. In particular, the volume of *inter*-industry trade depends on differences in factor endowments and the volume of *intra*-industry depends on countries' sizes, the extent of foreign direct investment and other elements, as well as factor endowment (Venables and Smith, 1986).

(iii) Further Implications of Economies of Scale

Feasible Patterns of Trade and Specialisation

We have seen that economies of scale can provide a rationale for international specialisation and trade quite independent of differences in relative abundance or scarcity of capital and labour. The clearest example is the case of two countries and two goods, each produced with economies of scale. Each country produces most efficiently by specialising in one good and acquiring the other by trade. If each country was to meet its own requirements of both goods, this would involve smaller scale production and, therefore, higher costs. Productive efficiency requires international specialisation and trade. An important question is whether the required pattern of specialisation and trade is feasible. Will there be a market for the goods produced in each country and will trade balance?

One implication of economies of scale that is often overlooked is the fact that they make it less likely that international trade will balance. When each country specialises in order to reap economies of scale it allocates its capital and labour to particular industries. It will wish to consume some of the resulting output and export and rest. Other countries will do likewise with their products. Trade

balance requires that each country wants to import exactly the amount that the other country wants to export. We would normally think of adjustments in the *price* of the two goods as capable of making this international market clear; that the 'task' performed by the market is to find a set of prices at which the amount that each country wishes to export of the good in which it has specialised just equals what the other country wishes to import.

It is not always recognised that the analytical argument that markets are capable of performing this task generally depends on ruling out the possibility of economies of scale. When economies of scale are ruled out, price adjustments will tend to change quantities demanded and supplied in a smooth manner, and eventually a price can be found which equates demand and supply. Where economies of scale exist the level of production may not adjust continuously in response to price movements or to shifts in demand. Instead, the quantity produced and supplied may change in discrete jumps and thus may persistently fail to match demand. This is because in industries with economies of scale there is a level of production below which it is not efficient or profitable to produce at all or, put another way, as price falls output may drop suddenly from some fairly high level to zero. Thus, the market may jump from excess supply to excess demand as prices change.

Applied to the international economy this argument shows that with profit-maximising price-taking producers, scale economies in production may make it impossible to balance international trade. Trade imbalance may be built into the structure of the international economy. Chichilnisky and Heal say that "with economies of scale in production, the world economy may stabilise in a non-market-clearing configuration. In this case, the international economic system can be kept functioning only if countries are willing to run substantial surpluses or deficits on their balance of trade" (Chichilnisky and Heal, 1986). As an example, they cite the trading relationship between the United States and Japan. This is characterised by a persistent US need to face the Japanese with quantitative constraints on their exports if trade between the two countries is to be held in balance, or even in an acceptable degree of imbalance. They stress that the constraints are typically imposed on goods whose production is characterised by economies of scale, namely motor cars and consumer electronics.

Stability and Structural Adjustments

A related but subtly different implication of economies of scale relates to the *stability* of the economy and the manner in which it adjusts to structural change. This is relevant in the domestic economy as well as in the international system. The basic point is that economies of scale tend to reduce the stability of the economy. In studying the stability of the economy and its adjustment to change, economists assign a role to the basic idea that if demand exceeds supply then price will tend to be driven up, and if supply exceeds demand price

will tend to be driven down. But this perfectly plausible idea is not the crucial element in the argument that the economy is stable. The crucial element is the effect which an increase or decrease in price has on demand and supply. For example, in the case where demand exceeds supply the resulting rise in price will both choke off demand and induce more supply. It is these responses which are the essential element in making price and quantity changes equilibrating. Since economies of scale involve falling costs as output increases they can alter the effects which price changes have on output and consequently undermine the stability of markets.

An intuitive grasp of this point can be gained by contrasting the behaviour of an industry with increasing returns to scale with one with decreasing returns to scale (Chichilnisky and Heal, 1986). In an industry with decreasing returns, the case typically considered in textbooks and economic theory, as output rises efficiency falls and costs per unit rise. If demand for the product should drop, output will drop also. At lower output levels productivity rises and this will lower costs and price. The lower price tends to restore the original level of demand. A parallel argument shows that an increase in demand is also self-correcting. As demand rises, output increases, and this raises costs and price, thus checking further increases in demand. Overall then, a change in demand sets in motion forces that tend to restore the original level. The market is a *self-correcting* mechanism because changes in price, demand and supply are equilibrating — they tend to remove the imbalance which gave rise to them.

Where there are economies of scale the opposite can be the case. Economies of scale mean that efficiency rises as production expands, and thus costs fall. A drop in demand, which lowers output, leads to a *reduction*, rather than an increase, in *efficiency*. This, of course, leads to higher costs and higher prices. But higher price will cause a further reduction in demand. Consequently, a fall in demand sets in motion forces that lead to further decreases in demand and output. There can be a *self-reinforcing* downward movement in economic activity. An increase in demand can, likewise, lead to a self-reinforcing expansion.

This argument can be applied to a single industry or to the whole economy. It can be used to study the cyclical behaviour of the economy and macroeconomic policy*, or the response of the economy to structural change. In a later section, we will consider the application to the whole economy. Here we are interested in structural change.

We can think of structural change as a significant change in the economy's price and output configuration resulting from a shift in its underlying demand

and cost structures. There is no doubt that economic integration is one major source of structural change, both because the removal of tariff and non-tariff barriers directly changes demand and competitiveness, and because thereafter the economy is more influenced by structural changes in the world economy arising from whatever source. The point we wish to make is that the way in which economists conceive of the response to structural change is very different depending on whether or not they take account of economies of scale. There are two differences in particular. First, in the textbook case of diseconomies of scale, a loss of competitiveness on the part of one firm or industry may not be fatal because, as explained above, a fall in demand sets in motion forces that tend to restore some of the lost competitiveness. Second, even if the structural change is such that the firm or industry is fundamentally uncompetitive, the drop in demand will lead to a gradual, continuous and smooth contraction of output and shedding of labour.

This contrasts sharply with what can happen when economies of scale are present. First, the initial loss of competitiveness and consequent fall in demand is much more likely to be fatal, because the contraction of output sets in motion forces which reinforce that loss. So even transitory external shocks can be amplified and cause serious problems. Second, the response to the underlying structural change will be less gradual. Firms or industries that are declining will contract suddenly and discontinuously rather than smoothly. There will come a point in their decline where they must shed a substantial amount of labour at once. Thus, where there are economies of scale, the operation of market forces may imply that the consequences of a change in the underlying economic environment can be erratic, large and very costly. This helps to explain the desire to preserve the industrial structure through protection. An alternative is to embrace the benefits of trade and technical change, but to devise policies to manage the gradual contraction of declining industries and the gradual expansion of their successors.

Adjustment to Intra-Industry Specialisation

In the previous two sections we have seen ways in which economies of scale can amplify the structural adjustments which are necessary in a free trade environment, can make the economy less stable and can contribute to trade imbalances which in turn often cause fluctuations in output and employment. But there are other ways in which economies of scale tend to *reduce* the amount of structural change and economic disruption caused by the opening of trade. Although economies of scale tend to amplify *any given* structural change, they may also ensure that the degree of structural change necessary is less than it would be if there were no economies of scale. The reason for this is that, as we noted above, economies of scale give rise to *intra-industry trade*. Many authors have argued that it is probable that adjustment to free trade will be *easier* when trade expansion takes the form of an increase in *intra-industry trade* as opposed to *inter-industry trade* (Robson, 1987). Owen (1983) has

*It has been suggested that economies of scale can help to sustain 'stagflation' and difficulties in devising macroeconomic policies to deal with it (Chichilnisky and Heal, 1986).

proposed that specialisation and adjustment *within* industries, which is what is implied by intra-industry trade, is likely to be *quicker* than specialisation and adjustment between industries.

Krugman (1981) has developed a theoretical rationale for this hypothesis about relative costs of adjustment. His argument is based on the idea that the more similar are the factor endowments of the two countries before trade the smaller the adjustment of factor prices that is required by moving to the free trade environment. On this view, the problem or cost of adjustment consists in the change (sometimes a decrease) in factor returns which is required by increased competition in import-competing industries. Using this approach, he endorses the view of Hufbauer and Chilas (1974) that most trade expansion over the post-war period (at least until the early 1970s) was relatively free of adjustment problems because intra-industry trade increased in prominence.

Others take a somewhat broader view of the costs of adjustment and include the possibility of labour and capital having to leave an industry which is declining (because of international competition) and join an expanding export industry. This process of adjustment can be both delayed and painful if factors are, for whatever reason, immobile between the sectors. It has been argued that if the factor intensities and skills in the two sectors are similar then movement from one to the other will be relatively easy. As Greenaway and Milner say, in the extreme case, where adjustment takes place *within the firm* the worker would simply be transferred from one production line to another. If factor intensities and skills are more likely to be similar where it is *intra*-industry trade which is expanding — and this is certainly intuitively plausible — then the transfer of labour and other resources to expanding activities should be relatively easy with intra-industry trade.

Greenaway and Milner, although they accept the plausibility of this argument, insist on a number of qualifications. In particular they say that even when simultaneous expansion of imports and exports occurs in the same industry both product mixes and factor mixes may alter. This may be particularly the case where the country is specialising in vertically differentiated products — products differentiated by quality. One example they cite is the contrasting skill inputs in 'low-quality' imports and 'high-quality' exports of clothing in developed economies.

These propositions about the nature and timing of adjustment to free trade are drawn upon in Part II of this report — where we assess the impact of EC membership on the Irish economy.

Cycles of National and Regional Growth

Much of the analyses cited here have been static in that they compare the situation of complete national self-sufficiency, autarky, with the situation of

complete free trade, and identify the pattern of production, consumption and exchange in the two situations* Furthermore, in order to focus in on *trade*, many of the analyses cited assume that factors of production (labour and capital) cannot be moved between countries. Yet, the authors of the new trade theories are well aware that economies of scale, though they can be treated in a static analysis, very strongly suggest dynamic forces. Helpman and Krugman (1985), for example, say that in practice "it is likely that one of the most important sources of economies of scale (and imperfect competition) lies in the dynamic process by which firms and industries improve their technologies". They point out that recent industrial organisation literature has emphasised the role of the learning curve in generating industry concentration, and the most plausible accounts of external economies involve diffusion of knowledge, an inherently dynamic issue.

Because of these dynamic elements, the trade theories developed in recent years, and reported here, connect to some extent with earlier theories of regional growth and decline. In seeking an explanation for the persistence of regional problems, Myrdal (1957), Hirschman (1958) and Kaldor (1970, 1971) placed great emphasis on dynamic economies of scale. They focussed not just on economies of large-scale production but also on what Kaldor described as the "cumulative advantages accruing from the growth of industry itself — the development of skill and know-how; the opportunity of ever-increasing differentiations of processes and specialisation in human activity" (1970). The argument of these theorists was that trade and factor movements between regions can, in certain circumstances, sustain and reinforce initial advantages and disadvantages thus causing polarisation.

This argument draws on the idea, outlined above, that in the presence of economies of scale the movement of prices, goods and, most importantly, labour and capital may fail to have the equilibrating effect assigned to them in orthodox theory and may, instead, reinforce the disparities which gave rise to them. In addition, migration of labour and capital may themselves *generate* economies of scale, thus creating the conditions which induce further movement, rather than offsetting initial differences (Robson, 1987; Chichilnisky and Heal, 1986).

From within the new trade theories, Helpman and Krugman (1985) specify some models which have somewhat similar effects. They show that where there are both traded and non-traded goods produced with economies of scale, larger countries will produce more non-traded differentiated products at a larger scale (and thus lower prices) than smaller countries. This means that if the price of labour or capital is equalised across countries, the *real* earnings of these factors of production are not. They point out that this appears to create an incentive

*There is some difference of opinion about whether economies of scale should be considered as 'dynamic' or 'static' (Corden, 1972a; Robson, 1987).

for movement of labour and capital towards larger countries. "Such movement will only increase these countries' scale advantage, possibly leading to a cumulative process". Indeed, they note that there "is a general point that emerges from this analysis . . . that the crucial effect of factor movements is their effect on the size of the market, not on the volume of production" (Helpman and Krugman, 1985).

In Chapter 11 we consider theories of regional convergence and divergence in more detail in order to assess the likely effect of completion of the internal market on the regions of Europe. In doing so, we will draw on the earlier regional theories of Myrdal and Kaldor, on the new trade theories and on other theories which address the regional implications of changes in technology and the international economic system.

5. THE GAINS AND LOSSES FROM TRADE

In the previous section we have outlined the possible effects of economies of scale on the pattern of production, the location of production, the direction of trade and the adjustment of the economy to a free trade regime. In this section we consider how these developments affect the *welfare* of countries and groups involved.

(i) Greater but less Certain Gains

The inclusion of scale economies, the market power of firms and product differentiation in the theory generally indicates that additional gains, on top of those from traditional comparative advantage, are available from trade. Krugman says that "probably the most important consequence of our thinking is that additional gains from integration become apparent. Against these newly appreciated sources of gains, however, must be set the perception of some risks of adverse consequences of trade liberalisation" (Krugman, 1987b). In this section, we briefly outline, these possible, gains and losses from trade as specified in the theoretical literature.

(ii) Additional Gains from Trade

We can identify five separate sources of potential gains from trade over and above those arising from conventional comparative advantage (Markusen and Melvin, 1988).

Decreasing Average Production Cost

The most obvious gain which can arise when there are scale economies, but cannot arise in the conventional analysis, is the reduction in cost of production captured by having one firm serve a large international market rather than a smaller national market.

Pro-Competitive Gains

One of the implications of scale economies is that the market can support only a limited number of firms. Such firms are likely to have considerable market power which allows them charge higher prices and hold back supply. Trade exposes existing producers to a larger number of competitors and consequently limits their market power. This will tend to lower prices and increase supply, which yields welfare gains to consumers (Venables and Smith, 1986).

Exit of Redundant Firms

When considering the pattern of trade and economic activity we noted that where there are scale economies, the opening of trade is likely to cause a reduction in the number of firms, and an expansion in the size of those firms which remain. This process can give rise to a third type of gain from trade. The exit of redundant firms frees up the resources that had been devoted to fixed costs, and thereby increases the total potential output of the country. Output which was previously produced by a number of firms, each absorbing resources in fixed costs, is now produced by one — with only one set of fixed costs necessary.

Increased Product Diversity

When studying the effects of scale economies on the pattern of production and trade we noted that, in certain situations, free trade can imply a greater diversity of products than autarky. So long as consumers prefer mixed bundles of goods, or if different consumers have different tastes, then an increase in the range of products produced or available will unambiguously increase welfare. We noted earlier that in this case, the gains from trade come in the form of having *more* products rather than having *lower costs* for existing products. To that extent there is a trade-off between this gain from trade and the first one outlined above.

Specialised Plants and Inputs

The increase in market size created by the opening of trade may permit firms to build plants specialised in fewer product lines and to create specialised inputs. In effect, the creation of specialised inputs requires initial fixed costs and so countries in autarky will create a given number. When the countries are combined through trade it becomes profitable to create a larger number of specialised inputs.

Dynamic Gains

All of these gains are static resource reallocation gains additional to, but of the same type as, the gains from trade as specified in traditional trade theory. But there may also be dynamic gains associated with the realisation of dynamic scale economies (Greenaway and Milner, 1986).

(iii) Losses and Costs of Trade

General Perspective

In outlining the conceptual issues which arise in the analysis of the completion of the internal market Krugman says:

Unfortunately, while scale economies and oligopoly increase the *potential* gains from trade, they also open up some possible ways in which trade can have adverse effects. The negative aspects have received considerable attention recently, and thus require discussion (Krugman, 1987b).

Most of the concern focusses on the possibility that the benefits of international integration will be divided unevenly, with some countries possibly emerging as net losers. In this section we consider these issues.

In fact, the pattern of gains and losses from integration and trade may be quite complex once we allow both for conventional 'comparative advantage' trade and trade that arises from economies of scale and the market power of firms. We have seen in Section 2 that trade arising because of differences in relative abundance of labour and capital produces gains for all countries, but also produces changes in income distribution and problems of adjustment. We have seen in this section that trade based on economies of scale produces additional potential gains. But we will see now that the distribution of those additional gains between countries, and between groups within countries, can be different from the distribution of the conventional gains. Krugman summarises this difference by saying that trade based on economies of scale and the market power of firms "probably involves less conflict of interest *within* countries and more conflict *between* countries than conventional trade" (Krugman, 1987b). The purpose of this section is to explain this statement.

Income Distribution and Intra-Industry Trade

We have seen in Section 2 that in conventional trade theory, trade liberalisation will always potentially make everyone better off — in the sense that the total real national income of each country will be higher with trade than in autarky. We also noted that in this theory, trade liberalisation will have significant effects on income distribution within a given country. Specifically, it was argued that the opening of trade will benefit the factor of production which is abundant and harm the factor of production which is scarce (this is known as the Stolper-Samuelson result). For example, if before trade, labour is relatively scarce and capital is relatively abundant then the opening of trade will reduce the real reward to labour and increase the real reward to capital. Effectively, the opening of trade makes the scarce factor, in this case labour, less scarce and the abundant factor relatively less abundant. Thus, although unrestricted trade can potentially raise welfare, the distribution of the gains from trade is uneven between capital and labour, and one factor is likely to be worse off after the opening of trade. The proposition that free trade increases the overall welfare depends, therefore, on the idea that the abundant factor

gains to a sufficient extent to compensate the scarce factor and still remain better off itself.

The distribution of gains between factors of production in the context of economies of scale and intra-industry trade has not been widely explored. However, Krugman has developed a theory which provides some answers. We have seen that scale economies produce additional gains from trade in the form of longer production runs (and, therefore, lower prices), greater variety of products, increased competition, the exit of redundant firms and more specialised plants and inputs. Krugman's idea is that if changes in income distribution, resulting from the opening of trade, are not too large then it is possible that, given the additional gains from trade generally available, *both* capital and labour may gain in real terms. In what situation would the changes in income distribution tend to be not too large? The theory suggests that this will be so when trade liberalisation takes place between countries with similar relative abundance and scarcity of capital and labour (Krugman, 1983). Krugman demonstrates that both capital and labour are more likely to gain the more similar are the initial factor endowments between the two countries, and the more differentiated the varieties of goods available after trade. The reason is that the more similar the initial factor endowments the smaller the required adjustment in factor prices, whilst greater product differentiation implies greater potential consumption gains. But these are precisely the conditions in which trade will be based on *intra-industry specialisation*. We noted that in Krugman's view the predominance of intra-industry trade explains the small adjustment problems experienced in the growth of trade in the post-war period.

It is this idea which is the basis of the first half of Krugman's summary statement that trade based on economies of scale "probably involves less conflict of interest *within* countries and more conflict of interest *between* countries than conventional trade" (Krugman, 1987b). There are two aspects of the first half of this statement which can be distinguished somewhat. The first is that with intra-industry trade there is less likelihood that any one factor of production, capital or labour, will suffer a *permanent* deterioration of real income as a result of trade liberalisation. But this relates to a second, slightly different, proposition which we have seen earlier. With intra-industry trade the changes in industrial structure resulting from trade liberalisation are likely to be less than with inter-industry trade. It follows that the *transitory* cost of adjustment, and *transitory* falls in the real income of certain groups are likely to be smaller also.

We may usefully locate Krugman's argument in a simple diagram — displaying the various combinations of factor endowments and scale economies and the theories of the effect of trade on income distribution to which they give rise.

		Economies of Scale	
		None	Significant
Factor Endowments	Different	Traditional trade theory	
	Similar		Theory of intra-industry trade

The traditional theory of trade assumes that endowments of capital, labour or land differ between countries and that there are no economies of scale. From these, and other, assumptions it derives the result that trade liberalisation will alter the distribution of income in favour of the abundant factor and against the scarce factor. By contrast, the theory of intra-industry trade assumes that factor endowments are similar and scale economies are significant. From these assumptions Krugman derives the proposition that trade liberalisation will have small distributional effects and that, in fact, all factors of production are likely to gain from trade.

The diagram serves to illustrate the basis of the difference between these two theories concerning the distributional effects of trade. It also serves to illustrate two other points. First, there are empty boxes denoting the fact that the two theories we have considered here do not deal with all possible cases; of particular significance may be the case where economies of scale are significant but where the relative scarcity of land, labour or capital also differs between countries. Second, in both the theories considered here, the 'difference' or 'similarity' of the countries engaging in trade is defined primarily in terms of the relative scarcity of the land, labour or capital — all other features of the countries being assumed identical. Different results could emerge if the concept of difference between countries was extended to include differences in technology, differences in the responsiveness of labour supply to wages, and differences in the size of countries. We will briefly comment on some of these issues later, but our main intention is merely to note that they exist.

Losses from Trade

In opening this section we cited Krugman's statement that concern focusses on the possibility that the benefits of international integration will be divided unevenly, *with some countries possibly emerging as net losers*. We must now consider this latter possibility.

The concern that a country might lose from trade traditionally centres on the possibility that trade might bring about a contraction of its increasing returns to scale industries and an expansion of its decreasing returns to scale sectors. In such a situation it was feared that this reallocation of resources, by reducing the economy's overall productivity, could bring about a fall in gross domestic

product. Indeed, a contraction of economies of scale sectors and an expansion of decreasing returns sector "does not seem too unlikely" (Helpman and Krugman, 1985; Venables and Smith, 1985). In our survey of the pattern of production and trade we noted that there were strong reasons why economies of scale industries will concentrate in certain countries — particularly those with large domestic markets. Krugman notes that "a country that succeeds in getting a disproportionate share of high-return industries as a result of trade can gain at other countries' expense, while a country that ends up with small high-return sectors can conceivably be worse off with trade than without" (1987b). In considering trade between a large country and a small country, Markusen and Melvin found that there are fairly general sets of situations under which only the small country can lose (1981).

However, it has recently been shown that such a contraction of economies of scale industries and expansion of decreasing returns industries, though quite possible, does not *necessarily* imply that a country loses from trade. The size of gains or losses from trade depend not only on the level of domestic *production* but also on the *prices* of domestic and foreign goods, the *range* of goods available and *market structure* of industries both at home and abroad. Helpman and Krugman (1985) argue that even if our own country's production in increasing returns or imperfectly competitive industries falls as a result of opening trade, the other effects creating gains from trade will still tend to work in our favour. In particular, the effect of the concentration of economies of scale industries in other countries will maximise the exploitation of scale economies and hence drive the price of those goods down. In certain situations, but not all, this effect, when combined with the other additional gains from trade, will be sufficient to generate a *net gain* from trade *regardless of the contraction of economies of scale industries*. Helpman and Krugman explain that in their analysis, the "sufficient conditions for gains from trade make clear the point that economies of scale that are achieved from foreign sources via international trade are more conducive to gains from trade than national economies of scale" (1985). Furthermore, this point is of particular relevance to small countries. Regardless of the fact that economies of scale industries will tend to concentrate in large countries, or perhaps *because* of that fact, "the smaller a country is compared to the rest of the world, the more it stands to gain from trade due to international economies of scale and the more it stands to lose via international diseconomies of scale" (Helpman and Krugman, 1985).

Consequently, the new theories of trade suggest an overall presumption that trade remains beneficial in a world characterised by economies of scale and imperfect competition. Indeed, our focus in this chapter and throughout this report is not on the possibility of net *losses* from trade but on the *probability* of a distinctly uneven distribution of gains.

Uneven Distribution of the Gains from Trade

The basic reason for an uneven distribution of the gains from trade has been outlined in the previous section. One effect of economies of scale, advantages of experience, and innovation is that sectors with these properties frequently earn higher returns than others. These above average returns, which are known as “rents” in economics, are unlikely to be fully competed away. In addition, some sectors, especially those based on technological competition, yield important external economies to the region or country at large (Krugman, 1987a). As a result, the benefits from trade are not likely to be shared symmetrically. Those countries whose production involves greater scale economies, more learning by doing and more innovative sectors are likely to benefit more than others (Eaton, 1987). As Krugman says there are, contrary to traditional trade theory and orthodox economics, *strategic sectors* and, consequently, countries will not be indifferent to the reallocation of resources and the pattern of production which are created by trade liberalisation (Krugman, 1987a; Yamamura, 1987; and see Chapter 11 below)* It is this likelihood of uneven distribution of the gains from trade which underlies the second half of Krugman’s summary statement that trade based on economies of scale “probably involves less conflict of interest *within* countries and more conflict of interest *between* countries than conventional trade”.

Further Sources of Uneven Distribution

The uneven distribution of the benefits of trade which arises because of the concentration in certain countries of industries characterised by economies of scale, imperfect competition and external economies may be exacerbated if other features of the trading countries are taken into account. Putting aside the rents which may not be competed away, it may be seen *a priori* that as trade expands, the price of the increasing returns product produced by country A should *fall*, and that the price of the decreasing-returns product produced by country B will *rise*. Indeed, this cheapening of the product produced with economies of scale in another country is the feature which, in Helpman and Krugman’s view, compensates for the losses from trade experienced by a country whose economies of scale industries contract as a result of trade. Without returning to the idea of net losses from trade we must note that the gains from trade in this situation will be smaller, and therefore more unevenly distributed, if the price of the economies of scale product, produced primarily elsewhere, does not fall relative to the goods produced at home. There are situations in which the terms of trade can move against a country producing a decreasing returns to scale good and in favour of those countries that have captured the economies of scale goods.

*It is this idea which underlies the recent development of a theoretical rationale for strategic trade and industrial policy (see, for example, Krugman 1987a). Strategic trade policy is not discussed further in this report and is cited here merely to underline the significance of the uneven distribution of the gains from trade. The analysis also has implications for industrial policy and some of these are discussed in Chapters 14 and 15.

This can occur where the differences between countries are not confined to different endowments of land, labour and capital — in particular, where there are certain differences between the technologies of the countries and different responsiveness of labour-supply to wages. These conditions definitely apply in trade between developed and certain less developed countries, and have been used convincingly in analysis of the effects of such trade (Chichilnisky and Heal, 1986). However, up to a point they may have a certain relevance to more developed, but not highly developed, economies. Indeed, theories along these lines would claim to explain both the success and the failures of export-led policies, whether pursued by developed or less developed countries, and would claim to point out when one of these outcomes is more likely than the other.

The Cost and Benefits of Trade Imbalance

In looking at the effects and patterns of trade we noted that economies of scale increase the difficulty of finding prices which clear the international market for goods and yield trade balance. In the presence of economies of scale it is more difficult for unregulated markets to find prices which simultaneously clear markets, balance trade, maximise profits and allow all countries to gain from trade. Trade may only be possible if countries are willing to run payments deficits and surpluses. Such deficits and surpluses have welfare effects themselves and, in addition, frequently give rise to macroeconomic adjustments which definitely affect welfare. It is, of course, much less easy to say how the welfare costs and benefits of trade imbalance and macroeconomic fluctuations will be distributed between countries.

The Costs of Structural Adjustment

We noted that economies of scale give rise to intra-industry trade and that intra-industry specialisation probably implies a *smaller restructuring* of the economy than inter-industry specialisation. Since transitory costs of adjustment were one of the major welfare costs of trade in traditional theory it follows that, in this respect, the new trade theory predicts *smaller adjustments costs* in countries where economies of scale are significant. This is widely considered to explain the fact that the expansion of trade between developed countries, and especially in the EC, “aroused fewer complaints about problems of adjustment than many had expected” (Krugman, 1987b).

This idea also underlies Krugman’s prediction that the trade expansion produced by the recent enlargements of the Community “is simply not likely to be as painless as the trade expansion produced by the formation of the Community and earlier enlargements” (1987b). In his view, trade between Portugal and Belgium will surely be more conventional in its character than trade between Belgium and Germany; it will involve specialisation in labour-intensive, low-technology products by the one and exports of higher-technology, capital — or skill-intensive products by the other. This will imply changes in income distribution within each country and “will pose adjustment

problems for both the heretofore protected Portuguese heavy industries and some traditional industries in Northern Europe" (Krugman, 1987b). In Part II of the report, we attempt to identify the pattern of structural adjustment which followed Ireland's entry into the EC. Our conclusions on this subject can be found in Chapter 7.

But we also noted that for any *given* structural adjustment, whether large or small, the presence of economies of scale could have the effect of both amplifying the change and making the adjustment of industrial structures less smooth. There will, obviously, be welfare costs associated with these effects.

In terms of the *international distribution* of these welfare costs we find an interesting argument. We have seen that, in general, the distribution of the gains from trade are likely to favour those countries which capture industries with economies of scale and external economies. But in the case of the specific welfare costs under consideration here, the amplified structural adjustment and the uneven pace of adjustment, it may well be the case that richer countries come off worse than poorer countries. The argument hinges on the importance of economies of scale in capital-rich industrial countries. The affect of scale economies in amplifying changes in competitiveness and in making structural changes erratic, discrete and sudden may be to limit the structural flexibility of these countries. Thus, the adjustment to a new technology or pattern of activity may be a more costly and difficult operation in rich countries than in newly-industrialising countries with less increasing returns industries (Chichilnisky and Heal, 1986).

Welfare Effects of Dynamic Economies of Scale

In listing the observable effects of trade we noted that economies of scale, though much more easily analysed in a static or comparative static framework, naturally suggest dynamic forces. From this, certain theorists have developed theories of self-reinforcing cycles of national or regional growth and decline. It is clear that just as economies of scale, considered in a comparative static sense, create an *uneven* distribution of the welfare gains of trade, so dynamic economies of scale could, if they generated such national or regional cycles, generate *cumulative divergence* of welfare levels. In Chapter II we consider these theories of regional development in a more detailed and critical way.

6. RECENT DEVELOPMENTS IN INTEGRATION THEORY

The five stages of integration outlined in Section 3, and traditionally used in the analysis of the economies of integration, have been criticised in recent years. In undertaking this investigation of Ireland in the European Community we have found these criticisms to be of considerable significance. This is strongly reflected in Chapter 13, where we discuss Ireland's strategic approach

to European economic integration; that chapter in turn informs our analysis of tax harmonisation (Chapter 12), the response to the threats and opportunities posed by 1992 (Chapters 10 and 14), the social dimension (Chapter 16) and our overall conclusions and recommendations (Chapter 17). These recent criticisms of the traditional conception of the five stages of economic integration are discussed in Chapter 13. Nevertheless, the two basic points are noted briefly here.

(i) The Integration of Mixed Economies

The five stages of economic integration set out in Section 3 differ from one another primarily in the nature of commercial policy. For example, a free trade area, a customs union and a common market are defined by reference to the arrangements for tariffs and quotas. This reflects the fact that in these five stages or models of integration, the only significant government involvement in the economy is the setting of tariffs and quotas and the creation of legal tender. This has led Pelkmans to reject these definitions of economic integration on the grounds that they are artificial and not applicable to contemporary mixed economies (Pelkmans, 1982; 1984).

Pelkmans point is that in modern mixed economies government intervenes in the economy in a myriad of ways, ranging from market regulation, social policy, labour market policy, industrial policy, technology policy, to direct provision of goods and services and active macroeconomic management. Many of these public policy interventions significantly affect the competitive conditions in each country. It follows that a common market — which implies free and undistorted movement of goods, labour and capital — could not be achieved by *removal* of tariffs, quotas and purely legal obstacles to the movement of labour and capital. In short, a genuine common market could not be achieved by measures of negative integration alone. In modern mixed economies the creation of even a common market requires harmonisation of public policy interventions which significantly affect competitive conditions in the member states (Pelkmans and Robson, 1987). This, in turn, requires the establishment of common policies and institutions in many areas — that is, measures of *positive* integration. Indeed, this analysis leads to the conclusion that in order to create a genuine common market it is probably necessary to create an economic and monetary union. Thus, the stages of integration, as traditionally defined, lose some of their meaning and usefulness (see Chapter 13).

(ii) The Process of Economic Integration

A related idea is that the five levels of integration outlined above cannot validly be thought of as a menu from which countries can choose. It has been argued that once countries choose to form a common market, dynamic forces are unleashed which demand that they either take positive steps to further integrate or watch the common market be eroded by new barriers to trade and the mobility of labour and capital (Pinder, 1968). A central idea here is that not

only will the union be driven to formulate new integration objectives, but that achievement of the *original* objectives will be contingent on further integration. There are several different versions of this argument about the dynamic process of integration, and these are discussed further in Chapter 13. It will be clear from that chapter, and indeed throughout the report, that the Council considers this to be an important and useful extension to integration theory.