

MONITORING EUROPEAN INTEGRATION

The Impact of Eastern Europe



Monitoring European Integration

A CEPR Annual Report

The Impact of Eastern Europe

Centre for Economic Policy Research

The Centre for Economic Policy Research is a network of over 140 Research Fellows, based primarily in European universities. The Centre coordinates its Fellows' research activities and communicates their results to the public and private sectors. CEPR is an entrepreneur, developing research initiatives with the producers, consumers and sponsors of research. Established in 1983, CEPR is already a European economics research organization with uniquely wide-ranging scope and activities.

CEPR is a registered educational charity. Grants from the Leverhulme Trust, the Esmée Fairbairn Charitable Trust, the Baring Foundation, the Bank of England and Citibank provide institutional finance. The ESRC supports the Centre's dissemination programme and, with the Nuffield Foundation, its programme of research workshops. None of these organizations gives prior review to the Centre's publications nor necessarily endorses the views expressed therein.

The Centre is pluralist and non-partisan, bringing economic research to bear on the analysis of medium- and long-run policy questions. CEPR research may include views on policy, but the Executive Committee of the Centre does not give prior review to its publications and the Centre takes no institutional policy positions. The opinions expressed in this volume are those of the authors and not those of the Centre for Economic Policy Research.

Executive Committee

Chairman

Anthony Loehnis

Vice-Chairmen

Jeremy Hardie
Sir Adam Ridley

Professor Giorgio Basevi
Dr Paul Champsaur
Honor Chapman
Guillermo de la Dehesa Romero

Michael Emerson
Sarah Hogg
Kate Mortimer
Sheila Drew Smith

Officers

Director

Professor Richard Portes

Assistant Director

Stephen Yeo

Director of Finance and Research Administration

Wendy Thompson

12 October 1990

Contents

<i>Tables</i>	iv
<i>Figures</i>	v
<i>Preface</i>	vii
<i>List of Contributors</i>	viii
Introduction	1
1 Trade Patterns and Trade Policies	7
1.1 Comparative Advantage	7
1.2 Concentration and Competition in East-West Trade in Europe	19
1.3 The Evolution of East-West Trade Relations	22
1.4 Conclusions: Policy Challenges for the Community	27
Notes to Chapter 1	30
2 The East, the Deutschmark and EMU	31
2.1 The Stylized Facts	31
2.2 The Macroeconomics of Eastern Europe	38
2.3 The Implications for the West	43
2.4 The Additional Effects of German Unification	55
2.5 Conclusions: Policy Challenges for the Community	65
Notes to Chapter 2	68
Appendix 1: The Experience of the Italian Mezzogiorno	70
Appendix 2: The Intertemporal Macroeconomics of Germany	72
References	75

Tables

1.1	East European Human Capital Statistics	12
1.2	Percentage Shares in World Energy Production by Region.	13
1.3	Possible Soviet and East European Energy Exports.	14
1.4	Potential Growth of East European Grain Production, as Percentages of 1934-8 Average Production Levels.	16
1.5	Inputs and Outputs for Agriculture in Soviet Union, Eastern Europe and in Developed Market Economies.	17
1.6	EC Imports from Eastern Europe and the Soviet Union by SITC.	24
2.1	Percentage Shares of Exports from East European Countries.	32
2.2	Various Estimates of GDP per Capita.	33
2.3	Percentage Shares of Investment in GDP or NMP.	34
2.4	The East European Industrial Capital Stock.	35
2.5	Subsidies Financed from the Central Budget as Percentages of Consumer Spending net of Subsidies.	36
2.6	East European Savings Deposits as Percentages of NMP in National Currencies.	37
2.7	East European Net Debt.	38
2.8	Percentage Shares of World Net Exports of Engineering Goods by Country.	47
2.9	Percentage Shares of World Exports of Machine Tools by Country.	48
2.10	Indices of Comparative Advantage for Machine Tools.	48
2.11	East European Imports from Germany as Percentage of Total Imports.	49
2.12	Percentage Breakdown of East European Imports of Capital Good from OECD, by Country of Origin.	50
2.13	Indicators of Spare Capacity in West Germany and Comparators.	51
2.14	Index of Consumers' Confidence for West Germany and EC(12).	52
2.15	The Long-run Effect of GEMU and Eastern Europe (EE).	61
2.16	The Short-run Effect of GEMU and Eastern Europe.	62

Figures

1.1	Labour Force by Occupational Group (excluding Unemployed and Armed Forces).	10
1.2	Highest Educational Qualifications.	11
1.3	Growth of Cereals in Europe: 1986-8 Figures as % of 1934-8 Levels.	15
2.1	National Savings and Investment as Percentages of GNP for the G7 Countries.	45
A1	Real Employee Compensations in the South of Italy as Percentages of those in the North-Centre.	71
A2	Migration from South of Italy to North-Centre as Percentage of Population Resident in the South.	71

Preface

The process of economic integration is at the centre of the European policy debate. Informed discussion of this issue must be based on economic analysis that is rigorous, yet presented in a readable and non-technical manner accessible to policy-makers, their advisers and the informed public. These are the objectives and the intended readership of this new CEPR Report, which will appear annually.

Monitoring European Integration will assess the progress and obstacles encountered by economic integration in Europe. A panel composed of CEPR Research Fellows will meet periodically to select relevant issues, analyse them in detail, and highlight the policy implications of the analysis. The output of the panel's work will be a short annual report, signed jointly by the panel members.

Each year's report will be devoted to a particular theme or issue. The 1990 Report examines the impact of developments in Eastern Europe on the economies of Western Europe and on the process of economic integration among them.

The first section of the 1990 Report focuses on micro-oriented issues concerning the long-run effects on trade and production of developments in Eastern Europe. In subsequent years, issues in the corresponding part of the Report may include the impact and implications of the Single Market, external trade policy, and questions of regulation and competition.

The second section considers the medium-term macroeconomic impact of the transformation of the East European economies. In subsequent years, the panel may examine developments in the EMS, monetary policies in Europe, capital movements in view of their complete liberalization, and institutional developments such as the growth of central bank cooperation following the Delors Report.

The German Marshall Fund of the United States provided generous financial support, which was essential to the completion of this report. We are also grateful to the Alfred P Sloan and Ford Foundations and the Commission of the European Communities, who provided support for much of the Centre's research in international macroeconomics and international trade, which informs the analysis presented here. We are also grateful to the United Nations Economic Commission for Europe, which provided hospitality and assistance in gathering data, and to Claudia Senik, who gave excellent research assistance.

None of the institutions acknowledged above is in any way associated with the content of the Report. The opinions expressed are those of the authors alone, and not of these institutions nor of CEPR, which takes no institutional policy positions. The Centre is extremely pleased, however, to offer to an outstanding group of European economists this new forum for economic policy analysis.

List of Contributors

David Begg, *Birkbeck College, London*

Jean-Pierre Danthine, *Université de Lausanne*

Francesco Giavazzi, *Università degli Studi di Bologna*

Carl Hamilton, *IIES, Stockholm*

Damien Neven, *INSEAD*

Victor Norman, *Norwegian School of Economics and Business
Administration, Bergen*

André Sapir, *Université Libre de Bruxelles*

Alasdair Smith, *University of Sussex*

Alan Winters, *University of Birmingham*

Charles Wyplosz, *INSEAD and DELTA*

Introduction

The Russian revolution and the political cleavage of Europe following World War II led to a virtual severance of economic ties between East and West. The foreign trade of the Soviet Union was disrupted at the time of the revolution and civil war, and it was deliberately curtailed as part of the self-sufficiency policy embarked on by Stalin in the 1930s. As a result, the share of the USSR in world trade declined from some 3.9% in 1914 to 1.1% in 1937 (Thorson, 1949, p. 482). In the case of Eastern Europe, isolation after World War II contrasted sharply with rapid trade expansion in the inter-war period.

Czechoslovakia provides a striking illustration. In the 1920s, Czechoslovak exports grew at an annual rate of more than 10% (Lethbridge, 1985, p. 543); and towards the end of the 1930s, Czechoslovakia was one of the major European exporters of manufactured products (particularly labour-intensive products like shoes and textiles), with Germany and other countries in the West as her main trading partners. Following the socialist take-over in 1948, trade relations with the West were drastically reduced, and the strategy for industrialization became one of self-sufficiency, with emphasis on heavy industry. The effects on trade were dramatic: by the early 1960s trade between the Soviet bloc and the Western industrial countries accounted for only 2-3% of world trade.

The autarkic strategy pursued by the socialist countries must have led to substantial misallocation of resources among industries, as well as a reduction in the volume of trade. As a result, the current structure of production and trade may be a misleading guide to the comparative advantage of Eastern Europe and the Soviet Union. If we are to make educated guesses as to the potential volume and structure of East-West trade following liberalization in the East, we must use more sources of information than current production and trade data.

There are four approaches which, taken together, can shed further light on the trade potential of a reformed Eastern Europe. One is to look at historical trends prior to the socialist experiment. The second is to use data on resource endowments, and assume that the trade potential reflects countries' different endowments of factors of production, in accordance with the Heckscher-Ohlin explanation of comparative advantage. The third is to look for specific indications on how resources have been misallocated, and to deduce the future (efficient) allocation of resources from that. The fourth is to assume that Eastern Europe, once transformed, in some respects will be similar to Western market economies today, and on that basis draw inferences from current West European trade patterns.

History prior to Socialism

In one sense, the establishment of the internal EC market and the integration of Eastern and Western Europe can be seen as a return to the liberal trading arrangements of Europe before 1914. That does not, of course, mean that we shall see a return to the pre-World War I patterns of production and trade. It does mean that it may be a useful starting-point to recapitulate the structure of trade as it was before Russia and the countries of Eastern Europe embarked on their autarkic experiment; and it may be instructive to consider how the closing off of Eastern Europe may have affected the more general pattern of world trade in the post-World War II period. There are two points worth noting in this respect.

First, before World War I, Russia was a major supplier to the West of agricultural products and raw materials. Grain from the Russian plains competed with American grain in the European market. The oilfields of Baku were the most productive in the world: at the turn of the century, Russian oil production stood at 10 million tons per year, of a total world production of 19.5 million tons (Thorson, 1949, p. 411).

The disruptions following the revolution and civil war closed off Russia as a source of raw materials. This was cemented by the autarkic central planning followed under Stalin. In consequence, the West had to look for new sources of raw materials. The growth in Romanian oil production and Argentinian agricultural exports in the 1920s and 1930s could be viewed in this perspective. The same can to some extent be said about the position of the Middle East as an oil exporter and about Canada, Brazil, and Australia as raw materials exporters in the period since 1945.

Second, the East European countries – Czechoslovakia in particular – played important roles as exporters of manufactured products prior to World War II. The Czechs were pioneers in the production of motor cars and other light manufactures; and in 1938 Czechoslovakia was the fourth-largest industrial nation in Europe (after the UK, Germany, and France). In many ways, their position resembled that of Japan in the 1950s and 1960s, or that of the newly industrialized countries in the Far East today, with strength in labour-intensive goods.

It is important to have this historical background in mind for two reasons. First, it suggests that successful liberalization in the USSR and Eastern Europe could have far-reaching consequences not only for intra-European trade, but for the global trading pattern as well. Second, it illustrates the extent to which East European trade prior to autarky reflected Heckscher-Ohlin comparative advantage: Russian exports of agricultural products and raw materials clearly reflected her relative abundance of natural resources; the same is true of Balkan agricultural exports in the inter-war period. In a similar vein, the export-led industrialization of Czechoslovakia following World War I reflected relatively low wages and a corresponding relative abundance of labour.

Heckscher-Ohlin Comparative Advantage

Given the historical importance of factor abundance, it seems fair to assume that future production and trade patterns also will reflect relative resource endowments. If so, we must look carefully at the factor base of the Soviet Union and the countries of Eastern Europe.

The abundance of natural resources in the Soviet Union remains; and given the absolute magnitude of agricultural land area, energy reserves and natural resource deposits, the exploitation of comparative advantage by the USSR could induce major shifts in the pattern of world trade in natural-resource-based goods. This could have a major negative impact on the relative prices of oil and agricultural products.

Similarly, the relative abundance of labour in Eastern Europe remains. In contrast to the pre-socialist period, however, East European labour today is fairly highly skilled. Exactly *how* highly skilled is unclear. Data on educational attainment are unreliable, and international comparisons difficult. The data we give below in Section 1.1 suggest that the overall level of educational attainment in Eastern Europe is somewhat below that of Western Europe – perhaps comparable to that of middle-income NICs. At the same time, however, the share of the labour force engaged in R&D-related activities is very high. That could *suggest* a comparative advantage in high-tech industries, rather than in more standardized, skill-intensive production.

The most difficult factor to assess is the capital base of Eastern Europe. The Soviet Union and the Eastern European countries have maintained very high investment rates throughout the post-war period. If the capital stock were to be measured in term of historical cost, therefore, we should probably find that Eastern Europe is abundantly endowed with capital. At the same time, however, much of the stock is of little or no value today, in part because it has been poorly maintained or does not embody best-practice technology, but more importantly because it is tied to unprofitable industries, reflecting systematic misallocation of investment.

Indications of Misallocation

The third approach one has to take, therefore, is to look for specific examples of how resources have been misallocated. Three such indications may be of particular importance.

One is the emphasis on heavy industry. Given that the Soviet industrialization from the 1930s onwards specifically emphasized heavy industry as a means of achieving both self-sufficiency and rapid industrial growth, it seems likely that the Soviet Union has significantly overallocated resources to production of steel and other metals, production of chemical raw materials, and production of paper and paper products. The same is probably true of post-1945 Eastern Europe. In both

cases, the hypothesis is strengthened if one takes account of the massive environmental problems created by heavy industry in the socialist countries.

The second has to do with productivity in agriculture. There seems to be little doubt that agricultural policy in the USSR and Eastern Europe has been an utter failure, with dramatic negative consequences for productivity. As a result, the potential for increased agricultural output, even without further inputs, is very large.

The third indication is the neglect of infrastructure. Roads and telecommunications seem to have been systematically ignored. The same is obviously true of factor market institutions – banks and other financial intermediaries hardly exist, and a well-functioning labour market is a long way off.

This suggests first that much of the existing capital stock, taking the form of buildings and equipment for heavy industry, is of little or no value, and also that much of domestic saving for many years will be absorbed by necessary (and highly profitable) investments in infrastructure. As a consequence, little domestic capital will be available for the production of tradable goods.

Lessons from West European Trade

The basic premise of liberalization in the East European countries is that by copying the institutions (the market system) of Western Europe and North America, they can copy Western economic success as well.

But if that is correct, we should expect a transformed Eastern Europe to resemble Western economies not only in terms of overall economic success, but also in terms of economic characteristics more generally.

It is well known that most Western trade is intra-industry trade between similar countries, deriving from product differentiation and economies of scale rather than from Heckscher-Ohlin type comparative advantage, and implying the existence of imperfect competition among firms. The Nordic countries, which in some respects might resemble a liberalized Eastern Europe, can serve as an illustration. Of the foreign trade of the Nordic countries, 23% is trade with other Nordic countries, and 69% is trade with other West European countries. Moreover, of the intra-Nordic trade, 95% is intra-industry trade (*Yearbook of Nordic Statistics*, 1986).

Another notable feature of Western markets is the remarkably low degree of import penetration: despite liberal trading arrangements, home-market firms dominate, and most of firms' production is sold in their home markets. In Japan, imports account for only 5% of domestic sales of manufactured goods. Even in Britain and France, the share is only some 30%. This low import penetration is due to many factors – a natural preference for home-produced goods designed with local consumers in mind, the fixed costs associated with the establishment of a dealership network, and transport costs all play some role. The remaining non-tariff barriers to trade may be the most important explanation. All of these are likely to apply to a transformed Eastern Europe as well. Even if East European countries opt for free

trade (and such a policy might, as we argue later, be a necessary feature of a successful transformation) and achieve an agreement with the European Community giving them access to Western markets, we should not expect import shares (or the corresponding ratios of exports to domestic sales) in excess of 20-30% (Berthet-Bondet et al., 1988).

Even so, East European trade in manufactures could become highly significant. If economic reforms raise income levels by 50%, the East European market (excluding the Soviet Union) would be of the same order of magnitude as those of France or West Germany; including the Soviet Union, it would be almost as large as that of the EC-12.

Hypotheses and Assumptions

The information available from current trade patterns, taken together with what we can deduce from the four approaches outlined above, suggests that successful transformation of the East European countries into open market economies could make the Soviet Union into a major exporter of energy and agricultural products, enable some of the East European countries to exploit comparative advantage in skill-intensive light manufacturing, and create significant intra-industry trade both among the East European countries themselves and between East and West. In Chapter 1 below, we explore these hypotheses in greater detail, and indicate the possible orders of magnitude involved.

If the significant potential for trade is to be exploited, however, a clear prerequisite is that Eastern Europe secures open trading arrangements with the European Community and the non-EC Western countries. We therefore also have to discuss the implications of changing trade (and investment) flows for the process of microeconomic integration in Europe and explore the possible trade and industrial policy arrangements which may define a future European-wide 'economic space'.

Further issues that are given some attention in Chapter 1 include capital movements, foreign direct investment, and technology transfers. Our assumption is that sufficient direct investment (and with it Western technology) and other forms of foreign capital will be forthcoming to enable Eastern Europe and the Soviet Union to modernize their agriculture, improve their energy efficiency, and exploit their comparative advantage in light industry. The capital inflow, however, will not be on a scale sufficient to turn the region into one of capital abundance. The reason is simple: capital will be attracted by the higher profitability which investment in Eastern Europe can provide. Higher profitability will only be a reality, however, for so long as capital is scarce. Capital movements can not, therefore, turn scarcity into abundance.

In Chapter 2 of this Report, we attempt to estimate the amount of investment that may be needed to rebuild Eastern Europe's capital stock. We then ask where the

required savings will come from, and who will provide the capital goods. This discussion leads us to analyse the effects that the reforms in the East will have on the macroeconomics of the European Community. The special position of Eastern Germany – which has overnight become a region of the Community – takes up a large section of that chapter.

The reader should note at the outset, however, that in both parts of the present Report we focus on the implications of events in Eastern Europe for the West assuming that the reforms currently in progress will succeed. We leave it to others to speculate on the possible course of events should that prove not to be the case.

The Time-scale of Reform

An important issue is the time-frame for the full implementation of successful reforms, and thus the time-horizon relevant for our predictions of future economic relations within Europe. Results may be slow in coming. The supply-side reforms carried through in the UK after 1979 cannot be directly compared with the reform process in Eastern Europe, but there are points of similarity. It took the best part of a decade for these changes to have much of an impact on British economic performance, which suggests that ten years is the minimum time-span that will be required by the very much more extensive and complex East European reform process, with two or three decades being perhaps a more realistic estimate. In some areas, however, we are likely to see effects much sooner. That is particularly true in areas such as shipbuilding, where Eastern Europe and the Soviet Union simply have to convert current production capacity into export. It is probably also true in some light manufacturing, where Western management techniques and direct investment can combine easily and rapidly with a suitably skilled East European workforce. And many of the macroeconomic implications will appear quite quickly: indeed in Chapter 2 we restrict our horizon to the next ten years and ask what can reasonably be achieved within that time-horizon.

1 Trade Patterns and Trade Policies

Carl Hamilton

Damien Neven

Victor Norman

André Sapir

Alasdair Smith

L Alan Winters

1.1 Comparative Advantage

In this section we consider the comparative advantage of the countries of the Eastern bloc as it will affect their international trade over the next ten years. Although we do not consider transitional issues, we do set the horizon sufficiently close that fundamental changes in factor endowments may be ignored, that is to say we take the current stocks of human and physical capital as broadly given, allowing for only moderate increases in investment. We consider several types of information: none is very reliable, but collectively they provide the elements of a story. Current trade data have something to tell us although they have to be used with great caution because of the distortions affecting East European trade, but we observe some aspects of East European trade patterns that are more akin to those of the EC-North than of the EC-South. Data on factor endowments allow us to make inferences about how trade patterns will change as distortions are reduced, but the available data are limited. In particular, reliable data on human capital are extremely hard to find for Eastern Europe. Such educational and scientific data as are available suggest that Eastern Europe is better endowed with more highly-educated labour and research workers than the EC-South countries.

From these observations we tentatively conclude that the East's comparative advantage in manufactures probably lies higher up the skill and non-labour intensity ladder than the EC-South's. This would imply first that the EC-South has relatively little to fear from the integration of Eastern Europe into the European trade matrix, and second that the growth of imports into the EC-North will be less in the sensitive labour-intensive sectors such as clothing and footwear than in more sophisticated goods.

We then present evidence which suggests that Eastern Europe is likely to generate significant net exports of energy as its own energy consumption is curtailed

and of agricultural goods as its supply expands. Strength in these sectors will also tend *ceteris paribus* to reduce net exports of labour-intensive manufactures.

1.1.1 Present trade patterns

In investigating future trade patterns in Eastern Europe, we first consider what we can learn from the present patterns. When we interpret data on actual trade patterns in Eastern Europe we need to recall the point made in the Introduction: if trade in these countries has been managed in a way that does not concur with comparative advantage, then existing trade patterns will not reveal *true* comparative advantage. The impetus for economic reform derives from the belief that the existing economic system creates large and systematic misallocations of resources, and one would expect such misallocations to affect both the pattern and size of trade flows. Eastern planners may nevertheless have felt some pressure from comparative advantage in the past, and there may have been some serious attempts to permit efficient national specialization within Comecon. Thus existing trade patterns may have something to tell us about comparative advantage, even if they are affected by quite large misallocations.

Direct evidence on the extent of intersectoral misallocations is hard to find. One way to proceed is to look at the allocation of labour across industries: if misallocation of resources in Eastern Europe has prevented appropriate specialization, then the East European economies should appear more homogeneous in the allocation of labour across industries than their Western counterparts. *Eurostat* data for France, Italy, the UK and West Germany and UN data for Bulgaria, Czechoslovakia, Hungary and Poland provide information on the shares of employment (as a proportion of total manufacturing employment) in 1984 in the 29 ISIC sectors, and these show that on average the share of each sector varies more among the Eastern countries than among the Western countries. Of course, this may reflect a greater dispersion of factor endowments in the East than in the West, but the comparison does at least suggest that the autarkic tendencies of the East European countries have not led to an overwhelming misallocation of labour. We might therefore be able to draw inferences, albeit with caution, from current trade data.

The 'average' trade pattern between the CMEA and West European countries can be characterized as follows:

- (a) There is some Heckscher-Ohlin trade between East European countries and the West, such that the East exports natural-resource-intensive commodities and to some extent labour-intensive commodities. The total volume of such trade is, however, small.
- (b) The West European countries on the whole exhibit net exports to the East of commodities that are intensive in capital and human capital. There is, however, a substantial amount of bilateral (intra-industry) trade in these commodities. East European countries have larger export than import shares with Greece and Portugal,

very roughly equal shares with Finland, Ireland, Norway and Spain,¹ and larger import than export shares with the remaining EC and EFTA countries.

Revealed comparative advantage varies surprisingly little across East European countries. The differences that do exist at the country level accord, however, with Heckscher-Ohlin intuition:

- (a) Poland and the USSR are more specialized and display a stronger comparative advantage in natural resources;
- (b) Romania and Yugoslavia tend to be more specialized in labour-intensive goods; and
- (c) East Germany is more specialized in human-capital-intensive products, and Hungary may be in a similar position. Hungary and Czechoslovakia have intra-industry indices for their trade with the north European countries that are comparable to those for Spain and Portugal. The corresponding indices for Greece are significantly lower, whereas those for trade between France and West Germany are very much higher.

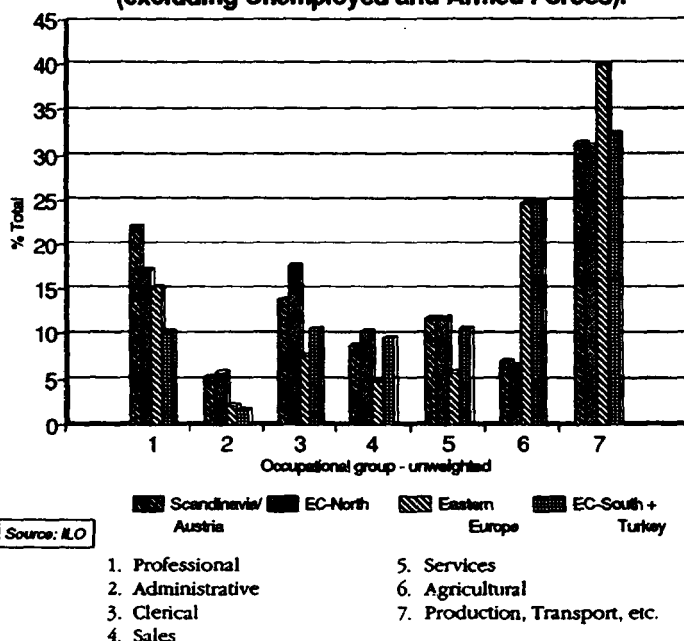
These observations are not out of line with what would be suggested by a 'stage-of-development' approach. GDP per capita in Eastern Europe ranges from \$4,100 in Romania to \$7,600 in Czechoslovakia and \$9,400 in East Germany; i.e. it is bounded (roughly) by Portugal (\$4,000) and Greece (\$5,200) at the lower end and by Spain (\$8,700) and Ireland (\$8,800) at the upper end.²

1.1.2 Human capital

Turning now to what we can infer from factor endowments, we first consider the role of human capital. An important determinant of the type of manufactures and services a country produces is its endowment of skilled labour. Over very long periods this is amenable to policy manipulation, but for the time-horizons of interest here current endowments provide a reasonable guide to future performance. Figure 1.1 reports the occupational breakdown of the employed labour force for four groups of countries, based on the International Labour Organization's classification. Missing data preclude complete coverage, and serious questions exist about the comparability of definitions across countries. Moreover, the data for Eastern Europe refer mainly to the 1970s, while those for other countries are more recent. Nevertheless, there is at least some information content to the data.

EFTA and the EC-North have similar structures, with around 20% of the workforce in professional, technical and related occupations and 5% in managerial posts. Eastern Europe on the other hand has only about 15% in the former category, and this figure is strongly influenced by Bulgaria's *reported* 26%, the second-highest figure in Europe. The EC-South has only 10%. While the precise figures are not

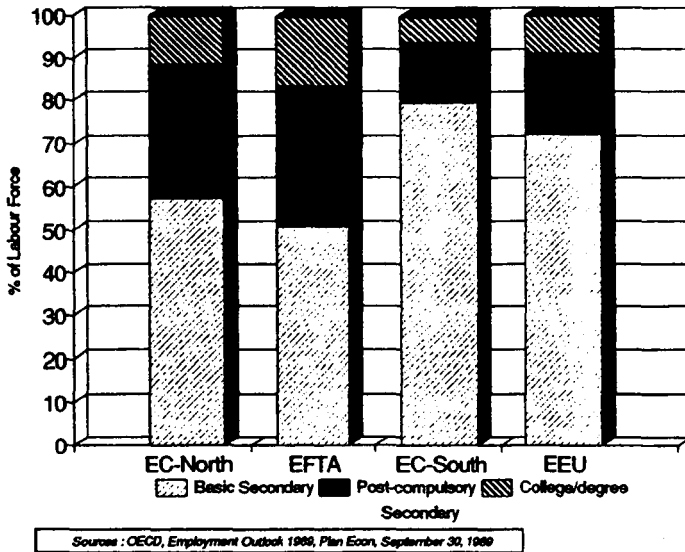
**Figure 1.1: Labour Force by Occupational Group
(excluding Unemployed and Armed Forces).**



reliable, these data suggest that the East European countries lie somewhere between the rich and poor members of the European Community on this scale. The figure also makes clear the under-emphasis on management in the East and South and the East's deficiencies in clerical, sales and service personnel.

A similar picture emerges from Figure 1.2, which reports the breakdown of the workforce by level of educational attainment in various country groups. Again coverage is incomplete and definitions of educational level rather variable, so the precise figures are of no consequence. Eastern Europe lies between the EC-North plus EFTA and the EC-South, with some 9% of workers having a university or college education and a further 19% having secondary/high school or industrial education. (Comparability problems may mean that the qualifications of the latter group are in fact lower than those of their counterparts in the other country groups.)

An alternative approach to human capital is via educational statistics, making the assumption that flows and stocks of skilled labour are fairly closely related. Columns (1) and (2) of Table 1.1 show UNCTAD data on the ratios for enrolment in secondary and tertiary education for Eastern Europe and for a number of comparators. The first of these, 'UMI', comprises Argentina, Hong Kong, Mexico, South Korea and Turkey

Figure 1.2: Highest Educational Qualifications. Mid-1980s.

– a group of large upper-middle-income countries with which Eastern Europe may have some parallels. Eastern Europe has low enrolments in secondary education relative to the better-off comparators and in tertiary education relative to all.

Column (3) presents education expenditure as a share of GDP and finds the East intermediate between the EC-North and EFTA on the one hand and the EC-South and UMI on the other. The higher expenditures but lower enrolments may reflect either high-quality education in the East or inefficiencies in providing education. It is impossible to determine which.

Finally, Column (4) shows the numbers of scientists and technicians engaged in R&D as percentages of the total workforce employed. Eastern Europe appears to have disproportionately large numbers involved in R&D, although there may be a definitional problem similar to that in the Bulgarian occupational data. None the less these data suggest that R&D intensities are quite different in Eastern Europe from those in the EC-South and UMI, and probably differ from those in the EC-North as well. Again it is difficult to know whether the co-incidence of high inputs and apparently low outputs reflects inefficiency, different objectives (e.g. military research) or definitional problems.

To the extent that the data are interpretable they suggest that Eastern Europe has a greater proportion of research-skilled workers in the total workforce than either the EC-South or UMI, and possibly even greater than Western Europe. On the other hand, the lower rates of school and university enrolments (and their corresponding

Table 1.1: East European Human Capital Statistics.

Country Group	Enrolment Ratios ^a		Educational Expenditure as % of GDP ^a	Ratio of R&D Workers to Total Employed
	Primary and Secondary	Tertiary		
UMI	87.6	22.3	2.3	0.288 ^b
EC-South	94.3	22.6	3.5	0.154
EFTA	92.8	25.2	5.5	0.705
EC-North	94.9	26.3	5.2	0.687
Western Europe	93.9	25.8	5.4	0.689
Eastern Europe	89.6	18.5	4.6	0.932
Eastern Europe and USSR	96.3	20.1	5.7	1.060

Notes: (a) unweighted averages.
(b) Excluding Mexico.

Source: UNCTAD, *Handbook on International Trade and Development*.

stocks) suggest a possible shortage of skilled production and commercial workers. These factor abundances suggest that among manufactures it is hi-tech goods rather than labour-intensive goods that represent Eastern Europe's area of comparative advantage.

Such a conclusion might be reinforced by considering the relative levels of skills involved in East and West. Eastern Europe's research workers may have better access to the international market for ideas (via journals and travel etc.) than its skilled workers have opportunities to train in the use of modern machinery and techniques. The reduction in military manpower may also have implications for skill levels. If there are reserves of highly-skilled scientists in military occupations a further relative stimulus to the hi-tech sector may emerge in the next decade as military numbers and expenditure decline. Moreover, conscription may previously have been a means of training at lower levels of skills, and so, as military throughput declines, we may observe declining supplies of skilled and semi-skilled labour until civilian programmes can replace it. The Eastern countries currently retain some 5.4 million men and women in the armed forces, and conscription covers approaching one-quarter of the male population between the ages of 18 and 22. Hence the magnitudes involved are quite significant.⁵ The release of highly-skilled labour coupled with declining training at somewhat lower levels again suggests a shift towards hi-tech rather than more standard manufactures.

Table 1.2: Percentage Shares in World Energy Production by Region. 1986.

	Hard Coal	Brown Coal	Crude Oil	Natural Gas
North America	24.4	7.6	22.8	32.1
EC	7.3	14.6	5.2	9.2
EFTA	0.0	0.2	1.5	1.8
Eastern Europe ^a	7.2	47.0	0.6	3.3
USSR	16.0	13.0	22.1	38.6
World	100.0	100.0	100.0	100.0

Note: (a) Excluding Yugoslavia.

Source: UN, *Industrial Statistics*, 1986

1.1.3 Energy

The Eastern-bloc countries account for disproportionate shares of world production and exports of coal, gas and oil (see Table 1.2).⁴ Liberalization could lead to changes in their energy sectors in any of three dimensions:

- (a) an increase in domestic demand, due to economic growth;
- (b) a decrease in domestic demand, as the systemic waste, demonstrated by their extremely high intensities of energy use, is reduced; and
- (c) a change in domestic supply, whose direction is not obvious, as these countries adopt commercial criteria for assessing and selecting investments and more closely approach Western environmental standards.

Table 1.3 quantifies item (b). Despite the difficulties of comparing GDP between socialist and market economies, the intensity of energy use in the socialist countries is at least twice that in the OECD countries, and 70% higher than the global average. A decline in Soviet and East European energy intensity to, say, 500 tons per million dollars of GDP – higher than the OECD figure because Eastern Europe is at a energy-intensive heavy industry stage of development – would generate a exportable surplus of 1,200 million tonnes of oil equivalent (mtoe). Even allowing for a increase in income of 50%, nearly 500 mtoe of exports would be available, equivalent to 6% of world energy consumption or nearly half of OPEC's production (see Table 1.3).

Furthermore, Soviet oil extraction technology is believed to be very inefficient, and it is possible that the adoption of existing Western techniques will be easier in the oil sector, where the problems are essentially technical, than in manufacturing and services, where in addition they are social and organizational. Given the high

**Table 1.3: Possible Soviet and East European Energy Exports.
Million Tonnes of Oil Equivalent.**

Current Consumption	2,666
Projected Consumption with Revised Energy Intensity:	
(i) at Current income	1,465
(ii) plus 50% increment	733
(iii) Total	2,198
Exportable Surplus	468
% of World Energy Consumption	6%

shadow value of foreign exchange to the USSR, and the greater openness of Western markets in energy than in agriculture and manufacturing, it seems highly likely that the energy sector will be strongly promoted.

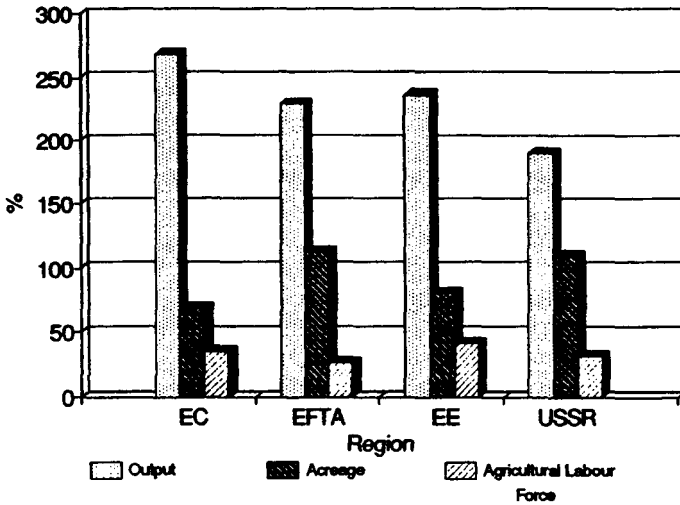
The precise size and timing of Soviet net export increases is uncertain, but it will certainly have a huge impact on world energy markets. World oil prices could tumble, perhaps by as much as one-fifth, squeezing current high-cost producers (e.g. the UK, Mexico and Texas) and reducing OPEC's market power. Similarly increases in East European output of coal and gas will put downward pressure on world prices, even allowing for some output reductions for environmental reasons, e.g. in East Germany.

Cheaper energy will stimulate the Western economies even if environmental factors preclude the full transmission of price falls to consumers. In particular, it will bring them significant terms-of-trade improvements. Moreover, for the EC, energy imports are a relatively uncontroversial means of opening markets for East European products – even to the UK where the importance of oil output is likely to decline over time.

1.1.4 Agriculture

The inefficiency of Soviet agriculture is notorious, and indeed it is one of the most significant factors in the failure of the Soviet economic experiment. East European agriculture is probably better – but not by a great deal. Overall, therefore, the liberalization of the East European economies has the scope to bring forth a substantial increase in agricultural production. Moreover, while their consumption of agricultural output will also increase, it will almost certainly do so by less than

Figure 1.3: Growth of Cereals in Europe:
1986-8 figures as % of 1934-8 levels



their production, so Eastern Europe will be able to increase its level of net exports of agricultural produce significantly.

A resurgence of agriculture in Eastern Europe raises several issues for the European Community. First, increased net exports will lead, *ceteris paribus*, to lower world prices. Second, if Eastern Europe is to finance imports of machinery etc., it will need to export, and will look to Western Europe as a natural outlet; hence increased EC imports from Eastern Europe may become inevitable. A liberalized Eastern Europe might also offer an outlet for certain EC surplus produce – e.g. wine – but not by enough to offset fully the increased imports. Third, East German agriculture will be entitled to the generous support provided by the EC's Common Agricultural Policy (CAP), probably increasing expenditure by over ECU 1 billion. Other East European countries may also aspire to membership, which would certainly stretch the CAP to breaking point.

Figure 1.3 and Tables 1.4 and 1.5 offer two views of the inefficiency – and hence the potential for expansion – of East European agriculture. The figure reports the crude growth of grain output and inputs in the different European blocs between 1934/8 and 1986/7. The USSR had already suffered a period of collectivization by the mid-1930s and thus was probably already under-performing in the base period. Nevertheless, its growth over the subsequent 50 years is substantially the lowest reported, *despite* the absolute increase in its grain acreages. For Eastern Europe proper, the 1930s represent potential agricultural output more accurately; its output

Table 1.4: Potential Growth of East European Grain Production as Percentages of 1934-8 Average Production Levels.

At West European Actual Yields	365
Less Growth due to CAP (half of policy-induced growth assumed to occur post 1938)	-18
Less Area Reduction of 15%	-55
Nominal Output of EEU	292
Actual Output of EEU	205
Potential Output of EEU	263
(actual plus 2/3 of excess of nominal over actual)	

growth is not far below that of Western Europe (if the data are to be believed), but the size of the agricultural workforce has declined much less rapidly than in the West.

It would be rash indeed to claim that Eastern Europe could, much less should, match the growth rates of grain output shown for the EC and EFTA. Although these latter countries' protective agricultural regimes were largely established by the late 1930s, at least part of their post-war growth must be due to increases in agricultural support. Tyers and Anderson (1986, table 14) estimate that agricultural support changed the EC(10)'s production of wheat and coarse grains by -2% and +20% respectively, with corresponding figures of +15% and +23% for EFTA. Assuming that half of these effects existed in the late 1930s, that East European acreage will decline by half the amount that West European acreages have done, and that Eastern Europe could catch up two-thirds of Western Europe's non-policy-induced growth in yields, we estimate possible increases in grain of about 30% overall (see Table 1.4). This amounts to about 89 million tonnes, or about 5% of world output of grains.

A second approach is explored in Table 1.5, which compares East European agricultural inputs and outputs with those of a comparator group that includes not only the high-productivity intensive-cultivation countries of North West Europe (probably the best model for Eastern Europe proper) but also some countries with extensive methods of agricultural production (e.g. Australia, Canada and the USA) and those at relatively low levels of development (e.g. Greece, Israel, Malta and Portugal). The value at 'international prices' of total agricultural output in Eastern Europe and the USSR (EEU) is just under half that of the developed market economies (DMEs), with the USSR accounting for about 31% and Eastern Europe for 18%. These ratios apply equally to crops and livestock. The lower part of the table makes clear, however, that EEU uses substantially more than half the DMEs' level of inputs into agriculture. This is most evident in terms of manpower. For so long as factor prices remain different between EEU and the DMEs we would expect

Table 1.5: Inputs and Outputs for Agriculture in Soviet Union, Eastern Europe and in Developed Market Economies. 1985.

	Eastern Europe and USSR (EEU)	Developed Market Economies (DME)	Ratio EEU/DME %
Outputs (Billion Dollars)			
Agriculture	177.3	359.1	49.4
Livestock	89.6	181.5	49.4
Crops	87.6	177.6	49.3
(of which Cereals)	(38.6)	(84.6)	(45.6)
Inputs			
Agricultural Labour Force (Millions)	34.5	25.5	135.3
Permanent Pasture (Million hectares)	396.0	870.8	45.5
Arable and Permanent Crop Land (Million hectares)	285.7	389.6	73.3
Tractors (Millions)	5.1	15.2	33.6
Fertilizers (Billion kg)	36.9	45.2	81.6

Sources: United States Department of Agriculture, *World Agriculture Trends and Indicators, 1970-88*; FAO *Production Yearbook, 1986*.

EEU to use more labour-intensive methods of production, but the data in Table 1.5 suggest that agriculture will be able – indeed, will need – to shed significant amounts of labour over the next decade. This stimulus to labour-intensive manufacturing will supplement the effects noted above stemming from the improved organization of labour.

The inefficiency of EEU's agriculture is also evident in the arable land and fertilizer data. Together these represent 'effective land', and we see that EEU's productivity of these inputs is at best two-thirds of the DMEs'. Most of the deficit is attributable to the USSR. Indeed, the crude measure of output per acre is higher in Eastern Europe proper than in the DMEs as a whole (although not higher than in Western Europe).

Table 1.5 does show, however, that EEU's agriculture is substantially less tractor intensive than DMEs' agriculture. Generalizing this feature to other mechanical inputs and assuming that there are also quality deficiencies in the existing stock of equipment provides a partial explanation of the agricultural productivity deficit. It would be unrealistic, however, to explain all of it in this fashion. The speed with which the stock of tractors will be built up is not easily estimated, but with higher producer prices for agricultural products it seems likely that the demands from EEU's

rural economies will be fairly buoyant. If sound property rights are established at the level of the individual farmer, there may be high levels of savings and investment in agriculture, so catch-up will be fairly rapid. There are reports that certain factories are being diverted from producing tanks to producing tractors, so that the domestic supply of tractors may increase, provided that quality control can be maintained.

On the other hand two factors might constrain the expansion of the EEU's agriculture. First, there are fears that poor farming practices have either permanently reduced fertility or 'poisoned' the land, and second, there are concerns about the skills of the workforce. In some countries (e.g. the Soviet Union and Poland) the peasantry was deliberately moved or eliminated, while in others rural life was so undesirable that the more able workers emigrated to the cities. Moreover, on the large EEU farms the division of labour has been such that few people have the experience to run a whole farm. Both factors seem likely to slow down or even curtail the improvement of agriculture, but it is difficult to imagine them preventing it from making some progress. Thus even if we allow for these factors, as well as for a decline in fertilizer use and for the possibility that Soviet arable land is naturally less productive than the DME average, a 20% increase in output looks quite reasonable.

A final approach to the prospects for East European agriculture comes from analogies with previous liberalizations elsewhere. The propensities of farmers to respond to economic incentives is well illustrated by the output-raising effects of the CAP. More dramatic, however, has been the liberalization of Chinese agriculture since 1978. Raising producer prices, relating farmers' incomes to their own output and permitting limited property rights in land led to a huge increase in output. Despite declines in every measurable input except fertilizer, total agricultural output increased by 50% over six years, with increases of 25% in grains and 300% in cotton (the two major crops). The remarkable speed of the resurgence of Chinese agriculture seems unlikely to be replicated in Eastern Europe, for a number of reasons. Social and geographical conditions differ; East European agriculture is larger scale and more capital intensive than Chinese agriculture, in which labour time and effort is by far the predominant input; and Soviet farms have been socialized for longer than Chinese. Nevertheless the Chinese experience suggests that the longer-term prognosis for East European agriculture is very bullish.

The Chinese experience raises the issue of consumption. The rapid increase in real incomes after 1978 increased the domestic demand for food very strongly; so China's increase in net exports was modest. The same phenomenon will inevitably characterize Eastern Europe's liberalization, but probably to a lesser extent. Incomes are substantially higher in Eastern Europe, which makes the income elasticity of demand for food lower, and with the obvious demand of investment and debt service, real income growth is likely to be lower. Hence we estimate that a significant share of Eastern Europe's expansion of production will be translated into increased net exports.

It is almost impossible to predict in which commodities net exports will increase most. Eastern Europe and the Soviet Union are in net deficit for crops but in surplus for livestock and meat. The latter will be the area in which demand grows fastest, however, so net exports will not be unduly favoured. In terms of major crops EEU has the largest shares of world output in rye (81%), barley (35%), dairy products (30%) and wheat (25%), which suggests that the strongest effects will come in cereals and dairy products. To put these figures in perspective, a 20% increase in EEU output in 1987 would have increased world output of wheat and coarse grains by 25 and 29 million tonnes respectively. Gross imports of these products were 10 and 30 million tonnes for the OECD as a whole and 2.4 and 4.7 million tonnes for the EC(12). Similarly a 20% increase in EEU milk production is equivalent to 20% of EC(12) output.

With price elasticities of demand for grains of around -0.5, world-wide price reductions at least of 10% (wheat) and 9% (coarse grains) would be necessary to absorb the additional output. If the extra demand were expected to come from only a sub-set of countries (e.g. the European Community), internal prices in those countries would have to fall much further. All previous experience, of course, suggests that governments will not pass on such price reductions to their consumers – let alone their producers – but will rather absorb them into subsidies, stockpiles and output reductions. Given the size of the shock, however, it is plain that such a burden could not be borne by the CAP alone. Hence, unless the CAP is substantially reformed – say within the context of the Uruguay Round – then the liberalization of Eastern Europe will put great pressure on it, and the inclusion of the East European countries within the CAP would all but destroy it.

1.2 Concentration and Competition in East-West Trade in Europe

1.2.1 Trade and competition

In the previous section we described an East-West trade pattern within Europe that may in important respects bear a surprising resemblance to the existing West-West trade pattern, and we also predicted that in the future much trade in both directions will consist of flows of relatively sophisticated manufactured products. Markets in which we observe such intra-industry trade are typically markets in which production is subject to economies of scale, firms sell differentiated products and there is imperfect competition.

The co-existence of market power and scale economies creates a trade-off for public policy: if the enforcement of a strong competition policy might seem to require many producers in each line of business, the benefits of economies of scale may be forgone. The sharpness of this trade-off is a matter of controversy. Geroski

and Jacquemin (1985) argue that in West European market structures the extent of unexploited scale economies is insufficient to justify a slack competition policy. What is uncontroversial is that economies of scale typically have much less impact on costs than other sources of efficiency and inefficiency. There is no better evidence for this than the current state of industry in Eastern Europe, whose very concentrated market structures are the result of planners' beliefs in the existence of scale economies. While these large East European enterprises currently have levels of productivity that are very low by Western standards, we should not neglect this trade-off, whatever its precise shape may be, since it raises a major microeconomic policy issue.

East European industries, at the start of the present reform process, display a very much higher degree of concentration than Western industries. In 1988, the 3,526 industrial enterprises in the German Democratic Republic had an average of 900 employees each, while the 47,826 West German enterprises had an average of 190 employees.⁵ Polish statistics on industrial concentration paint a similar picture: the 5,617 industrial enterprises employed an average of 750 employees in 1987.⁶ Whereas for a typical Western distribution of enterprise sizes, in which the greatest number of enterprises are of the smallest size in the distribution, the Polish statistics show more enterprises with 200-500 employees than with 1-50 employees for all the industries considered.

It is surely one of the defining characteristics of a successful reform that the pattern of industrial concentration will change as private enterprise emerges and the capital market develops. There is also one respect in which these statistics may be misleading: multi-plant public enterprises may be broken up as they are privatized. History matters nevertheless, even after economic reform, and it seems quite likely that the East European economies will maintain relatively concentrated industrial structures for a long time to come.

History is also important to the ownership of East European enterprises. Privatization will play a central role in economic reform, but the practical problems of privatization on a wholly unprecedented scale may imply that it will take a long time to reduce the public sector to Western proportions.

These observations might lead to pessimism about the degree of competition that will be attainable in the East European economies in the medium term, but this would be to ignore the important role of international trade in relaxing the trade-off between scale and competition. In the larger market of the international economy, there may be both more firms and larger firms; or to put the point in a different way the behaviour of firms facing weak domestic competition may be disciplined by competition from importers and the fear of competition from potential importers. Thus, even if East European market structures remain relatively concentrated for some time, they may not suffer the ill effects of monopoly if they are genuinely open to foreign competition. Indeed, given the problems associated with the high initial level of concentration and public ownership, relatively free international trade may

provide the only effective competition policy in the reform process, and a liberal trade regime may be a necessary part of successful reform.

There will inevitably be pressures in the reforming economies to protect declining and moribund industries from the effects of competition, and so long as much industry remains concentrated and publicly owned, these pressures will be particularly strong. Successful reform requires, however, that most of the pressures be resisted. Governments will need to make credible commitments to industrial policies that severely limit state intervention, and international trade may play another important role in this regard. External obligations are a powerful aid to credible commitment, and the acceptance of the full obligations of GATT membership may enable a government to resist protectionist pressures by pointing to the illegality with respect to GATT of the proposed interventions. It is probably more important, however, for reforming governments to be able to resist pressures for interventionist industrial policies such as subsidies and tax concessions, and the restraints of EC competition policy are the most convenient strait-jacket to hand for this purpose. There is therefore a strong incentive for the reforming East European economies to seek early associate membership of the Community, with a form of association which brings them within the rules of the EC's competition policy. This could be crucial to their ability to resist internal pressures to abort the reform process.

1.2.2 The implications for the West

The direct effects of trade with a reformed Eastern Europe on scale and competition in Western Europe are likely to be small. Eastern Europe without the Soviet Union will add 110 million people to a European Community population of 325 million. This is not an insignificant change, but it will not lead to a qualitative change in the functioning of West European markets: the competition-scale trade-off will shift only by a small amount.⁷ It is therefore for Western *policy options* that there are important implications. As the logic of economic reform leads the East European economies to adopt liberal trade policies and to accept the disciplines of GATT and of EC competition policy, the EC's ability to respond in a protectionist way to trade pressures from the East will be much reduced.

1.2.3 Foreign direct investment

We have argued that skill-intensive goods, such as cars and electronic consumer goods, will play a significant role in East European exports. Western production of these goods is dominated by multinational corporations, and even where expansion takes place in more labour-intensive lines of production, such as clothing and food-processing, there is much scope for the multinationals. What are the prospects for West European, US and Japanese multinationals in Eastern Europe, and what will be the effects of their presence?

The East is short of productive capital, and no doubt will continue to be so for the medium term. The modern view of the multinational corporation plays down its role as a supplier of capital, since international capital flows can also take the form of portfolio investment. In a setting with very undeveloped capital markets and a residual fear that reversals to the reform may lead to restrictions on the repatriation of profits or even to the expropriation of foreign-owned capital, direct investment via multinational corporations may be a more attractive channel for West-to-East investment flows than portfolio investment. A multinational corporation bundles firm-specific skills and expertise into its investment in such a way that the enterprise might well collapse without the continued involvement of the parent company, so that the expropriation of its investment would be impractical. The fact that expropriation (or barriers to profit repatriation) may be prohibitively expensive enables reforming host governments to make credible their commitments to welcoming foreign direct investment.

It is not just as vehicles for foreign investment, however, that we should see the role of Western multinationals. The East is short of a broad range of the managerial skills needed to manufacture products with the quality and reliability required in competitive markets. It will surely remain short of such skills, and it will find that multinationals can provide them. The experience of both the electronic consumer goods and car industries with Japanese foreign direct investment in the UK indicates that foreign expertise can be very rapidly transmitted in this manner. It remains a common view, however, that a production system based on multinationals deprives host countries of the most valuable spin-offs of economic development, since they do not share in design, R&D and strategic planning. The experience of Singapore provides a counterexample: it is now developing from a host to multinational production into a home base for multinationals with production elsewhere in South East Asia. Given the high levels of education and skill in such countries as Czechoslovakia and Hungary, it is entirely conceivable that they could become the hosts of the 'upstream' activities of multinationals.

Here there is the possibility of direct effects on Western Europe. The UK has particularly welcomed Japanese multinationals in recent years, and Ireland and Spain are also notable hosts for non-European multinationals. The supply of multinational investment is not infinitely elastic, however, and while an 'eastward' orientation of multinational investment may take time to develop, it will certainly appear as the reform process gathers momentum and credibility, and there will then surely be a slowing of multinational investment in Western Europe.

1.3 The Evolution of East-West Trade Relations

In this section we examine the changing nature of trade policies applied by Western Europe to imports from Eastern Europe. We first describe their history and the

present situation, and we then go on to analyse the implications of economic reform in the East for the commercial map of Europe in the year 2000.

Trade between Eastern Europe and the market economies of the West has not been very substantial, as there have been strong discouragements to trade on both sides. On the importing side, in Western Europe (as in the rest of the world) there are quantitative import restrictions and voluntary export restraints in addition to tariffs.

Most of the explanation for the lack of East-West trade must lie nevertheless in the East. It is a precondition for increased exports from Eastern Europe that they be able to transform their domestic supply conditions. The transformation required includes the rapid introduction of the legal framework for a market economy, the definition of new property rights, and the introduction of other laws to give decision-makers at both the firm and household levels a more stable economic environment with a more predictable relationship between actions and outcomes. Such reforms of the microeconomic foundations are essential if changes in macroeconomic policy and in trade policy are to have their desired effects. The wages and prices that emerge from a reformed economic mechanism must provide signals to guide the efficient allocation of resources, but they must also provide incentives for agents to react to these signals. Microeconomic reforms are also necessary if the East European economies are to get away from the barter trade arrangements that have arisen from the limited access to hard currency.

1.3.1 GATT

Several East European countries are Contracting Parties to GATT. Czechoslovakia joined GATT immediately after World War II and remained a member after 1948, but until now it has been a passive Contracting Party. Poland has been a Contracting Party since 1967, Romania since 1971, and Hungary since 1973. Bulgaria applied in 1986 for the status of a Contracting Party. The Soviet Union obtained observer status in 1990 (Aslund, 1990). The terms of accession typically include special arrangements to take into account the fact that the East European countries have not been market economies. An important ingredient is extra safeguard clauses against the risk of dumping through state-subsidized exports. There are also other features of these agreements tailor-made to each East European country and coloured by the climate of East-West relations at the time of negotiations for accession.

The scene has now completely changed. The East European countries want their special state-trading status in their agreements with the GATT to be abolished. Czechoslovakia, Hungary and Poland are presently involved in negotiations to introduce genuinely non-discriminatory tariffs at lower levels than in the past, and to bind them at the new lower levels. In the past, tariffs were of only limited importance, since other trade policy instruments such as the CMEA price and volume agreements, quantitative import and export restrictions, and the shortage of hard currency were much more significant barriers to free trade than were tariffs.

Table 1.6: EC Imports from Eastern Europe and the Soviet Union by SITC. January-September, 1989. Billion ECUs and as Percentage Shares of Total Extra-EC Imports.

	SITC section										
	0	1	2	3	4	5	6	7	8	9	Total
Billion ECUs											
Total	1.3	0.1	2.1	6.9	0.0	1.4	4.1	1.6	2.0	1.7	21.2
Soviet Union	0.1	0.0	1.2	5.6	0.0	0.5	1.7	0.4	0.1	1.5	11.2
Eastern Europe	1.2	0.1	0.8	1.3	0.0	0.9	2.3	1.3	1.9	0.2	10.0
% Share											
Total	5.3	3.9	6.8	15.4	3.8	6.3	7.7	1.8	4.5	9.7	6.4
Soviet Union	0.4	0.9	4.1	12.5	1.0	2.2	3.3	0.4	0.2	8.5	3.4
Eastern Europe	4.9	3.0	2.7	2.8	2.8	4.2	4.4	1.4	4.3	1.3	3.0

1.3.2 The European Community

In the recent past, exports from Eastern Europe to the European Community have been of limited importance for both partners. According to the *GATT Report*, exports to the Community accounted for only 15% of Eastern Europe's total exports in 1988, while the share of Eastern Europe in total EC imports (excluding intra-EC trade) was barely 6%.

The figures in the upper panel of Table 1.6, taken from *Eurostat* trade data, show the composition of EC imports from Eastern Europe for the period from January to September 1989. Despite depressed world prices, primary products (chiefly fuel products belonging to SITC 2) still constituted the bulk of EC imports from the Soviet Union. By contrast, manufactured products (SITCs 5-8) accounted for nearly two-thirds of EC imports from the other East European countries. The figures in the lower panel highlight the importance of Eastern Europe as a source of fuel supply to the EC. For manufactured products, Eastern Europe occupies a relatively low share of total EC imports, except in goods intensive in energy and other primary resources (which belong to SITCs 5 and 6). The relatively low importance of Eastern Europe as a supplier of non-energy-related products to the European Community is primarily due to supply conditions. None the less, difficulties of access to the EC market for agricultural and manufactured goods have also played a role in distorting the export structures of the East European countries.

As is well known, over time the Community has constructed a complex hierarchical system of preferential tariff arrangements with its trade partners. Since the late 1970s, the so-called 'pyramid of privilege' has comprised three layers. At the top are the countries granted duty-free access for all their manufactured exports: the six current members of the European Free Trade Association (EFTA), the twelve Mediterranean countries and the sixty-six African, Caribbean and Pacific (ACP) states of the Lomé Convention. The middle layer includes all the other developing countries (except Taiwan), which are beneficiaries of the EC's Generalized System of Preferences (GSP).⁸ At the bottom, there is a handful of countries subject to the full common external tariff, namely Australia, Canada, Japan, New Zealand, South Africa, Taiwan and the United States. 'Like in the Indian caste system, below these three layers lies the outcast: Eastern Europe...' (Sapir, 1989).

The lot of the East European countries was not enviable: they enjoyed no preferential tariffs and were subject to special quantitative restrictions (QRs) as well as frequent anti-dumping actions. That situation has changed rapidly over recent months, and the Community has concluded trade and cooperation agreements with Bulgaria, Czechoslovakia, Hungary, Poland and the Soviet Union. These agreements provide, among other things, for non-discriminatory tariff regimes. So far, Hungary and Poland have moved up the furthest on the pyramid of privilege. Since 1 January 1990, these two countries have benefited from the GSP. At the same time, specific QRs (those that apply only to East European countries) have been totally abolished, while non-specific QRs (those that apply to all the EC's trading partners) have been suspended for one year, except for specific agricultural arrangements, textile restrictions and coal and steel agreements. Similar measures are being extended to the other East European countries, with the exception of the Soviet Union.

1.3.3 EFTA

Today there are bilateral trade agreements between each of the EFTA countries and each of the East European countries,⁹ and the East European countries are seeking free trade agreements with the EFTA countries. In the past the EFTA countries have followed trade policies towards Eastern Europe broadly similar to those of the Community, and the EFTA countries are also likely to liberalize their imports from the East European countries in a similar manner.¹⁰ In June 1990, the EFTA countries decided to invite Czechoslovakia, Hungary and Poland to start discussions in the autumn of 1990 about free trade agreements, with the aim that the EFTA countries should liberalize trade in manufactures in parallel with the Community.

1.3.4 The commercial map of Europe in the year 2000

The future commercial map of Europe will be completely dominated by the European Community, not because the EC institutions in the area of trade and commerce are in some sense 'better' than others, but rather because the eventual *economic* integration of Europe is viewed by Europeans very much as an instrument for achieving the *political* aims of stability and peace. The Community provides the only realistically available set of institutional arrangements to manage the integration of the European economies – including a reunited Germany – under one supranational hat. The desire to employ supranationally organized economic integration as an instrument for common security and stability is strong not only in Germany's Western neighbours – Benelux, France and Italy – but also in Czechoslovakia, Hungary, Poland and perhaps even the Soviet Union itself. Several EFTA countries, including the neutral ones (except Switzerland), are also likely to be attracted to participate in such a supranational arrangement. As a reflection of these preferences, and also of their hopes to benefit from a dynamic 'internal market' in the 1990s, several European countries now want to become members of the Community. No supply-side problem here!

Members of the governments of Czechoslovakia, Hungary and Poland have spoken about the possibility of associate membership status of the Community, with full membership as a final objective.¹¹ In Article 238 of the Treaty of Rome, the substance of associate membership was left completely open. In practice, associate membership has been regarded to date as a 'waiting room' for countries that could eventually become full Community members but which are not yet sufficiently developed economically or politically for immediate full membership.

The EFTA countries' upcoming European Economic Space (EES) agreements – likely to be concluded during 1991, although their substance on the issues of sovereignty is still obscure – will probably come in under Article 238. In 1989, however, Austria applied independently for full Community membership, and there are active discussions about membership in the Nordic EFTA countries: Finland, Iceland, Norway and Sweden, with the latter two as the front-runners.

What of the demand side? Is the Community interested in having all these candidates as full members? When the issue of 'widening' the Community was discussed in May 1990, it was clear that the East European countries would be invited to negotiate associate Community membership under a revised Article 238 and that this revision would start in the autumn of 1990. Their associate membership should be seen only as a step towards their ultimate aim of full membership. Since the EFTA countries fall both politically and economically between the existing EC members and the East European countries, this seems to imply that the EFTA countries should also be accepted eventually as full members.

In the field of commercial policy it seems likely that the East European countries could by the mid-1990s have joined with the existing Community and EFTA countries to form an economic association embracing a customs union without

internal tariff barriers and with a common external trade policy to cover all goods except agriculture and foods (for which internal border controls would remain). Such an association could also have a common competition policy (including common rules on state aid, regional aid and public procurement, with the European Court as the supreme watch-dog) and rules on increasingly free trade in services (such as banking, insurance and transport services) including rights of establishment and national treatment of foreign firms. It is unlikely, however, that the free migration of labour from East to West would form part of this package.

Around the year 2000, say, a possible constellation of countries in an enlarged Community could have as its core Austria, Benelux, France, Germany, Ireland, Italy, Portugal and Spain joined in an economic and monetary union. There might then be a second circle of full Community member countries, consisting of the five Nordic countries, Cyprus, Greece, Malta and the UK, which would participate fully in all aspects of the 1992 programme's four freedoms. Finally, an outer circle might be established of countries with close access to the inner circles.

This relationship would take the form of a revised Article 238 associate membership of the Community. Although each country would have its own agreement under Article 238, a set of common features would include free trade in manufactures, formal application of the Community's commercial and competition policies, preferential status in trade in transport services and in rights of establishment to carry out financial services; but free migration and membership of the CAP would be excluded. This outer circle would include Bulgaria, Czechoslovakia, Hungary, Poland, Romania (subject to its democratic status), Switzerland, Turkey, and – depending on political developments – the Baltic states, possibly some of the other republics of the Soviet Union, and either Yugoslavia or the individual Yugoslav republics. Needless to say, the allocation of countries to the different 'circles' is somewhat speculative. It is much less speculative to predict that the sensitive issues of labour migration and the CAP could hold up the East Europeans in the outer circle for a considerable time.

1.4 Conclusions: Policy Challenges for the Community

Successful reform of the economic system of Eastern Europe and the Soviet Union will have large effects on the volume and pattern of international trade, particularly within Europe. Trade brings economic gains to both sides, and as the Eastern countries become more formidable competitors for Western producers, they will also become more attractive markets for Western products.

All changes in trade patterns, however, cause problems for some, notably those producers who face intensified competition. The policy challenge is to cushion the transitional effects and to contain the political pressure for protectionism.

Some of the likely changes in trade patterns that we have identified should not be problematic for Western Europe: notably the expansion of energy exports from East to West. At the other end of the spectrum, the expansion of agricultural exports will impose severe strains on the CAP. In between these extremes, it is harder to be certain about the nature of the impact of trade expansion. Our analysis suggests that there are not strong grounds to fear that Southern European producers of goods like clothing and footwear will be particularly hard hit by competition from Eastern Europe. In the long run much expansion of trade and production will take place in more skill-intensive goods, but that is not to say that there will be no adjustment problems in the West. On the contrary, especially if the reforming economies succeed in attracting multinational investment to take advantage of their endowments of skilled labour, we might see some striking expansions in 'sensitive' industries like consumer electronics and food processing; as well as a slowing of multinationals' investment in Western Europe. And unskilled labour in Western Europe will face a new source of competition.

This does not, however, seem to make a case for slowing down the microeconomic side of the European integration process. The intra-EC '1992' changes are a gradual process which will be spread over a decade or more, causing changes in economic growth and in the allocation of resources that are surely much smaller than the continuing changes associated with technical change, innovation and international trade. Successful reform in Eastern Europe and the Soviet Union could well have a larger aggregate impact on Western Europe than '1992', but the impact will be spread over an even longer period of years; so even together the two sets of effects are likely to be a modest and gradual addition to the changes that would have been happening in any event.

Financial services in Western Europe provide a concrete example. This is probably one of the sectors most affected by the deregulatory effects of 1992, and it may also be strongly affected by East European reform, which will generate demand for financial services from the West. Yet these two effects taken together will probably have much less impact on the pattern and level of employment in financial services in Western Europe than technological developments in information technology.

Furthermore, even the combination of two sets of gradual and partially predictable changes will give rise to much less severe adjustment problems than unpredictable shocks, such as those that emanate periodically from the world oil market.

Hence, far from East European reform providing an argument for slowing down West European integration, a good case can be made for the two processes being complementary. Close association with the Community, and eventual full membership, may provide the institutional framework needed both to make the reform process credible and to guard it from protectionist pressures in Western Europe. The geographical widening of the '1992' process across a European

Economic Space that includes Eastern Europe may be essential to the success of economic reform.

Notes

1. Finland and Norway's exports to Eastern Europe are highly capital intensive, which reduces the share of human-capital-intensive goods.
2. *Amex Bank Review*, Vol. 17, No. 4; and World Development Indicators, *World Development Report*, Oxford University Press for the World Bank, New York, 1989.
3. Information provided by Dr Somnath Sen of the University of Birmingham and by the Stockholm International Peace Research Institute.
4. This section draws heavily on Radetzki (1990).
5. 'The structure of GDR industry and problems of transition and integration in the Common Market', Chapter 5 of *The Impact of German Unification on the European Community*, European Parliament working document no. 1, European Communities publications office, 1990, p. 45.
6. *Rocznik Statystyczny Przemyslu*, 1988, Table 4, p. 5.
7. These effects contrast sharply with the effects in the East itself. The integration of Poland's economy, with a population of 37 million, into the Community would imply a major shift outwards in the competition-scale trade-off for Poland.
8. It should be borne in mind, however, that the Community has non-tariff barriers (NTBs) as well as tariffs, and that these have been particularly deployed against developing countries.
9. Yugoslavia has a form of associate membership of EFTA.
10. Finland is a special case since it has not imposed quantitative import restrictions. Trade has been restricted instead by the Soviet Union's fluctuating availability of convertible currency arising from the changing relationship between exports of Soviet energy to Finland and world market prices.
11. The present associate members of the Community are Cyprus, Malta and Turkey.

2 The East, the Deutschmark and EMU

David Begg

Jean-Pierre Danthine

Francesco Giavazzi

Charles Wyplosz

In this chapter we discuss the macroeconomic significance for the European Community of the process of reform in Eastern Europe. We first seek to identify the key characteristics of East European countries from a macroeconomic perspective. We then describe a plausible scenario for the Eastern-bloc economies and assess the implications for the West. In particular, we consider whether these developments should affect the pace of economic integration within the European Community.

2.1 The Stylized Facts

Because of the immense uncertainties in the Soviet Union, our discussion focuses exclusively on the countries of Eastern Europe: Bulgaria, Czechoslovakia, East Germany, Hungary, Poland and Romania. At the outset of the recent reforms the East European countries were characterized by six main features that we detail and document in turn.

2.1.1 Degree of openness

Although East European countries have not been entirely autarkic, they have not been very open; primarily they have traded among themselves and with the USSR. As Table 2.1 shows, their exports towards the OECD area represent less than 10 per cent of their Net Material Product (NMP), with the exceptions of Hungary and East Germany. Moreover, the third column of Table 2.1 certainly overstates the degree of openness of East European countries in international comparisons. NMP is an aggregate that excludes services, with the exception of distribution and much of transportation. The conventional wisdom is that the figures for NMP underestimate GDP by about 30%, and adjusting these shares correspondingly would therefore indicate that Eastern Europe's integration with the OECD is even lower. (The comparable numbers from France, Italy and West Germany lie between 15 and 25%.) Viewed from the West, trade with the East is even less significant. Eastern Europe's share of West European foreign trade amounts to 3% of extra-EC imports (or 6%

Table 2.1: Percentage Shares of Exports from East European Countries. 1987.

	Region ^a		Exports to OECD as % of NMP ^b
	CMEA	OECD	
Bulgaria	79.7	7.4	4.0
Czechoslovakia	73.4	18.1	3.9
GDR	61.9	31.2	11.8
Hungary	50.0	39.0	19.7
Poland	41.2	45.1	8.9
Romania	42.5	36.7	9.4

Sources: (a) Keating and Hoffman (1990).

(b) Calculated from the shares in column (2) and 1986 ratios of exports to NMP, taken from United Nations, *National Accounts and Statistical Yearbook*, and IMF, *International Financial Statistics*.

including imports from the Soviet Union). This suggests that there are large potential gains from international trade that are left unexploited (see Chapter 1 above).

2.1.2 Income per capita

We know that per capita income is low in Eastern Europe, but 'political accounting' and distorted prices and exchange rates make it difficult to tell by how much. Table 2.2 documents the extent of disagreement that surrounds the attempts to estimate East European per capita income levels. Estimates vary markedly – by a multiple of 5 in the case of East Germany. Column (1), for example, is the result of adding 30% to the estimates of NMP obtained from national sources to allow for services excluded from NMP but included in GDP, and of adjusting to dollars at an exchange rate of three-quarters of the black market rate. According to some estimates, each of these countries' per capita GDP is lower than (or at most equal to) that of Portugal. Under the more optimistic assessments, Czechoslovakia and East Germany may approach or even exceed the per capita income level of Spain. (It is hard to believe, however, that per capita income in Bulgaria is as high as in Spain, as suggested by the CIA data.)

2.1.3 Human capital

These low income levels could be the result of a poorly-qualified labour force, a deficient capital stock, an inefficient economic organization or any combination of these. It is generally believed that the two latter factors bear a larger share of responsibility than the former, and this belief is confirmed by the discussion of human capital statistics in Section 1.1 above. The main cause of Eastern Europe's

Table 2.2: Various Estimates of GDP per Capita. 1988 US Dollars.

	Based on national data ^a	CIA ^b	ECE ^c	World Bank ^d	PlanEcon ^e	Paribas ^f	CSFB ^g
Bulgaria		7510	4244		5633		1500
Czecho- slovakia	2610	10140	7591		7603	6500	3500
GDR	2610	12480	12608		9361	8500	4000
Hungary	2830	8660	2621	2460	6491	3000	3000
Poland	640	7270	1818	1860	5453		2000
Romania	470	5490	3072		4117		1000
Comparators:							
Spain				7740			
Greece				4800			
Portugal				3650			
United Kingdom				12810			
West Germany				18480			

Sources: (a) Net Material Product from national data (Keating and Hoffman, 1990) multiplied by 1.3 and translated into dollars at an exchange rate of three-quarters of the black market rate.

(b) Central Intelligence Agency, *Handbook of Economic Statistics*, 1989, US Government Printing Office, Washington DC, table on 'Preferred Estimates of GDP Per-Capita'.

(c) UNECE Secretariat, Common Data Base.

(d) *World Development Report*, Oxford University Press for the World Bank, New York, 1990. Data refer to 1988.

(e) 'Western Investor's Guide To Eastern Europe and Soviet Union', PlanEcon Reports, Volume V, Nos 42-43, November 1989.

(f) 'Paribas Conjuncture', No. 1, January 1990.

(g) Credit Suisse First Boston. These are Keating and Hoffman's preferred estimates. They are based on the data in column (1).

Note: This table is reproduced from Keating and Hoffman (1990) with the exceptions of columns (1) and (4).

poor economic performance is probably not to be found in its endowment of human capital. This does not rule out the possibility that certain skills will lose their value, new ones will be in shortage, and new attitudes towards work and risk-taking will be required as the form of economic organization changes. To be specific, there is no way to tell how quickly the East European labour force will be able to adapt to a market economy – and in particular to acquire the necessary managerial skills. Nevertheless, the binding constraint to growth is likely to be found in the level and adequacy of *physical* capital, rather than *human* capital.

Table 2.3: Percentage Shares of Investment in GDP or NMP. 1989.

Eastern Europe	% of NMP	Western Europe	% of GDP
Bulgaria	34.4	Belgium	19.5
Czechoslovakia	32.5	France	20.5
GDR	27.0	Germany	20.7
Hungary	28.7	Italy	20.1
Poland	26.0	UK	18.8
Romania	29.3	Spain	20.6

Sources: UNECE Secretariat, Common Data Base, and *European Economy*, November 1989.

2.1.4 Physical capital

It is frequently asserted that investment ratios in Eastern Europe are substantially higher than those observed in Western Europe (see Table 2.3). As in the case of trade shares, however, these investment ratios are computed as fractions of NMP, not GDP, and raising NMP by 30% to obtain a comparable figure yields investment ratios of the same order of magnitude as those of the Western economies. Even so, these ratios do not square with casual evidence and widespread reporting of antiquated industrial machinery. The data available – for example on the average age of the capital stock – cannot be compared directly with similar information for Western countries. They suggest, however, that whatever the initial level, the situation has been deteriorating rapidly in the last two decades. As documented in Table 2.4, the average age of the capital stock has risen in all countries. An increasing proportion of investment has been devoted to expanding the capital stock, rather than to modernizing the existing plants; replacement investment – i.e. the substitution of new machinery for old – has been cut; and the retirement of old equipment has slowed down. On the other hand new projects seem to take longer and longer to complete, confirming the reports of large amount of wastage in the investment process.¹ Finally the technology content of the capital goods imported from the West is low in all countries, with the exception of Romania, where the absolute value of such imports is in any case small.

Investment expenditures therefore differ from increments in the capital stock for three reasons: the equipment is not brought into operation (i.e. it remains as inventories); investment projects are never completed; and the newly installed machines are sometimes older equipment purchased from the West.

2.1.5 Prices

It is well known that the East European economies have experienced heavily distorted prices. Table 2.5 shows that price support has been as high as 32% for total sales of goods and services in Poland and 84% for food items in East Germany. The

**Table 2.4: The East European Industrial Capital Stock. 1975-88.
Percentage Breakdown.**

	Bulgaria	Czecho- slovakia	GDR	Hungary	Poland	Rom- ania
Fixed assets under five years old:						
1975	52	31	30	41	42	51
1980	49	32	30	41	35	53
1985	46	25	26	28	17	3
1988	45	23	24	24	19	33
Replacement investment: ^a						
1976-80	51	44	31	45	29	47
1981-5	49	20	32	12	-71	32
1986-8	29 ^b	11	21	9 ^b	30	5 ^b
Retirement of fixed assets:						
1971-7	3.9	1.5	0.8	2.0	1.0	1.3
1978-80	3.5	1.4	1.7	2.5	0.3	3.3
1981-5	3.4	0.2	1.0	1.7	0.7	0.5
1986-8	3.2	0.1	0.6	0.4	1.0	-0.4
Percentage of capital goods imports from OECD classified high or very-high R&D-intensive:						
1981-5	29	31	27	28	29	47
1986-7	36	33	28	29	29	55

Notes: (a) Defined as $(1-(\Delta K/K)/I)\%$. Small numbers indicate that only a small fraction of investment is devoted to the substitution of old with new machinery. A negative number indicates that plants previously scrapped have been recommissioned.
(b) 1986-7.

Sources: UNECE, *Economic Survey of Europe in 1989-90*, and *Economic Bulletin for Europe*, Vol. 41, 1989.

corresponding figures are significantly lower in Hungary. Viewed from another angle, public subsidies to consumers and firms may have absorbed as much as 28% of total public expenditures in Hungary (1986), 42.3% in Poland (1987) and 38.6% in East Germany (1988).²

While the more important consequences of distortions such as these may materialize in the medium run, as distorted incentives slow down growth, there are also a number of more directly visible, static consequences in the form of accumulated inventories of unsold products, pervasive instances of rationed demand and (as a result of the latter) accumulated (forced) savings. In the next section we show that accumulated savings are a factor to reckon with in the analysis of the economic adjustments to the reforms. Their importance is apparent from the

Table 2.5: Subsidies Financed from the Central Budget as Percentages of Consumer Spending net of Subsidies. 1988.

	Czechoslovakia	GDR	Hungary	Poland
As % of retail sales of goods: (of which food):	13.2 (22.9)	30.6 (83.7)	- (9-12)	- (38.8)
As % of retail sales of goods and paid services:	-	-	6.5	31.9

Source: UNECE, *Economic Survey of Europe in 1989-90*, table 3.3.10, p. 125.

data in Table 2.6, which shows that savings deposits range between 20% and 60% of the respective countries' NMPs.

2.1.6 External debt

Finally, the external debt of East European countries is substantial (see Table 2.7), and in principle this should severely limit the ability of these economies to borrow for consumption purposes in the near future, as it has done in the recent past. This is more true for Bulgaria, Hungary and Poland than for Romania and Czechoslovakia, while East Germany stands as a special case since the significant part of its debt that is due to West Germany will be absorbed in the process of reunification.

2.1.7 Summing up

The stylized facts discussed above suggest that the decisive factor in developments in Eastern Europe will be investment. In Section 2.2 we attempt to estimate how much capital is needed and how this investment will be financed. Some of it will come from the international organizations, whose lending to Eastern Europe will mostly be linked to specific projects, but the bulk of the funds will have to come from the private sector in the West, attracted by potentially very high returns. Working against that, however, are a number of factors. First the Western private sector's assessment of the success – and durability – of the shift to a market economy may be less favourable than that of the international organizations. Second, because the process of price liberalization may require a temporary surge in inflation, the early period of liberalization will take place under the threat of an eventual stabilization. Thus, foreign investors may anticipate low returns and possibly acute social tensions over the first few years. The resulting uncertainty is likely to offset on a present value basis a large fraction of the expected high returns, especially as

Table 2.6: East European Savings Deposits as Percentages of NMP in National Currencies. 1986.

Bulgaria	60.3
Czechoslovakia	41.3
GDR	54.6
Hungary	31.4 ^a
Poland	19.5 ^b
Romania	17.8 ^c

Notes: (a) Without convertible currency deposits, including bonds and other types of new saving facilities.

(b) Excluding current accounts.

(c) Percentage of GDP.

Sources: UNECE, *Economic Survey of Europe in 1989-90*; United Nations, *National Accounts*.

Table 2.7: East European Net Debt. 1989.

	Billion Dollars	Dollars per Capita	% Ratio of Net Debt to Exports
Bulgaria	9.3	1,000	321
Czechoslovakia	5.8	367	51
GDR ^a	11.0	650	115
Hungary	19.5	1,840	342
Poland	36.5	963	456
Romania	-0.1	-4	-1

Note: (a) Including intra-German debt.

Source: UNECE, *Economic Survey of Europe in 1989-90*.

it is front-loaded. Third, the continued uncertainty surrounding the issue of property rights represents an extremely serious impediment to foreign investment.

We do not discuss these issues here, but we leave them to the reader as a reminder of the possibility that the whole process will stall in the face of political resistance, fuelled by the inevitable sacrifices required from the people in the first years of the reforms. Even barring that extreme possibility, it is still possible that economic reforms and growth will be too slow to have any discernible impact on the West for a long time.

2.2 The Macroeconomics of Eastern Europe

The more optimistic and interesting possibility – and the only one that might have significant economic implications for the West – is that the extraordinarily rapid political evolution that Eastern Europe has experienced since late 1989 will be followed by a reasonably speedy implementation of economic and social reforms leading to significant changes in economic performance. In this section we sketch what we believe are the key elements of this process from the viewpoint of Western Europe.

We have chosen a time-horizon of ten years. If all goes well this may be long enough to permit the reconstruction of much of Eastern Europe's capital stock. We thus postulate that political uncertainties will progressively disappear and that the economic reforms will be successful in establishing an efficient social and economic organization. We do not describe what these reforms should be, how they should be sequenced, or what the appropriate emphasis on macro versus micro reforms should be. Our interest is elsewhere: assuming they are successful in setting the stage for growth, what set of events can we expect next?

We first describe how the reconstruction of Eastern Europe's capital stock could come about, and what the consequences might be for the flows of goods and capital between the East and the West of Europe. We will then be in a position to discuss, in Sections 2.3 and 2.4, the impact these flows will have on the European Community.

2.2.1 Rebuilding Eastern Europe's capital stock

Under the conditions we postulate, it is reasonable to think that the productivity of physical capital will shoot up as a very limited amount of capital is initially combined with a well-trained labour force. The return to investment will be high and exceed by a margin the return on comparable opportunities in the West. There will therefore be a process of recapitalization, brought about by new investments and technological transfers: this process will be the main force reactivating economic growth.

Assuming as a bench-mark that our favourable scenario will enable the East European countries to double their GDP in ten years from a base level that we take to be the estimates of column (7) in Table 2.2 – equivalent to assuming that East Germany, the richest of the East European countries, has a GDP similar to Portugal's now, and which will grow to today's level for Spain in ten years from now – this implies an average annual growth rate of income per capita of about 7%. This is the same growth rate achieved by West Germany in the 1950s, and by South Korea since the mid-1960s. Of course the rate of success of these economies will vary, and they may not all double their GDP in that time-interval. East Germany is likely to outperform relative to this bench-mark, however, so that overall our estimate appears plausible, perhaps even conservative.

Under our hypothesis the joint GDP of the six East European countries considered in Table 2.2 would jump from the current 1988 estimate of \$265 billion to \$530 billion or (with a constant population) \$4,700 per capita. If we now assume that the existing capital stock of Eastern Europe is worthless, and we use a capital-output ratio of 2.5 (the US capital-output ratio is about 2.6), the value of the physical capital needed to achieve that level of output would be \$1,350 billion. We thus arrive at a rough estimate of \$135 billion per year as the average annual investment flow that can be expected into the East European countries over the next ten years. We consider this to be the lower bound for the value of the investment flows needed over the decade.³

Siebert (1990) performs a similar exercise for East Germany, assuming a capital-output ratio of 2.1 for industry and 4.6 for the whole economy (the latter is higher since it includes infrastructure). We thus computed an upper bound for the investment needs of Eastern Europe using a value of 4 for the capital-output ratio, and assuming that initial conditions are much better – i.e. that income per capita is 36% higher than indicated in column (7) of Table 2.2. This is like saying that per capita income in East Germany is to grow to \$10,000 (at 1988 prices) in ten years. (By comparison per capita income in the United Kingdom in 1988 was \$12,810.) Under this hypothesis the average annual investment flow over the next ten years jumps from \$135 to \$291 billion per year. For future reference, the annual flow to Eastern Europe excluding East Germany is \$103–226 billion, or 185–407 billion DM.

This investment is by no means insignificant. The lower bound (\$135 billion per year) represents about five times the annual investment of Belgium, 56% of West German or 15% of EC total annual investment. The upper bound represents one-third of the Community's annual investment. The numbers remain significant even when compared with the annual investment of the OECD: from 5% to 10%.⁴

The size of sustainable investment flows is also related to the evolution of private consumption. East Europeans now have prolonged experience of rationing and of forced savings, and they have therefore accumulated a lot of frustrations which they will want to relieve as the prospects of rising income improve. At the outset of the reforms, the uncertainty that surrounds them may induce some precautionary savings (as we are witnessing in East Germany); but under our optimistic scenario this uncertainty will gradually vanish, and so will the precautionary savings. We thus expect private savings in East European countries to be very low and possibly negative for the years to come. The issue then is how both investment and consumption needs can be financed.

One would hope to be able to rely on the accumulated savings documented in Table 2.6. We argue, however, that past savings in local currencies have no real value. Consequently the financing needs identified above will have to be satisfied from abroad. We further believe that capital from the West will be almost entirely directed towards investment, taking the forms of direct private investments or of government loans for public infrastructure. We see no *economic* justification for public aid to consumption; but it may provide *political* support for the reforms by

minimizing the hardships of the transition and discouraging migration. We discuss these points further below.

2.2.2 Can accumulated savings be used to finance investment and consumption demands?

As documented in Table 2.6, in many East European countries there are substantial private sector holdings of very liquid assets, typically in the form of savings deposits. (The figures would be even larger if they included holdings of cash.) This is sometimes referred to as the 'monetary overhang', and it may be given one of two interpretations. First, with rudimentary financial markets, money balances may represent desired savings. If so, liberalization may lead to saving in a wider range of assets. The extent to which households save or dissave will then depend on standard considerations of intertemporal choice. On the one hand, anticipation of rising future incomes should lead to a desire to overspend current income if borrowing is feasible; on the other hand, if consumers foresee that the transition to a market economy is fraught with uncertainties, personal savings may actually increase in the short run.

There is, however, a second – more plausible – interpretation that arises from the distortions of a planned economy, and which may be illustrated by the following stylized model. Suppose for simplicity that labour is the only input to production, that all output is consumed, and that wages and prices are fixed exogenously without reference to market clearing. If prices are set much lower than wages – and there is ample evidence that such economies have repressed inflation by failing to raise administered prices – the wage bill exceeds the value of output available for consumption. Output is rationed and 'forced savings', i.e. the excess of the wage bill over the value of output, show up in the undesired accumulation of money balances.

What happens when markets are liberalized? In a closed economy with no external borrowing opportunities, households will anticipate real income growth and will therefore wish to spend as much as they can. Their immediate spending power is current labour income plus the real value of accumulated savings. Hence, for any wage rate, the equilibrium price level must rise to the point at which it deflates the sum of current wages and accumulated nominal savings to a real value compatible with current real output. In a frictionless world there is a substantial one-off jump in the price level to wipe out the monetary overhang. In the following period, with the overhang eliminated, the price level falls back a bit, though it still exceeds the artificially low level that obtained during the repressed inflation. From then on, the real wage bill simply equals the real output available for consumption.

Two conclusions may be drawn. First, the monetary overhang is effectively useless to consumers. Until the supply side expands, prices simply adjust to wipe out as much of the overhang as is necessary to restore consumption plans to the level of current real output; without the overhang prices would simply have risen less.

Second, once we abandon the unrealistic assumption of frictionless market clearing, an inevitable element of persistence arises. There is thus the very real danger that the initial price blip becomes a continuing, and perhaps spiralling, inflation. This danger is already great enough – since the elimination of output rationing necessarily requires a jump in prices – without compounding the difficulty by inducing an additional price rise to offset the attempt to liquidate forced savings. Since aggregate consumption is limited, and past savings effectively worthless, it may well be preferable simply to tax them away, thereby minimizing the initial upward blip in the price level.⁵ Another option is to absorb the 'monetary overhang' through the sale of public assets to domestic residents. Though obviously attractive, this option runs up against the difficulties of privatizing the economy quickly enough to avoid a prolonged spell of uncertainty.⁶

Now consider a more complete model with both savings and investment, in which the liberalization also applies to external trade and payments. Suppose, as a first approximation, that external borrowing and capital inflows are available to finance investment (for which there is collateral) but not consumption. If all accumulated domestic savings are in domestic currency, they are again effectively worthless for enhancing immediate consumption. Since external borrowing for consumption is impossible, external trade in consumer goods must balance. Attempts to liquidate accumulated domestic savings through imports of consumer goods basically lead to a downward blip in the exchange rate until import demand is restored to its former level. This time it is the international value of accumulated savings that is wiped out.

This argument does not apply, however, when the earlier hyperinflation has already led to substantial holdings of money in foreign currency, whose international value cannot be wiped out by exchange rate blips. Although this caveat may be significant for Poland, its quantitative significance for Eastern Europe as a whole is small, and it therefore does not affect our conclusion that the 'monetary overhang' is of little relevance for our analysis.

Thus the whole of investment will have to be financed from foreign savings. We now proceed further and assume that the finance for these investments will indeed be forthcoming from the West. This is the first channel by which the development of Eastern Europe will affect Western economies. The capital inflows corresponding to these investments will alter the balance-of-payments constraint discussed above by allowing the existence of current account deficits. This configuration – current account deficits financed by capital inflows – will characterize the first stage of development of Eastern Europe, i.e. it will prevail as long as the return to investment in the East exceeds world levels. (This of course does not preclude some profit repatriation even in this first phase.)

As we argued above, these current account deficits will correspond to imports of consumption goods from the West only to a small extent, since most of the capital inflows are likely to take the form of direct investments that will be linked with proportionate imports of capital goods. This additional demand can be expected to

have a significant impact on the capital goods industry of Western economies. This is the second effect on the West of the opening of Eastern Europe, which we shall analyse in the next section. Of course labour will be needed to put this capital in place, and that proportion of capital inflows used for paying wages will be available to finance imports of consumer goods, but this will correspond to only a small fraction of the investment expenditure.

In addition foreign investors will have to acquire or rent local assets (buildings and land mostly). Who will benefit? If these assets are state-owned, the revenues will accrue to the state and should be used to finance the infrastructure investments that will complement investments by the private sector. To a large extent the revenues will then return to the West in the form of extra demand for capital goods. We have however alluded to the fact that one promising way to absorb past savings would be for governments to sell public assets to private individuals. This transfer of wealth to households would further alleviate the impact of the vanishing value of their savings in terms of both domestic and foreign goods.⁷ If assets are transferred to the private sector, consumers will enjoy extra revenues from renting or selling them to foreign investors, which they will be able to spend on imported consumption goods. They could also use their assets as collateral to secure loans to finance consumption (directly or indirectly) from Western financial institutions. Again the corresponding capital inflows will permit further imports of consumer goods.

In summary the bulk of the demand for imports by Eastern Europe will fall on the capital goods sector, with imports of consumer goods being limited to the sum of the counterpart of the wage bill in foreign investment projects and the proceeds of selling assets and goods to the West. For the West, the East European reforms can thus be equated with a sizeable increase in the demand for investment funds, a large proportion of which will materialize as an increase in the demand for the output of capital goods producers. This will be the starting-point of our analysis in Section 2.3 below.

Could this clear-cut diagnosis be blurred by political considerations? We end this section by observing that indeed it is conceivable that the limitations in the ability to import consumption goods from the West may become politically unsustainable thus threatening the process of reform.

Our point is that we see no general justification on purely economic grounds for official lending that is not strictly project-based. Private banks will agree to make consumption loans to individual consumers wherever it is economically justified. Borrowers' ability to put up collateral might be a decisive factor.

Any additional intervention must be based on the recognition of a specific market failure. One possibility is associated with the consequences of increased labour mobility from the East to the West. For the West the cost of large-scale migration is partly private (more competition in the labour and housing markets) and partly public (congestion, provision of public services). The externalities associated with migration may provide a strong argument for subsidizing consumption in the East.

As we shall discuss in Section 2.3, this problem is at the core of German Economic and Monetary Unification.

Any inflow of public money will at the same time soften the balance-of-payments constraint and permit more imports of consumption goods. While admitting this possibility we do not think the numbers involved could in any significant way modify the fundamental asymmetry that we have uncovered: the flow of goods from the West to the East will be disproportionately composed of capital goods.

2.3 The Implications for the West

In the previous section we set out the stylized facts for Eastern Europe and discussed how these economies may evolve if all goes well.⁸ We drew two principal conclusions. First, there is little prospect of Eastern Europe running a substantial trade deficit in consumer goods. The West will not be prepared to finance it. Thus, consumption in Eastern Europe will increase only as domestic output increases.

Second, there will be a substantial demand for investment goods in Eastern Europe. Traditionally these economies have devoted high shares of GDP to physical investment, though the return on that investment has been low. Eastern Europe will meet some of its investment needs itself – for example we envisage substantial employment in construction – but it will rely on imports of capital goods to a large extent. These we judge the West will be prepared to finance, through official lending (the EBRD, EIB, World Bank and the IMF), but also to a significant extent through private foreign investment and joint ventures. In the previous section, we estimated that total imports of capital goods from the West might range from \$1,350 to \$2,910 billion over the next ten years, which on an annual basis represents about 15-30% of the total investment of the European Community or 5-10% of the total for the OECD.

Hence, in assessing the implications of Eastern Europe for the West, we must focus our attention on this new demand for Western capital goods. Will production increase, or will investment merely be diverted from elsewhere in the OECD? Will higher demand for capital goods bid up their price or will it be reflected instead in higher world interest rates? In this section we argue that these two questions are related, and that their answer depends crucially on the extent to which world savings can be increased.

Higher interest rates might help to increase private savings. Alternatively, higher public sector savings – more taxes – might augment total savings. We will argue that neither channel is likely to be significant. Hence in this section we are led to argue that higher investment demand, initiated by favourable investment opportunities in Eastern Europe, will not elicit a significant increase in OECD savings. In consequence, world interest rates must rise to maintain OECD investment in line with savings. At an unchanged level of investment it is interest rates, not capital goods prices, that must take most of the strain. The primary effect will therefore not

be an increase in world investment, but rather a diversion of world investment towards Eastern Europe.

Thus far, we have supposed that the OECD can be treated as an integrated economy. But capital goods are not perfect substitutes, and geography matters for two reasons. First, geography – which we take as a shorthand for physical proximity, shared markets, culture, language and so on – seems to matter in itself. Second, with different endowments, different countries have a comparative advantage in different commodities, including capital goods. We argue that both comparative advantage and geography imply that different countries will have differential access to the capital goods opportunities in Eastern Europe. Specifically, we argue that West Germany will enjoy a disproportionately high share of the benefits, even before taking account of the unification with East Germany.

Our report therefore proceeds in two stages. In this section we examine the adjustment process set in motion because West Germany is particularly affected by Eastern Europe. From a welfare viewpoint, we suggest how adjustment should ideally be handled and contrast this with what is likely to take place. We highlight the problems that may emerge for other EC countries, and we relate these to the likely timetable of negotiations about steps towards monetary union. In Section 2.4 we then identify the additional effects arising from German unification and examine whether these will offset or exacerbate the strains we identify in this section.

2.3.1 The savings/investment balance within the OECD

The yearly investment flows to Eastern Europe that we computed in Section 2.2.1 represent a net addition of 5-10% of OECD investment. Is it plausible that the OECD could meet this demand?

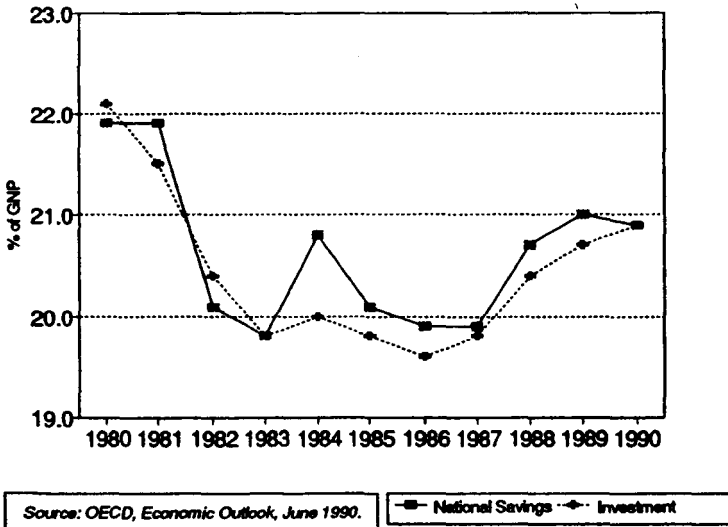
We suppose first that the OECD can not run substantial trade imbalances *vis-à-vis* the rest of the world, so that total savings and total investment within the OECD must balance. (Figure 2.1 shows that this is not an unreasonable assumption.) We now consider two polar cases.

First, we assume that OECD savings are perfectly elastic at the going real interest rate. Hence the increase in profitable investment opportunities in Eastern Europe raises the rate of return on capital at the existing price of capital goods. The price of capital goods rises, and this higher (relative) price provides the incentive to OECD capital goods producers to increase supply. OECD output of capital goods rises. There is also a diversion of demand. With higher capital goods prices, some projects elsewhere in the OECD are no longer viable. So the net increase in OECD investment is smaller than the capital goods imports into Eastern Europe.

Who loses out? Not capital goods producers: demand for their products is booming world-wide. Rather it is the firms in the other industries who can no longer afford to install expensive machinery. Southern Europe is worried that the anticipated investment boom associated with 1992 may fizzle out, but this is only half true. Southern Europe will certainly invest less than it would have done in the

Figure 2.1: National Savings and Investment

% of GNP for the G7 Countries. 1980-90.



absence of developments in Eastern Europe; but the arguments that made Southern Europe a better investment bet than say the UK or the US still obtain. In short, it is in Northern Europe, the US and Japan that absolute investment reductions, relative to the levels of the last few years, may be experienced. And these may be only partially compensated by higher investment in the capital goods sector itself.

In the second polar case, instead of assuming that savings can be increased indefinitely at the going interest rate, we suppose that savings are completely unresponsive to interest rates. With a given flow of OECD savings, total OECD investment must remain fixed. Since the supply of capital goods depends upon their price, capital goods prices are also unaltered. Hence the effect of higher investment demand by Eastern Europe is simply to raise world interest rates to the point at which enough projects are displaced elsewhere to leave total investment unaltered. In this case, we have a pure diversion effect. Our previous conclusion about who loses is now even more likely, for now OECD capital goods producers are no better off than before.

The actual outcome is likely to lie somewhere between the two polar cases described above. Thus the key issue is by how much world savings will increase. We begin by discussing private savings.

The outcome will be close to our first polar case if small increases in interest rates increase private savings a lot, which is not plausible. Households can either lend and borrow freely at the going interest rate, or they cannot. In the latter case we say

that they are liquidity constrained: facing high borrowing rates or explicit rationing, households' consumption is closely determined by their current income. Since they do not resort to financial markets, interest rates are irrelevant.

Alternatively, households are not liquidity constrained. Lending and borrowing allows households to divorce current consumption from current income. Rather they plan a lifetime consumption profile which they can afford out of lifetime income. Higher interest rates increase the pay-off to saving and delaying consumption, but they also reduce the need to put so much aside for later life. In principle these two effects can cancel out, and our reading of the vast empirical literature on interest rates and saving suggests that this is roughly what happens.

So we conclude that higher interest rates will not elicit any significant increase in OECD private savings. Even if they do so, another force is at work. Assuming, as we have, that Eastern Europe is a profitable investment opportunity, the OECD will be richer in the future than it would otherwise have been. To the extent rational people want to spend today against this future income, this will actually be a force for reducing savings rates today.

Can public sector savings provide a substitute for private savings? This question must be answered in two stages. First, will governments raise taxes to increase public sector savings? Second, even if they do, will this succeed in raising total savings?

With respect to the first question, we do not generally expect the answer to be yes. This is in part a political judgement. Given the widespread emphasis on tax cutting in search of supply-side benefits, we do not anticipate a wholesale reversal of this policy. Two caveats should be entered, however. First, if the Bush Administration undertakes a major reversal in US fiscal policy, by raising taxes or cutting subsidies to bring the budget deficit under control, this will raise public sector net savings in the largest OECD economy, and the numbers could be substantial. Second, there is a possibility of massive tax-financed transfers from West to East Germany, which we consider explicitly in Section 2.4 below.

For this reason, it is important to proceed to the second part of the argument. Even if public sector savings increase in the OECD, will this increase total OECD savings? We believe the answer is yes, but it does need to be qualified in one important regard. In an influential line of research, Professor Robert Barro of Harvard has shown that, in an ideal and somewhat special world, changes in government saving will be offset one-for-one by changes in private saving. People care only about total saving and undo what the government does. Two strong assumptions are necessary for this argument to work. People today must care, directly or indirectly, about all future generations; and individuals must have the same access to borrowing opportunities as the government. Neither is wholly plausible. Indeed, were both assumptions to hold, tax policy would be emasculated as an instrument of demand management and would work chiefly through incentives and supply-side effects. Whilst we reject the extreme version of the argument, we concede the importance of Barro's insight. Thus we believe that some of any increase in public savings will be offset by reductions in private savings.

Table 2.8: Percentage Shares of World Net Exports of Engineering Goods by Country. 1970 and 1987.

	1970	1987
Japan	7.1	16.2
West Germany	11.3	9.0
Italy	2.1	0.8
France	0.9	-0.1
Switzerland	0.4	-0.3
UK	4.7	-0.9
United States	6.3	-8.5

Source: UNECE, *Economic Survey of Europe in 1989-90*.

Piecing these arguments together, we are led to the conclusion that total OECD savings are unlikely to increase substantially as a result of events in Eastern Europe, whose principal effect will therefore be to increase interest rates. As a result OECD investment will not substantially increase in total: rather it will be diverted to Eastern Europe from elsewhere.

2.3.2 Asymmetries within the OECD

Next we recognize that it is only a simplification to treat the OECD as an integrated economy. OECD countries will not share equally in the opportunities of Eastern Europe. We now explore the reasons for asymmetry and their consequences.

As discussed in Chapter 1 above, international trade is of two kinds. The first is based on comparative advantage: countries specialize in commodities that they make relatively cheaply. Comparative advantage in turn is explained by factor endowments: labour abundant countries have a comparative advantage in labour-intensive goods, countries with high levels of physical and human capital have a comparative advantage in capital-intensive and higher-tech goods. The second type of trade is two-way trade in the same commodity grouping. Scale economies and consumer preference for diversity make it appropriate for different countries to concentrate on different brands within the same commodity grouping.

Capital goods are centre stage in our analysis. So the first question to ask is which countries appear to have a comparative advantage in capital goods production. Table 2.8 displays the key facts about world trade in engineering goods in general. Engineering goods are all investment goods plus consumer goods such as televisions and washing machines. These patterns tell us something about countries' comparative advantage in relatively high-technology products. Table 2.9 focuses on exports of machine tools, perhaps the most significant component of the capital goods that Eastern Europe will require. Table 2.10 shows indices of revealed

Table 2.9: Percentage Shares of World Exports of Machine Tools by Country. 1970 and 1987.

	1970	1987
West Germany	32.8	26.5
Japan	4.3	24.5
Switzerland	2.5	11.7
Italy	9.1	8.5
United States	14.5	5.4

Source: UNECE, *Economic Survey of Europe in 1989-90*.

Table 2.10: Indices of Comparative Advantage for Machine Tools. 1970 and 1987.

	1970	1987
Switzerland	3.40	4.20
Japan	0.40	1.61
West Germany	1.85	1.55
Italy	1.09	1.25
Spain	1.69	1.12
UK	1.40	0.63
United States	0.86	0.47
France	0.71	0.32

Source: UNECE, *Economic Survey of Europe in 1989-90*.

comparative advantage in machine tools. The index is the ratio of two numbers: the first is each country's machine tool exports as a percentage of its manufacturing exports; and the second is the same ratio for world trade as a whole. Thus when the index exceeds unity, the country has an above-average share of machine tools in its total manufacturing exports.

What do we learn from Tables 2.8-2.10? Table 2.8 shows the dominant position of Japan and West Germany in net exports of engineering goods. This provides a bench-mark of the countries with the skills and expertise likely to be of most relevance for developments in Eastern Europe. On the other hand, it provides only a partial picture. Because engineering goods also include some types of consumer goods – chiefly the consumer durables which Japan exports and countries such as the US import – Table 2.8 overstates Japanese comparative advantage in capital goods and understates it for countries like the United States.

Table 2.11: East European Imports from Germany as Percentage of Total Imports. 1925-38.

	1925	1930	1938
Bulgaria	21.0	23.2	54.8
Czechoslovakia	31.3	25.4	14.2
Hungary	15.0	21.2	30.3
Poland	30.1	27.0	18.4
Romania	16.7	25.1	28.0

Source: Drabek (1985), tables XXIII to XXVII.

Table 2.9 shows that Japan has not yet overtaken West German dominance of the machine tool industry. We notice that the United States plays a relatively small role, since it has a lower market share than Switzerland and Italy, and that countries such as France and the UK are still less important. Table 2.10 confirms this picture with data for a larger sample of countries. Relative to world averages, Switzerland's manufacturing exports are unusually concentrated on machine tools, but the importance of Japan, West Germany, and to a lesser extent Italy, is again confirmed. Countries like France and the UK are weak in the capital goods sector.

The message seems clear. If we simply look at indicators of export share or revealed comparative advantage, West Germany and Japan are best placed to supply any net increase in demand for investment goods. But since OECD output of capital goods will not substantially increase, this is not the whole story: we also need asymmetries in demand.

These may be based on transport costs and other physical barriers; or on regional affinities of language, culture and familiarity. And once geography matters, its importance is magnified by scale economies.⁹ Which country is best placed to meet the opportunity of Eastern Europe? There can be little doubt that it is West Germany. This is not only because of physical location. As noted in the Introduction, the integration of Eastern and Western Europe can be seen as a return to the trading patterns prevailing before the war. Although those trade patterns need not be reproduced, they offer the only available counterfactual. In the inter-war period the countries of Eastern Europe had close trade relations with Germany. In the 1930s, when the multilateral system of payments collapsed, shortages of liquidity had given rise to a trading system based on bilateral clearing agreements. As documented by Drabek (1985), Germany was particularly active in this respect, and took the lion's share of Eastern Europe's trade. Table 2.11 shows the evolution of German trade shares up until the war. The role of West German firms in supplying the markets of Eastern Europe, already prominent before the war, does not seem to have been affected by the post-war division of Europe. Table 2.12 shows that one-half of capital goods imports to Eastern Europe originate from West Germany.

Table 2.12: Percentage Breakdown of East European Imports of Capital Goods from OECD, by Country of Origin. 1980-87.

	1980	1981-85	1986-87
West Germany	41.0	43.0	50.0
United Kingdom	9.0	7.0	5.0
France	12.0	10.0	7.0
Italy	8.0	8.0	8.0
EFTA countries	15.0	16.0	15.0
Japan	5.0	8.0	6.0
United States	2.0	2.0	2.0

Source: UNECE, *Economic Bulletin for Europe*, vol. 41, 1989, table 4.2, p. 79.

To sum up the argument so far, there are important asymmetries in both the supply of and the demand for capital goods. The impact effect of Eastern Europe's demand for capital goods will be skewed heavily towards West Germany, which also happens to be the country best equipped to supply such goods. Because of the partial segmentation of the capital goods industry between West Germany, the rest of Western Europe, the US and Japan, we must qualify our earlier conclusion regarding the required adjustment of interest rates and capital goods prices. The demand for capital goods in West Germany will rise substantially; and an increase in West German capital goods prices is therefore inevitable – a fact that has not escaped the German stock exchange where equity prices in such firms have outperformed the market.

Unless there is a major increase in OECD savings and investment – which we think unlikely – this sharp increase in West German output of capital goods means that output in other countries will fall. Whilst Italy and Switzerland may be able to exploit some of the advantage in both location and specialization in capital goods, the same cannot be said of the United States, France or the UK. Such countries will thus experience both an increase in interest rates and a fall in the prices of their capital goods. The latter will not be sufficient to restore investment incentives in these countries; and we have already seen that investment demand must be diverted away from them.

2.3.3 A closer look at West Germany

So far we have identified the impact effect of Eastern Europe upon the West. Next we need to think about what the induced effects will be, and indeed what they should be. First, we focus on West Germany where the largest effect will be felt. Then we consider how other EC member states are likely to respond.

Table 2.13: Indicators of Spare Capacity in West Germany and Comparators. 1987-9.

	1987	1988	1989
Annual % growth of real fixed capital formation:			
West Germany	2.2	5.9	7.9
France	3.7	7.8	5.4
Italy	6.8	4.9	5.4
United States	2.6	5.8	1.8
Unemployed as % of total labour force:			
West Germany	6.2	6.1	5.6
Western Europe	9.9	9.5	9.0
Annual average % capacity utilization in manufacturing (West Germany):			
	-	85.0	88.1

Source: UNECE, *Economic Survey of Europe in 1989-90*.

Does West Germany have the spare capacity to meet the surge in the export demand for its capital goods? Table 2.13 provides some data on the capital goods sector itself and on the economy as a whole, which do not suggest that West Germany has significant spare capacity. Unemployment has been falling, and 1989 saw investment growing more rapidly than in other EC countries. Direct evidence on capacity utilization in manufacturing also points to the possibility of serious bottlenecks. (These data on capacity utilization should be compared with the previous *peak* figures of 88.1% and 86.0% in 1973-4 and 1979-80 respectively.) Thus, in the absence of other changes, additional export demand will cause the West German economy to overheat and will fuel inflation.

We have argued that the opening of Eastern Europe will lead to an increase in world interest rates. Will this be sufficient to keep aggregate demand in West Germany in line with supply? Certainly not, for two reasons. First, because of the asymmetry whereby West Germany attracts a disproportionate share of demand from the East, whatever rise in interest rate is required to balance savings and investment within the OECD will still imply a substantial increase in the demand for West German capital goods. Second, as major investors in the East, itself a profitable investment opportunity, West Germans will be better off than before. Rationally, they will wish to increase their consumption immediately. So, in the absence of a change in government policy, consumer demand should also increase, thereby compounding the inflation problem. (Direct evidence on consumers' confidence, reported in Table 2.14, suggests, especially when compared with the EC average, that West German consumers have perceived the events of 1989 as good news for them.)

Table 2.14: Index of Consumers' Confidence for West Germany and EC(12). 1983-90.

	West Germany	EC(12)
1983	-15	-15
1984	-10	-14
1985	-8	-13
1986	3	-5
1987	-1	-5
1988	-4	-5
1989:1	-2	-5
1989:2	1	-6
1989:3	3	-6
1989:4	4	-7
1990:1	4	-6
1990:2	4	-7

Source: *European Economy*, Supplement B, August 1990.

Before we think about what will happen, let's think about what should happen. West Germans are indeed better off, and ideally they should be allowed to increase their consumption immediately. Output of the capital goods industries also needs to rise. Government spending could be slashed, but that is not appropriate in an economy which is richer than before. So the answer is obvious. West Germans need to import a lot of consumer goods to sustain their desired consumption level – all the more so, since domestic production of consumer goods will have been crowded out by the boom in the capital goods sector. The market mechanism that brings this about at full capacity is a substantial appreciation of the real exchange rate.

There are two ways to achieve this: a nominal appreciation or domestic inflation. We take it for granted that the former is preferable. So we reach the conclusion that, if we could ignore the special features of German unification, our first clear policy recommendation is that it is desirable that the Deutschmark should appreciate substantially. Whether this recommendation survives the extra issues implied by German unification is the subject of Section 2.4.

This, of course, raises the question of against which currencies the DM should appreciate. Suppose first that all EMS countries appreciate together against the rest of the world. What would be the consequences? First, capital goods producers in the US and Japan would now get a larger slice of the action, since their exchange rates would be more competitive. At the global level, US exports would increase, but it seems likely that Japan would be the major beneficiary in both capital and consumer goods.

What about within Europe? A joint appreciation would tend to cause a slow-down elsewhere in Europe. Whatever combination of higher interest rates and

exchange rates is necessary to prevent inflation in Germany, which faces the strongest increase in its demand, will more than offset higher demand elsewhere in Europe. Facing a genuine external and asymmetric shock, this seems the textbook case where a realignment within the EMS is appropriate. The DM should therefore ideally appreciate against its EMS partners.

Essentially, the problem is very simple. West Germany will get a larger share of the action in the East than it can cope with. Hence it must take what it can comfortably digest, and pass on the rest. The policy issue is: to whom? A DM realignment within Europe has the consequence of passing more of the action on to Germany's European partners and less to third parties, notably Japan and the United States.

Our first conclusion was that the nominal DM should appreciate. Since we have argued that an equivalent rise in other Community currencies would imply a recession elsewhere in Europe, our second conclusion is that, in such circumstances, it would be inappropriate for other EMS countries fully to match the DM appreciation. In short, the most straightforward policy response to the largest asymmetric shock since the foundation of the EMS would be a realignment of the member currencies.

Is this bad news for Economic and Monetary Union (EMU)? We stress again that in this section we are addressing the counterfactual question of how Western Europe would be affected in the absence of German unification. To arrive at policy conclusions, and to discuss the relation of a DM realignment and the timetable for steps towards EMU, we must superimpose the special features of German unification. This is the purpose of the next section. Before doing so, however, it is worth elaborating the other policy options within our counterfactual. That we do in the remainder of this section.

2.3.4 Alternative policy responses

Assuming away German unification, we argued that West Germans should immediately increase consumption, since advantageous investment opportunities make them better off than before, and should appreciate the nominal DM to prevent higher consumption and capital goods production from overheating their economy. We now suppose they don't do so.

One possibility would be to increase taxes in West Germany to choke off consumption and prevent inflation. To be successful this would have to engineer a substantial reallocation: if investment and capital goods exports are to rise a lot, consumption has to be severely curtailed. We leave to one side issues such as whether this would be politically feasible or compatible with world-wide trends towards tax reform and the pursuit of supply-side economics. Rather our concern is merely to draw out some simple macroeconomic consequences.

With current consumption curtailed, West German imports would be considerably lower than under what we have called the 'best' response. Within the

decade or so which is the time-horizon for our analysis, the stock of West German foreign assets would therefore be substantially higher under this alternative policy response. This in turn means one of two things. First, West Germans may persist with lower consumption levels, in which case accumulated external earnings eventually raise the equilibrium value of the real DM. In this case the taxation strategy has simply postponed the need for a change in the real DM, but it has not buried the issue for ever. In policy terms, the question is whether to grasp the nettle before or after monetary union. In the latter case the (perhaps substantial) adjustment required will have to be accomplished through German inflation, and disinflation elsewhere – perhaps not the most auspicious honeymoon for marital bliss in Europe.

Alternatively, as their wealth increases, sooner or later the demand by West Germans for higher consumption may become irresistible. Relative to the consumption smoothing along the best response, West Germans have exchanged lower consumption today for higher consumption later – not a very sensible strategy, and one unlikely to hold much political appeal.

Suppose therefore that substantial German tax increases do not materialize, and that no realignment is immediately sought. What would happen next? It would all depend on the Bundesbank's actions and on market anticipations of those actions. First, interest rates might remain unchanged in Germany and throughout the EMS, perhaps because of the overriding priority of exchange rate stability within the EMS. In that event speculators, understanding the need for an appreciation of the real EMS exchange rate against the dollar and the yen, could bid the external EMS exchange rate sharply upwards, thereby achieving the average adjustment required against the rest of the world. Within the EMS, the remaining bilateral real adjustments would then be accomplished not by realignment but by differential inflation. Even at the higher common exchange rate, West Germany would enjoy a boom, excess demand, and inflation; its partners a slump and lower inflation. Our basic contention is that this would be attractive neither to policy-makers in West Germany nor to those in the other EMS member states. The third possibility is that, foreseeing the above, the Bundesbank would have to raise interest rates in West Germany. If other member states follow suit, we then have collective exchange rate overshooting to an eventual higher level. For the EMS as a whole, this sharp real appreciation may pass on 'too much' of the East European demand to the United States and Japan. Outside West Germany it is likely to exacerbate the danger of recession: other member states are forced to absorb the harsh external discipline which Germany needs to keep the lid on inflation.

Contemplation of these alternative scenarios merely strengthens our belief in the wisdom of the best response strategy we identified above. At this stage, therefore, we see major difficulties in the path of those hoping to proceed to EMU quickly and without further realignment which might make such a time-scale problematic. For that reason, German unification assumes special importance. Will it compound the difficulties, or provide offsetting forces that will alleviate the need for the policies described in this section?

2.4 The Additional Effects of German Unification

In the previous section we noted that changes in Eastern Europe will have special effects on West Germany quite independently of the unique status of East Germany. The purpose of this section is to analyse the effects of German Economic and Monetary Unification (GEMU). GEMU began with monetary union on 1 July 1990 and was completed by the formal integration of East and West Germany on 3 October 1990. Whereas in the previous section we retained the terminology East and West Germany to refer to separate countries in our counterfactual assessment of the impact of Eastern Europe, we now adopt the terms Eastern Germany and Western Germany to refer to the corresponding regions within the united Germany. Our principal conclusion in this section will be that, in itself, GEMU implies a *lower* real value of the Deutschmark than would have obtained in the analysis of the previous section.¹⁰

It is important to understand the basis of comparison and the kernel of the argument before proceeding to its details. A united Germany will be richer than the weighted average of East and West Germany prior to liberalization in Eastern Europe. But that is the wrong comparison. A key channel through which developments in the East will affect Western Europe is through the asymmetric pressure exerted on the DM relative to other EMS currencies. Thus the relevant comparison is between West Germany prior to unification (whose characteristics formerly influenced the value of the DM) and the new united Germany (whose characteristics will now influence the DM). Our central point is that living standards in a united Germany will be lower than they would have been in West Germany in the counterfactual of the previous section. Hence the impact of GEMU *relative to the counterfactual* is to reduce the equilibrium value of the real DM. That argument we spell out in this section. We then identify the total impact of Eastern Europe by adding together the counterfactual of the previous section and the opposite effect of GEMU relative to the counterfactual.

Before isolating the most important aspect of GEMU, we can quickly dispose of some minor points. First, in Eastern Germany, as elsewhere in Eastern Europe there was a monetary overhang, estimated at 160 billion Ostmarks, three-quarters of which became eligible for conversion into DM at the 1:1 rate agreed on 1 July 1990.¹¹ The remainder could be converted at 2 Ostmarks per DM. Fears that this overhang would in itself lead to inflation seem largely unfounded: the Bundesbank will simply mop up any excess liquidity in a united Germany. Second, the prospects for macroeconomic stabilization are more optimistic than elsewhere in Eastern Europe: not only will Eastern Germany be subject to a monetary authority which already has a credibility other Central Banks must earn from scratch, but there will also be much greater immediate integration of product markets. Producers in Eastern Germany will thus be subject to greater competition than those in Czechoslovakia, Hungary

and Poland, and this will place a ceiling on the ensuing price rises. Third, investment prospects may be enhanced by rapid access of Eastern German exports to West European markets, not merely in manufacturing but also in agriculture, which other Eastern European producers can hope to achieve only over a much longer period.

We have argued that foreign investment will be the crucial engine of growth throughout Eastern Europe. But uncertainties about property rights and the legal framework may act as a serious impediment to foreign investment in the short run. Thus another consequence of GEMU, the immediate adoption by Eastern Germany of West German law, is likely to clear the way for such investment more quickly.¹²

A related issue concerns national ownership. Except for investment in infrastructure, which may receive official assistance, for example from the new European Bank for Reconstruction and Development (EBRD), most foreign investment will be financed by the private sector. Ideally much of it will be direct foreign investment: in one step foreign companies can provide equipment, know-how and the distribution network. Many East Europeans may baulk at the prospect of their businesses being owned by foreigners. While Eastern Germans are already expressing similar fears of control by Western Germans, there is one key difference: as full citizens of a united Germany, Eastern Germans will receive substantial transfers from Western Germany through unemployment benefit, pensions, and investment subsidies. This will inevitably mute objections to outside ownership, thus providing Western German investors with a marked advantage over foreigners in the exploitation of investment opportunities in Eastern Germany.

Notwithstanding the importance of these points, the aspect of overriding significance is the degree of labour mobility between Eastern and Western Germany. Prior to unification, it was the knowledge that West Germany could hardly turn away the influx from East Germany that made credible the threat of massive migration; correspondingly, the timetable for unification had to be accelerated to prevent such migration.

After GEMU, the effects of labour mobility continue to dominate the analysis. The continuing threat of migration means that living standards in the East cannot be too far below those in the West, even though productivity differences initially will be large. Western Germans are prepared to finance substantial transfers to the East, both as the price of unification and in order to prevent substantial migration, whose social and economic costs – for example, congestion, higher house prices, lower wages – would be concentrated in particular parts of Western Germany.

Thus for Western Germans, who as paymasters will continue to call the shots, the central issue is the speed and extent of convergence of living standards; and the extent of the transfers required to bring this about. After the initial euphoria, Western Germans are becoming increasingly concerned about the scale of these transfers. Hence it is reasonable to ask what minimum scale of transfers is necessary to prevent substantial migration. We answer that question and then examine the macroeconomic impact of GEMU.

2.4.1 The extent of convergence

Many authors, such as Siebert (1990) and Fitoussi and Phelps (1990), adopt the bench-mark that there will be complete catch-up: within 10-15 years Eastern and Western Germany will be identical in structure, productivity and living standards. The implicit assumption is that integration of product and labour markets will be complete. But is this reasonable?

Within countries such as the US, the UK, Italy or even West Germany itself, there have been substantial and persistent productivity and income differentials across regions. Factor mobility is far from perfect. Moving is expensive. Moreover, within a country a common tax and social security system redistributes from the rich to the poor, and hence dampens the effect of differentials in pre-tax income on living standards.

Even if productivity and labour incomes are equated across regions, labour income (the part of income that *can* be affected by relocation) is only about 70% of total income. Eastern Germans moving west will not magically acquire the human, physical or financial assets with which Western Germans are already endowed. Nor are future pension rights affected. These arguments imply that even when labour income is equated differences in living standards can persist.

We briefly describe the case of Italy's Mezzogiorno in Appendix 1 below. That experience suggests that wage differentials explain only a fraction of the flow of migrants from the South to the North of Italy. The state of the labour market in the North and the *level* of per capita income in the South are important determinants of the decision to migrate. This latter finding suggests that an improvement in living standards in Eastern Germany *relative to their level prior to the unification* may reduce the incentive to migrate even in the presence of a persistent wage differential.

To sum up, we accept that mobility within Germany will be significantly larger than elsewhere in Eastern Europe; that is the essence of GEMU. But mobility will not be perfect. Hence we think it optimistic to suppose full catch-up within our ten-year horizon. In fact we think a more plausible estimate is that by the end of ten years, Eastern Germany will have attained a productivity level equivalent to about 80% of that prevailing in West Germany immediately before GEMU.

Given the share of labour income in GDP, and assuming that initial emergency transfers from west to east have been phased out after ten years, this suggests that living standards in Eastern Germany might then be about 60% of those in Western Germany. Given our remarks above about impediments to migration, we judge this compatible with the objective of preventing substantial migration.

In the counterfactual of Section 2.2.1, where East Germany was treated on a par with other countries in Eastern Europe, we effectively assumed that after ten years productivity in East Germany had reached the level currently enjoyed by a country like Spain. Because GEMU will enhance investment in Eastern Germany, our revised assumption about Eastern German output after ten years means that we have to increase our previous estimate of the total capital requirement in Eastern Europe

over the period. Depending on the capital-output ratio, which we discussed in Section 2.2.1, we raise our estimate of the range of the total capital requirement of Eastern Europe from \$135-290 billion to \$170-320 billion. The increase is significant in itself, and assumes even greater importance when we recognize that much of the extra investment arising from GEMU will be heavily skewed towards the capital goods produced in Western Germany.

So far we have focused on the impact over a decade. But there is one aspect of the transition that we cannot ignore because it affects the position even in the long run. Overnight, a sharp increase in living standards in Eastern Germany is required to prevent migration westwards, and living standards must rise before productivity improves. The issue is through which mechanism the transfer from Western Germany is achieved. One possibility is that wages in Eastern Germany rise rapidly and far in advance of productivity. The transfer is then achieved through unemployment benefit and initial losses on investment by Western Germans in Eastern Germany. This of course would slow down investment and postpone catch-up. A preferable channel is through subsidies to wages, consumption or investment in Eastern Germany financed out of Western German taxes. It is better for employment, investment and output in Eastern Germany.

Whatever the channel, the transfer is inescapable if migration is to be prevented: Eastern Germans must be allowed to overspend their incomes in the early years of the transition. Western Germans can bear the burden immediately through contemporaneous and corresponding tax increases which are gradually reduced as catch-up occurs and the need for transfers falls off. But for the usual reasons of intertemporal smoothing, it is preferable to spread the tax burden over time. Hence the optimal Western German response is to compute the permanent income equivalent of the transfers and raise tax rates immediately and permanently by this amount. In the early years, the tax revenue thus raised will be insufficient to cover the transfers when they are at their largest, so the excess of transfers over tax revenue should be financed by external borrowing. As catch-up occurs and transfers diminish, tax revenue (throughout Germany) expands and the excess of tax revenue over transfers pays back the foreign borrowing with interest. For Germany as a whole, the bottom line is that, once the transfers are completed, the country is poorer by the present value of the transfers, which represents the excess of consumption over output and corresponding reduction in wealth to finance it.

This insight serves as the basis for a more complete assessment of the intertemporal macroeconomics of GEMU to which we now turn.

2.4.2 The intertemporal macroeconomics of Germany: the long run

We have argued that labour mobility will be less than perfect and that differences in productivity and living standards will persist even in the medium run. Initially, however, we ignore these complications and adopt a very simple framework which

allows us to get a ballpark estimate of the largest possible effect of GEMU. We proceed in two steps. First, we look at the long-run effects once the two Germanies have become indistinguishable. Then we identify the short-run effect in the period immediately after GEMU occurs. Details of our calculations are presented in Appendix 2.

Our ballpark estimate rests on the following extreme assumptions. First, we ignore trend growth. Rather we assume complete catch-up by Eastern Germany to existing Western German levels of productivity and capital, which we assume takes ten years. This focuses attention on the process of catch-up and its consequences. Second, we assume that consumption is constant over time and based only on permanent income, and that living standards in Eastern and Western Germany are immediately equated after GEMU. Complete consumption smoothing is feasible only if agents can borrow against future income. Although this appears unrealistic for Eastern Germans, Western Germans enjoy an excellent credit rating and can finance temporary transfers to Eastern Germans which enables complete consumption smoothing. The rationale for consumption parity between East and West is perfect labour mobility.

GEMU unambiguously benefits Eastern Germans. The cost of GEMU is the reduction in living standards it imposes on Western Germans. Our extreme assumptions overstate the cost of GEMU to Western Germans. First, the latter in practice will not fully share their wealth with Eastern Germans: with less-than-perfect labour mobility this will not be necessary. Second, in consequence, during the transition Eastern Germans will not overspend their income and import as much as the above assumptions would imply; so German foreign assets will be depleted by a smaller amount. Finally, catch-up will take more than ten years. A slower pace of net investment will reduce its cost: depleting foreign assets more slowly means they earn more interest income in the mean time.

Suppose, prior to GEMU, West Germany begins in long-run equilibrium at internal and external balance. Permanent income is net domestic output (GDP minus replacement investment) plus income on foreign assets. Internal balance means that net output equals consumption plus net exports; external balance means that net exports and foreign interest earnings sum to zero.

After GEMU, all Germans immediately consume the same amount for ever more. This new consumption level is given by the new level of permanent income. Relative to initial per capita levels in West Germany, permanent income is reduced by two effects and enhanced by a third effect.

The first effect arises because average wealth in the new Germany is lower than in the old West Germany. Net foreign assets (6,500 DM per capita in West Germany) are diluted when the population increases. Nor do Eastern Germans begin with the physical capital of the West. The build-up of capital can be viewed as the temporary diversion of domestic German production from consumer goods to capital goods. Consumption smoothing means the difference is made good by temporary imports of consumer goods. Foreign assets have to be liquidated to pay for these transitional

imports. In the long run, foreign interest income declines, and this effect has an immediate impact on the assessment of permanent income and consumption.

The second effect is a cost arising from the fact that in Eastern Germany initial consumption exceeds initial output. We assume that per capita output in the East is initially 1/5 of that in the West. To enjoy the same consumption level, Eastern Germans receive transfers which gradually decline as catch-up occurs. Since Western Germany is at full capacity, these transfers must finance additional imports. Again German foreign assets must be liquidated to meet this temporary burden until output and productivity catch up.

The third effect is a possible benefit of GEMU. We have noted that the rate of return in Eastern Europe (including Eastern Germany) is potentially much larger than in the West during the transition; but once catch-up occurs, returns will fall back to normal levels. Apart from the transitional effect, there is no increase in permanent income when Germans invest in Eastern Europe. In fact, since Western Germans are at full capacity, there is no first-order effect even of additional export demand. Exports increase, domestic production is diverted to capital goods, and imports of consumer goods are correspondingly increased, leaving consumption and welfare unaltered.¹³

Hence in evaluating both Eastern Europe and GEMU, we present two sets of estimates. The first assumes for simplicity that the rate of return is identical to world levels, the second that there are excess returns during the transition. For investment in the rest of Eastern Europe, the permanent income effect on Germany is simply the interest on the cumulated excess income and assets during the transition. For GEMU, within which profit income repatriated from east to west is simply a transfer payment, we assume that a higher initial rate of return on Western German investments in Eastern Germany corresponds to faster output catch-up for a given investment flow, and hence to a reduction in the need for transfers and imports. Whereas in the rest of Eastern Europe, a higher return affects only the profit share repatriated to Germany, within GEMU the whole of the additional output accrues to Germans; so the latter is more significant. Even so, in the following estimates, this possible benefit is insufficient to outweigh the two costs of GEMU identified above.

Once transition is complete, by assumption per capita net *output* has returned to the level initially prevailing in West Germany. Foreign assets, the permanent income to which they give rise, and hence consumption, have fallen because of the transitional cost of GEMU. Since the decline in permanent income and total consumption then entirely reflects a decline in external income, long-run equilibrium is restored at the pre-GEMU real exchange rate only if the marginal propensity to import is unity. Since the marginal propensity to import is clearly smaller than unity, in the long run Germany will suffer a current account deterioration at given real exchange rates. Thus eventually the real value of the DM must *fall*.

Table 2.15 presents our calibration of these effects. All costs are measured per capita in present values (see Appendix 2 for details). The first two lines show the

**Table 2.15: The Long-run Effect of GEMU and Eastern Europe (EE).
DM per Capita in a United Germany.**

	Investments Yielding Going World Rate		Investments Yielding Temporary Excess Returns	
	GEMU	EE	GEMU	EE
Dilution of foreign assets	-1,300		-1,300	
Cost of Eastern German net investment	-18,500		-18,500	
Present value of transfers to Eastern Germany	-35,500		-23,500	
Addition to foreign assets from temporary extra returns in Eastern Europe				2,450-5,380
Change in Western German wealth	-54,800		-36,420 to 40,350	
Change in Western German consumption	-2,740		-(1,820 to 2,020)	

Note: We are assuming that the real interest rate is 5% and that temporary extra returns on investment average 5% above world rates for ten years.

effect of dilution of foreign assets and the cost of building up capital in the East. The third line shows the cost of transfers. When returns in the East are higher than world levels during the transition, we compute the effect on lower transfers within Germany in the third column and the effect of higher wealth from investments elsewhere in Eastern Europe in the fourth line. Hence we deduce the change in wealth, and the change in permanent income and consumption in the final line.

The message from Table 2.15 is clear. Because supernormal returns in Eastern Europe last only a finite time before being competed away, they have a relatively small impact on German wealth and permanent income. They cannot come close to paying the immediate costs of GEMU arising from (i) transfers and excess consumption in Eastern Germany, (ii) the cost of installing new capital, and (iii) the dilution of existing foreign assets when they are shared between a larger population. In the long run, Germany must suffer a reduction in living standards relative to initial West German levels.

It is important to understand the long-run cost of GEMU, but our principal concern is the impact on the integration of Western Europe; in the context of steps towards EMU this means the effect on the DM. Table 2.15 sends another clear message. Since per capita output eventually returns to its initial level in West

**Table 2.16: The Short-run Effect of GEMU and Eastern Europe.
DM per Capita in a United Germany. First Year.**

Net output	
Western Germany	31,400
Eastern Germany	7,400
United Germany	26,600
Net output relative to West Germany	-4,800
Aggregate demand relative to West Germany	
Consumption	-1,820 to -2,740
Net investment in Eastern Germany	+640
Change in domestic spending	-1,180 to -2,100
Required change in net exports	-2,700 to -3,620
Change in exports from:	
Dilution of initial West German levels	-2,400
Additional capital goods to rest of EE	+1,185 to +2,600
Total change in net exports	-1,215 to +200
Required change in imports	+1,485 to +3,820

Note: Prior to GEMU gross output in West Germany is 36,900 DM, and net output 31,400 DM. In treating the East German capital stock as worthless, we also dispense with the need for replacement investment. Hence we take initial net output in East Germany to be 7,400 DM, or 1/5 the level of West German gross output.

Germany, the entire reduction in permanent income corresponds to a reduction in income from external assets. Since the marginal propensity to import is less than unity, in the long run the DM must fall to restore current account balance. Initially, per capita West German foreign assets were 6,500 DM. Table 2.15 implies each German eventually has net foreign debts of between 30,000 and 48,300 DM. In the long run, servicing this debt requires an increase in German competitiveness and a fall in the real value of the DM.

This conclusion runs against much current analysis of GEMU. First, we emphasize that we have so far focused on the long run. Many others look only at short-run effects, to which we turn in Section 2.4.3 below. Second, our conclusion rests on the fact that, in the long run, the costs of GEMU outweigh the benefits to Germany of the rest of Eastern Europe.¹⁴

2.4.3 The intertemporal macroeconomics of Germany: the short run

How does the short run differ from the long run? Chiefly in two respects. First, per capita output is initially much lower than in Western Germany because Eastern Germany's productivity is so low. Table 2.16 shows that in consequence German per capita output is 4,800 DM lower than that in West Germany. Unless there is a corresponding reduction in per capita demand, there will be substantial excess demand in Germany. But demand does change, for the following reasons.

First, since consumption is smoothed over time, we know already from Table 2.15 that consumption is about 1,820-2,740 DM below its initial Western German level. Second, net investment in Eastern Germany *adds* about 640 DM per German to aggregate demand. Hence, if Western Germany begins without spare capacity, the trade balance must deteriorate by 2,700-3,620 DM to prevent excess domestic demand.

What happens to per capita exports? There are two effects. First, if Eastern Germany initially has no exports, original West German per capita exports are diluted by 1/5 as the population increases. Second, if Germany receives half the orders for capital goods elsewhere in Eastern Europe, our previous estimates imply that this generates new exports of 1,185-2,600 DM per German. Thus, permanent income and consumption *fall* by at least 1,820 DM, but imports must *increase* by at least 1,485 DM to keep aggregate demand in line with aggregate supply. We draw two conclusions from Table 2.16.

First, early in the transition the German current account must rapidly deteriorate; very roughly, by 200-300 billion DM in the aggregate, as against the actual surplus of about 100 billion DM in West Germany in 1989. Even additional export orders to the rest of Eastern Europe fall a long way short of the additional imports required to finance immediate consumption catch-up in Eastern Germany and to make good the temporary diversion of domestic capacity to the provision of net investment for Eastern Germany.

Second, at a given real exchange rate, there would be massive excess demand in Germany, and spiralling inflation. Income or wealth effects cannot effect the required adjustment: substitution effects are also required. German inflation is the last-resort adjustment mechanism: it engineers a real DM appreciation in the short run, thereby switching desired expenditure from domestic goods to imports, restoring internal balance.

Of course, it is implausible and undesirable that this inevitable short-run effect is achieved through inflation. It would be vastly preferable to achieve the same result through a nominal appreciation of the DM.

2.4.4 Implications for monetary union in Western Europe

The calculations of Table 2.15 place an upper bound on the cost of GEMU. The actual cost will be lower. Catch-up will not be attained within ten years, and a slower pace of investment will reduce its present value. Equivalently, Germans will not have to liquidate foreign assets so quickly. Second, we have argued strongly that full consumption parity between East and West will not be required to prevent mobility. Eventually it may be necessary to allow Eastern Germans only 60-70% of Western German levels – don't forget Western Germans will eventually derive much of the income from capital in Eastern Germany – and GEMU is likely to enjoy an initial honeymoon in which Eastern Germans have even lower consumption relative to their Western compatriots. Since transfers are the largest single element of the cost of GEMU, and since reducing their value in the early years makes the greatest difference to the present value of their cost, this effect potentially could be quite large.

There is no simple way to refine our previous estimate of the effect of GEMU: for example once West and East are different, we need to keep track of fiscal transfers and profit repatriation even in the long run. We suspect nevertheless that the cost of GEMU might be less than half that identified in Table 2.15. If so, then in terms of the long run, Table 2.15 makes clear that an eventual real DM depreciation would still be required. And in the short run, we must stress that the *smaller* the cost of GEMU, the lower will be the reduction in permanent income and consumption, the greater the initial excess demand, and the *greater* the need for a real DM appreciation. Thus, reducing the estimate of the cost of GEMU lowers the eventual depreciation but raises the initial appreciation; it does not diminish the need for substantial changes in German competitiveness over time.

Such changes must be the key to an intelligent solution to the problem Germany faces. Alternative policies cannot do the job well. Some tax increases are necessary for Western Germans to make transfers to the East; their effect is already in our analysis. But massive additional taxes, to prevent short-run overheating in Germany, prevent the consumption smoothing which is desirable.

Rather the solution lies in monetary policy. If the real DM must initially appreciate but then decline to a level lower than its initial position, real interest rates in Germany must exceed those elsewhere. As in Section 2.3 the question is whether other EMS countries should match the initial DM appreciation. For the reasons we gave in Section 2.3, we believe the answer should be no.

One final remark. The impact of all these changes is large and immediate; that is why we argue the appropriate response to this very unusual shock is a change in exchange rates. But the position will then unwind over a decade or more. Thus it is possible that market forces – booms and slumps and gradual changes in competitiveness at given nominal exchange rates – can achieve the subsequent

changes in real exchange rates required within Western Europe. But we hope to have demonstrated that the case for an immediate DM realignment is overwhelming.

2.5 Conclusions: Policy Challenges for the Community

After an initial breakthrough, when the EC Council of Ministers agreed to embark on the first stage of the Delors plan (Madrid, June 1989), the process leading to a European monetary union seems to have come to a standstill. The argument that economic convergence should come first, and monetary union later, is winning supporters. The opinions of the British Prime Minister, for a long time in a minority of one, are now referred to with sympathy in the documents of the Deutsche Bundesbank.

One view is that deadlocks are customary in difficult negotiations. (A few months before the launch of the EMS a similar impasse brought the negotiators to a temporary halt.) What is important is that the decision to liberalize European financial markets leaves no other choice than to move ahead on the road to monetary union. With free capital mobility the EMS may not survive a prolonged period of uncertainty: this is a risk Europeans cannot run, since a break-up of the EMS would undermine the *raison d'être* of the Community – the construction of a single market in goods and services.

Others argue instead that we may be in for a re-run of the early 1970s. The steps that so far have followed the publication of the Delors Report are reminiscent of the fate of the Werner Plan designed to create a European Monetary Union by the beginning of the 1980s. The plan was adopted by the EC Council of Ministers in March 1971, but discarded only two months later when it became clear that European exchange rate parities would not survive the collapse of the Bretton Woods System, and West Germany decided to let the Deutschmark float.

In this paper we have analysed the effects of the principal macroeconomic shock that has hit the European Community since the Delors Plan was launched: the unification of Germany and the process of reform in Eastern Europe. What is the effect of this shock on the Delors Plan? Can the Community give up the exchange rate instrument just when it faces the task of absorbing the economic consequences of 1989? The answer of the Deutsche Bundesbank is clearly negative:

... at a time when the German economy is being confronted with substantial transitional problems as a result of the intra-German unification process, and when developments in eastern Europe are still unclear in many respects, there is much to be said for preserving such room for manoeuvre and for adjustment as still exists in the field of domestic and external monetary policy and budgetary policy until such time as the economic situation in Germany as a whole and in the Community can be regarded as sufficiently

consolidated.' (Deutsche Bundesbank, 1990)

We share the Bundesbank's view that uncertainty is the prominent factor; but we believe one can do better. We have shown in this chapter that the main effects on Western Europe of the reunification of Germany and of the reform process in Eastern Europe can be quantified – albeit within wide ranges.

German economic and monetary unification and events in Eastern Europe have opposite effects in the long run. By 'long run' we mean when per capita output in the united Germany will have reached (approximately) the level of per capita output in West Germany prior to unification. GEMU will then entail a lower per capita demand for German goods – because it implies a fall in per capita wealth. On the other hand, the special position of German industry in the reconstruction of Eastern Europe will have increased German wealth, and thus the demand for German goods. Our estimates of the relative magnitudes of these two effects suggest that the GEMU effect will dominate and that the DM must eventually depreciate in the long run.

In the short run, however, the effects of GEMU and of Eastern Europe work in the same direction. What matters in the short run is the impact these developments will have on the demand for German goods: both GEMU and Eastern Europe imply a higher demand for German goods. Since the German economy is close to full capacity, the excess demand must be redirected abroad. This can happen either through a nominal appreciation, at given prices, or through higher inflation in Germany, at given exchange rates. We believe that the Bundesbank will attempt to keep domestic prices stable and let the exchange rate produce the required adjustment of relative prices. The economic consequences of 1989 therefore provide an early test of the ability of the Community to adjust to idiosyncratic shocks.

In the 'old' EMS a failure of the Bundesbank to convince its partners that a realignment was necessary to avoid inflation in Germany would have meant a blow to its reputation – the corner-stone of the whole system. The 'old' EMS is long forgotten, however: the last realignment took place almost four years ago, and in the mean time financial markets have learned to live with a system in which realignments no longer seem to be an option. A revaluation of the Deutschmark would signal that the 'old' EMS is back, i.e. that realignments are once again the normal way to respond to idiosyncratic shocks.

Some of the actors in the EMS play, probably the Bundesbank, would like to give the market such a signal. If this happened, it would no longer be necessary to speculate about the future of the Delors Plan: we could simply substitute the name 'Delors' for 'Werner' in the books that describe the economic history of Europe in the late 1960s and early 1970s.

Giovannini (1990) discusses the difficulties involved in the transition from a system of fixed-but-adjustable parities to irrevocably fixed exchange rates, and he concludes by suggesting that the commitment to abandon the exchange rate as a policy instrument must be made credible by:

'... a declaration by all governments embarking on stages I and II [of the Delors Plan] that any disruptions in the foreign exchange and money markets that would lead to parity realignments will be met instead by an acceleration of the final monetary reform. In other words ... to the creation of the common currency ahead of time. This "option to accelerate" the monetary union will give full credibility to bilateral parities in the transition.'

The only realignment that would not signal a return to the 'old' EMS is one that is accompanied by a monetary reform and by the adoption of a single currency. The redefinition of units that would then take place could allow for the pressures originating from Eastern Europe, thus providing a last opportunity to use the exchange rate to ease the cost of absorbing an external shock.

If European governments are prepared to trade the costs of surrendering the exchange rate as a policy instrument for the benefits of a common currency, the time to accelerate is now.

Notes

1. Direct evidence on construction backlogs and on hold-ups in the installation of new machinery and equipment is available only for the Soviet Union. The UNECE estimates, however, that 'policies to cut investment lead times have not resulted in any detectable success in most [East European] countries.'
2. Figures computed by the authors from national data sources: *Abbreviated Statistical Yearbook of Hungary*, 1986; *Country Profile*, 1989-90 (Poland); *Pocket Statistical Yearbook of the GDR*, 1989.
3. Our computation does not allow for depreciation. On the other hand it assumes that there is no capital stock to start with. The two errors work in opposite directions.
4. The upper bound of our estimate – one-third of the Community's annual investment expenditures – is close to the number reached by Fitoussi and Phelps (1990) using a different method.
5. The economics of monetary reforms and the experience of the 1940s are discussed in Dornbusch and Wolf (1990).
6. Blanchard and Layard (1990) discuss the merits of different ways of privatizing the economies of Eastern Europe.
7. This will not apply if Easterners are more 'rational' than Westerners, in which case Ricardian equivalence holds.
8. In this section we are addressing the counterfactual question of how Western Europe would be affected in the absence of German unification (we shall thus keep referring to the two parts of Germany as 'East' and 'West'.) The effects of German unification are discussed in Section 2.4.
9. Increasing returns and the economic role of 'geography' are discussed in Krugman (1990).
10. The pressure that GEMU may exert on the DM has been recognized by Gros and Steinherr (1990).
11. This estimate is due to Burda (1990).
12. The adoption of a legal code does not in itself solve ambiguities about property rights. These must then be contested in the courts; and there is already a rising number of applications by former East German residents for reclaim of their former property.
13. There is of course a second-order effect: the gains from trade, comparative advantage and specialization. However, Germany may not be a small country. After GEMU, when we assume all activities are eventually a multiple of original activities in West Germany, the German terms of trade will deteriorate if Germans face a downward-sloping world demand curve for their exports or

upward-sloping world supply curve for their imports. Our calculations make the simplifying assumption that the efficiency gain from specialization exactly offsets the potential terms of trade loss from German expansion, allowing us to ignore both these effects.

14. This result does not depend on the numbers chosen here. For an elaboration, see Wyplosz (1990).

Appendix 1

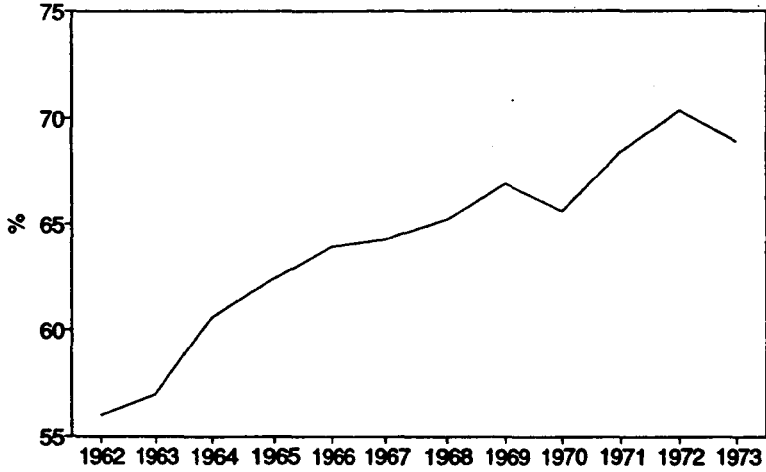
Migration: the Experience of the Italian Mezzogiorno

How important are wage differentials for inter-regional migration? Figure A1 shows the ratio of real employee compensations in the South of Italy relative to the North. Nominal compensations are deflated using the *local* price index. Thus the ratio accounts for changes in the *relative* cost of living between the South and North, but it cannot take account of their absolute *levels*. In other words we do not know what the relative compensation in 1962 (56%) meant in terms of purchasing power.

In Italy inter-regional wage differentials were abolished in 1968, when a new law declared that national labour contracts could not specify different wage levels in the North and in the South. In a few years the ratio between compensations in the South and North jumped from about 60% to 70%, although the flow of migrants did not stop for a few years (see Figure A2). It only started to fall at the time of the 1973-5 recession. This observation, and that of the 1964-6 recession, when migration virtually stopped, suggest that demand factors also play an important role in determining the flow of migrants.

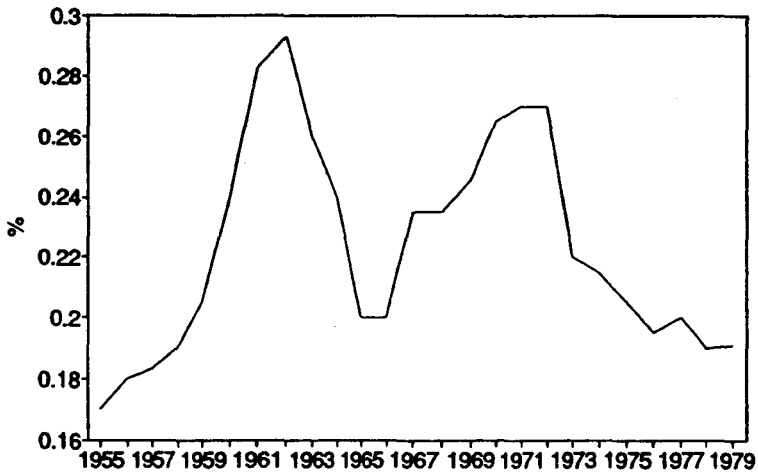
In an econometric estimate of the flow of migrants from the South to the North since the mid-1950s (undertaken by the Banca d'Italia), the two variables that turn out to be most significant are the unemployment rate in the North and the ratio of per capita consumption in the two regions. However, if the demand variable is excluded, the equation performs quite poorly. In a related piece of research, Faini (1989) also finds that relative wages (defined as in Figure A1) can explain only a fraction of the flow of migrants. His equation performs much better when the level of income per capita in the South is added as an explanatory variable – which suggests that for a given wage differential an improvement in per capita income in the South reduces the flow of migrants.

Figure A1: Real Employee Compensations in South of Italy as Percentages of those in North-Centre. 1962-73.



Source: Faini (1989)

Figure A2: Migration from South of Italy to North-Centre as Percentage of Population Resident in South. 1955-79.



Source: Banca d'Italia

Appendix 2

The Intertemporal Macroeconomics of Germany

Consider first the position in West Germany prior to GEMU. Let c denote per capita consumption, k per capita capital, and f per capita foreign assets earning a real interest rate of r . For simplicity, we assume West Germany begins in long-run equilibrium at internal and external balance. (This involves neglecting the substantial current account surplus, a point to which we return later; and, less importantly, means that all investment is replacement investment.) Let y denote per capita net output after subtracting off replacement investment.

Permanent income is domestic output plus interest earnings on foreign assets. Thus:

$$c = y(k) + rf \quad (1)$$

Let the population of West Germany be W and the population of East Germany be E . Let the subscript 1 denote variables after GEMU. Thus, immediately after GEMU, per capita consumption in both East and West becomes c_1 and remains at that level for ever. The 'excess consumption' (relative to output) in the East during the transition involves imports of consumer goods financed by running down foreign assets. If t is the present value of the transfers to each Eastern German, and hence the present value of each Eastern German's excess consumption, the total cost as viewed at the date of GEMU is Et .

But there is a second cost. It arises because of the need to make net investment in the East achieve catch-up. This temporarily depresses y , the net output available for consumption. This cost is $E\bar{k}$, the total amount of capital required to replicate the Western capital stock in the East.

We now put these two costs together to measure the consequent change in German foreign assets. The initial stock we take to be Wf , those of West Germany. Although East Germany begins with external debts, we neglect these, assuming implicitly that relief on repayments is rolled over indefinitely. Hence the external budget constraint implies:

$$(W + E)f_1 = Wf - E(k + t) = (W + E)f - E(k + t + f) \quad (2)$$

The left-hand side is the total external wealth of the united Germany, where f_1 is its per capita level. The middle part says that this must equal the original wealth Wf minus the cost of GEMU in terms of excess consumption and provision of new capital. The right-hand part simply rearranges the middle part. Comparing the left with the right we obtain:

$$f_1 - f = \frac{-E(k + t + f)}{E + W} \quad (3)$$

which shows how much the per capita external wealth of Western Germans is reduced. After GEMU per capita consumption throughout Germany is simply:

$$c_1 = y(k) + rf_1 \quad (4)$$

All we have done is suppose the East had immediate catch-up, and then adjust foreign assets to reflect the fact that catch-up is not immediate, and to reflect the cost of catch-up itself.

Once the transition is complete, annual net output is $y(k)$. Consumption has fallen because external income has fallen. Unless the marginal propensity to import is unity, restoration of external and internal balance requires a substitution effect achieved through a real DM depreciation. Hence to confirm that an eventual depreciation is required, it is sufficient to confirm that the transition reduces foreign assets, and hence permanent income and consumption.

In 1989 West German per capita income was 36,900 DM. Assume replacement investment is about 15% of GDP (with a capital-output ratio of 2.5, which corresponds to a depreciation rate of about 6% which seems plausible), so per capita net output y was 31,400 DM. Per capita net foreign assets f were about 6,500 DM. At a 5% real rate of return, foreign income was about 325 DM per head. Thus we take initial West German per capita consumption c to be 31,700 DM.

In West Germany the capital-output ratio is 2.1 in manufacturing and 4.6 for whole economy (Siebert, 1990). However, relative to its almost worthless manufacturing capital, Eastern Germany has a housing stock which is of greater use. Hence we assume an eventual capital requirement of 2.5 times the output in Eastern Germany after catch-up. This yields a capital requirement per Eastern German of $2.5 \times 36,900 = 92,200$ DM.

Take initial output in East Germany to be about 1/5 that in West Germany, which implies a per capita output of 7,400 DM. Conjecture that as a result of GEMU per capita consumption in Western Germany falls from 31,700 DM to 29,000 DM. Since Eastern Germans attain this immediately, the initial transfer is $29,000 - 7,400 = 21,600$ DM per person. Assume transfers fall linearly to zero over a ten-year catch-up period. Discounting at 5%, the present value of the transfer to each Eastern German is therefore 175,000 DM. There are 62 million West Germans and 16 million East Germans so $(E/(E + W))$ is almost exactly 1/5. Hence directly calibrating equation (3) we get:

$$f_1 - f = -(1/5)(92,000 + 175,000 + 6,500) = 54,800 \text{ DM} \quad (5)$$

as in Table 2.15.

With a real interest rate of 5% this implies a fall in external income for Western Germans of about 2,700 DM, which is the cost to them of GEMU in this extreme case, and validates the conjecture on which these calculations were based, namely that per capita consumption in the new Germany is 29,000 DM in comparison with the 31,400 DM enjoyed by West Germans prior to GEMU.

The second column of Table 2.15 makes the extreme assumption that German investments elsewhere in Eastern Europe earn no higher a return than elsewhere. If so, there is no change in permanent income from this effect, provided, as we have argued, Western Germany begins from full capacity.

The third column of Table 2.15 considers what happens if returns in Eastern Germany yield a higher pay-off during the transition. For a given flow of net investment, Eastern German output grows more quickly than is assumed in the first column of Table 2.15. Hence the net transfers required by Eastern Germans are lower. Since the return is highest at the outset, growth is especially rapid in the early years. Potentially this has an important effect on the present value of transfers. We judge that this effect might reduce the present value by up to one-third.

The final column of Table 2.15 considers the effect on German wealth of unusually good investment returns elsewhere in Eastern Europe during the transition. Eventually, the return must be driven down to world levels, but we suppose that for ten years the return is 5% higher than world levels. Consider an annual investment flow of 100 units per annum over this period. Thus the invested capital is 100 units in the first year and 200 in the second, rising to 1,000 in the tenth year. The extra income is 5 in the first year, 10 in the second, rising to 50 in the final year. Its undiscounted extra value is 275. Discounting at 5% reduces this to 207, or 2.07 times the annual investment flow over the period.

On p. 39 we identified total orders in the range 185-407 billion DM per year for ten years. We assume Germany gets half these orders. Thus per German this implies between 1,185 and 2,600 DM per annum. Hence the additional wealth is 2.07 times this flow, or between 2,450 and 5,380 DM per German. This is shown in the final column of Table 2.15.

Finally, we note that if 40% of consumer goods are imported, this would imply an initial level of West German imports of about 12,400 DM per person. When the population of Germany is enlarged by 20%, this dilutes per capita exports overnight by about 2,400 DM, the figure we use in evaluating the short-run impact of GEMU.

References

- Aslund, A. (1990), 'Systemic Change in Eastern Europe and East-West Trade', mimeo, Stockholm Institute of Soviet and East European Economics, Stockholm School of Economics, March.
- Berthet-Bondet, C. et al. (1988), 'The OECD compatible trade and production data base, 1970-1985', OECD working paper No. 60, November.
- Blanchard, O. J. and R. Layard (1990), 'Economic Change in Poland', CEPR Discussion Paper No. 432, June.
- Burda, M. (1990), 'The Consequences of German Monetary and Economic Union', CEPR Discussion Paper No. 449, September.
- Deutsche Bundesbank (1990), 'Statement of the Deutsche Bundesbank on the Establishment of an Economic and Monetary Union in Europe', Frankfurt-am-Main, September.
- Dornbusch, R. and H. Wolf (1990), 'Monetary Overhang and Reforms in the 1940s', CEPR Discussion Paper No. 464, October.
- Drabek, Z. (1985), 'Foreign Trade Performance' in Kaser and Radice (eds.).
- Faini, R. (1989), 'Regional Development and Economic Integration: The Case of Southern Italy', mimeo, Johns Hopkins University Center, Bologna.
- Fels, G. and H-P. Froehlich (1986), 'Germany and the world economy: a German view', *Economic Policy*, Vol. 2, No. 1, April.
- Fitoussi, J. P. and E. S. Phelps (1990), 'Global Effects of Eastern European Rebuilding and the Adequacy of Western Saving: An Issue for the 1990s', OFCE Discussion Paper 90-07, August.
- Geroski, P. and A. Jacquemin (1985), 'Industrial change, barriers to mobility, and European industrial policy', *Economic Policy*, Vol. 1, No. 1, November.
- Giovannini, A. (1990), 'The Transition to Monetary Union', CEPR Occasional Paper No. 2, May.
- Gros, D. and A. Steinherr (1990), 'Macroeconomic Management in the New Germany: Its Implications for the EMS and the EMU', mimeo, Centre for European Policy Studies, Brussels.
- Kaser, M. C. and E. A. Radice (1985), 'Economic Structure and Performance Between the Two Wars', Vol. 1 of *The Economic History of Eastern Europe 1919-75*, Oxford University Press, Oxford.
- Keating, G. and J. Hoffman (1990), 'The Remaking of Europe', Credit Suisse First Boston, February.
- Krugman, P. (1990), 'Increasing Returns and Economic Geography', NBER Working Paper No. 3275, March.

Lethbridge, E. (1985), 'National Income and Product', in Kaser and Radice (eds.).

Radetzki, M. (1990), 'Socialist transformation: how will it impact on energy exports from the centrally planned economies?', *Energy Policy*, forthcoming.

Sapir, A. (1989), 'Does 1992 come before or after 1990?', in Jones, R. and A. O. Krueger (eds.), *The Political Economy of International Trade*, Basil Blackwell, Oxford.

Siebert, H. (1990), 'The Economic Integration of Germany,' Kiel Discussion Paper No. 160, May.

Thorson, O. (1949), *Verdenshandelens Historie* ('History of World Trade'), Fagforlaget, Oslo.

Tyers, R. and K. Anderson (1986), 'Distortions in World Food Markets: A Qualitative Assessment', Background paper to the *World Development Report*, World Bank, Washington DC.

Wyplosz, C. (1990), 'A Note on the Real Exchange Rate Effect of German Unification,' mimeo.

Yearbook of Nordic Statistics, Nordic Council of Ministers, Stockholm.

CEPR Research Programmes

Economic Transformation in Eastern Europe

This programme involves a set of linked projects that will bring together outstanding researchers and policy-makers from West and East European countries and from international organizations. As the East European reform process accelerates, incoming governments face a number of conventional but pressing economic problems: high debt, high interest rates, fiscal imbalance, and an industrial structure that is ill suited to exporting to hard currency markets. They must also quickly create financial systems, functioning labour markets, and much more rational tax-subsidy structures.

This project will therefore give high priority to research in the areas of internal and external stabilization, industrial restructuring, trade reorientation and tax reform, within an overall framework of 'robust sequencing'. The programme is designed to exploit a wide variety of theoretical, empirical and institutional approaches to the transformation of economic systems.

Completing the European Internal Market: the Consequences of '1992' for International Trade

This programme covers a series of linked projects on the effects of completing the European Internal Market on international trade flows and policy. The unifying theme of the programme is the quantitative assessment of the effects of '1992' on international trade flows, and in particular on EC trade with the rest of the world. The research includes assessments of the trade and welfare implications of replacing *national* trade policies with *Community* policies for particular industrial sectors, modelling the effects of '1992' on third countries' trade, and studies of the role of reciprocity in trade negotiations, notably the Uruguay Round.

Financial and Monetary Integration in Europe

The experience of the EMS and the design of European monetary institutions have been important areas of CEPR research since 1985. The programme now covers a set of closely related projects on international financial phenomena: the exchange rate and monetary consequences of financial integration; the relevance of the experience of the EMS as a blueprint for the wider reform of the international monetary system; and the implications of EMU for the design of coordinated fiscal policies within the Community.

Related CEPR Books

Unity with Diversity in the European Economy: The Community's Southern Frontier, edited by Christopher Bliss and Jorge Braga de Macedo, deals with vital policy debates concerning the present and future development of the Community. The insights it gives into the integration of the Southern members, the full impact of which still remains to be felt, are of particular relevance in assessing the future relationship of the East European countries to the Community.

Cambridge University Press for the Centre for Economic Policy Research,
£30.00/\$59.50, September 1990.

European Financial Integration, edited by Alberto Giovannini and Colin Mayer, examines the implications of integration for the structure and regulation of capital markets, the changing relationships between the corporate and banking sectors throughout the Community, the distortionary effects of differing taxation policies among member states and possible means of overcoming them, and alternative routes to European Monetary Union.

Cambridge University Press for the Centre for Economic Policy Research,
c. £27.50/\$34.50, January 1991 (forthcoming).

European Integration: Trade and Industry, edited by L Alan Winters and Anthony Venables, addresses topical issues such as the expected gains from both 'internal' and 'external' economies of scale following the completion of the EC internal market in goods and services and the implications of '1992' for the Community's trade with its traditional EFTA partners, the potentially valuable new East European markets and the rest of the world. The volume also considers the effects of the completion of the internal market on the appropriate technology and taxation policies and the role of foreign direct investment from Japan in European manufacturing.

Cambridge University Press for the Centre for Economic Policy Research,
c. £30.00/\$54.50, May 1991 (forthcoming).

The above books cannot be obtained from CEPR, but can be purchased from good academic bookshops or from Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge, CB2 2RU or 40 West 20th Street, New York, NY 10011, USA.

CEPR Discussion Papers

Recent CEPR Discussion Papers on topics of related interest include the following:

- | | |
|--------------------------|---|
| 405 P Bofinger | Unresolved Issues on the Road to EMU in Europe |
| 418 W H Buiter | Reflections on the Fiscal Implications of a |
| K M Kletzer | Common Currency |
| 432 O Blanchard | Economic Change in Poland |
| R Layard | |
| 444 R MacDonald | Exchange Rates, Policy Convergence and the |
| M P Taylor | European Monetary System |
| 448 A A Weber | EMU and Asymmetries and Adjustment Problems in |
| | the EMS |
| 449 M Burda | The Consequences of German Economic and Monetary |
| | Union |
| 453 B Eichengreen | Costs and Benefits of Monetary Union |
| 457 P Bofinger | The Roles of Monetary Policy in the Process of Economic |
| | Reform in Eastern Europe |
| 458 P Bofinger | A Multilateral Payments Union for Europe? |
| 464 R Dornbusch | Monetary Overhang and Reforms in the 1940s |
| H Wolf | |
| 472 D Currie | Hard-EMS or EMU? |
| P Levine | |
| J Pearlman | |
| 474 A Jacquemin | Competition and Imports in the European Market |
| A Sapir | |

Single copies of the Discussion Papers are available at £3 (\$5). Payment in advance is required for orders under £15 (\$25). Orders should be sent to:

CEPR Discussion Papers, Centre for Economic Policy Research, 6 Duke of York Street, London, SW1Y 6LA.

Also available...

CEPR Occasional Papers for £5/\$10:

- | | |
|-----------------------|---|
| 2 A Giovannini | The Transition to Monetary Union |
| 3 R Portes | The European Community and Eastern Europe after |
| | 1992 |

- DAVID BEGG (Birkbeck College, London)
- JEAN-PIERRE DANTHINE (Université de Lausanne)
- FRANCESCO GIAVAZZI (Università di Bologna)
- CARL B HAMILTON (IIES, Stockholm)
- DAMIEN NEVEN (INSEAD)
- VICTOR NORMAN (Norwegian School of Economics and
Business Administration, Bergen)
- ANDRÉ SAPIR (Université Libre de Bruxelles)
- ALASDAIR SMITH (University of Sussex)
- L ALAN WINTERS (University of Birmingham)
- CHARLES WYPLOSZ (INSEAD)

Centre for Economic Policy Research

25–28 Old Burlington Street, London W1X 1LB Tel: (44 171) 878 2900 Fax: (44 171) 878 2999