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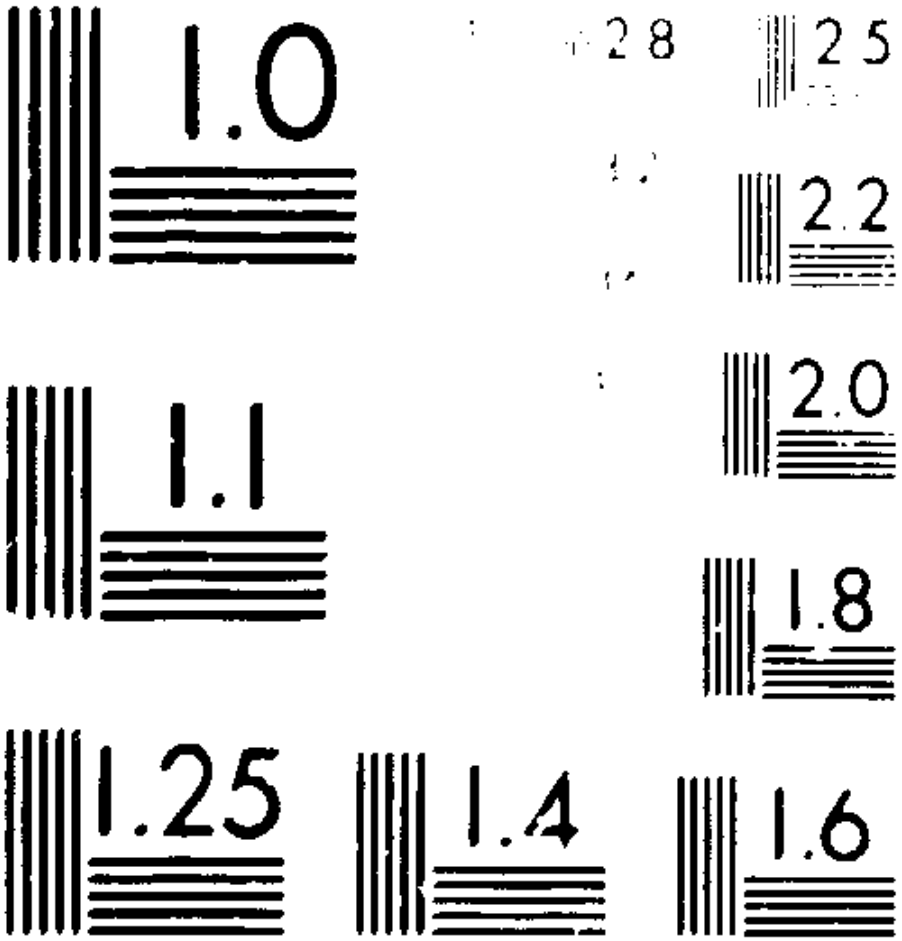
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THE INTERNATIONAL INDUSTRIAL RESTRUCTURING PROCESS: THE EEC, THE EUROPEAN PERIPHERY AND SELECTED DEVELOPING COUNTRIES*

VOLUME TWO

PAPERS PRESENTED TO A RESEARCH SEMINAR*

Sesimbra, Portugal
22-24 October 1980

Prepared by the
Global and Conceptual Studies Branch
Division for Industrial Studies

UNIDO Working Papers on Structural Changes

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FOREWORD

As part of the research programme of UNIDO on international industrial redeployment and structural adjustment, a Research Seminar on the International Industrial Restructuring Process and the European Periphery Countries was organized under the joint auspices of UNIDO and the Government of Portugal in Sesimbra, Portugal, 22-24 October 1980. The purpose of the seminar was to shed light on issues pertaining to structural change and problems gravitated around self-reliant growth palatable to global interdependence, with a focus on past experience and future prospects for international trade, energy and capital flows as well as their indelible imprint on the changing pattern of international division of labour.

This volume contains eleven papers presented to the seminar and listed in Annex III of the main Report (Volume One).

The issue paper furnishes the list of issues, with an analytical exposition of the changing parameters at the international, regional and national levels.

The research papers attempt to make an apposite and comprehensive presentation of: EEC enlargement and adjustment problems; structural vulnerability that looms as the most difficult challenge to the potential entrants into EEC; problems of particular types of developing countries, their current policies, the lessons of their recent experience; outward oriented policies and their implications for global interdependence; fewer options; and the importance of noneconomic factors.

A case study on the Republic of Korea is presented to add further detail to the analysis of national adjustment to structural change.

In this volume the papers are signed individually by authors who had the benefit of friendly discussions and a good deal of exchange of views as it transpired during the seminar, but commit only themselves.

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ANNEX III-1

Seminar on International Industrial
Restructuring and the European Periphery
Countries

Sesimbra, Portugal, 22-24 October 1980

THE INTERNATIONAL INDUSTRIAL RESTRUCTURING AND THE EUROPEAN PERIPHERY COUNTRIES

Issue Paper

Prepared by the
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CONTENTS

I. BACKGROUND

In pursuance of General Assembly resolution 31/163 of December, 1976, requesting UNIDO to prepare studies relating to the promotion of redeployment of industries from developed to developing countries, UNDIO is carrying out a programme of research covering, inter alia, studies on redeployment potentials and obstacles, and prospective analyses of structural changes in developed and developing countries. The aim of this research programme is to analyze the on-going international and national restructuring process in the industrial sector, to identify the major determinants of these processes, and to assess the objectives of and constraints upon the major actors concerned in terms of the course and pace of structural change. It is expected that on this basis it may be possible to assess the convergence and divergence of the various actors' objectives and motives in the changing pattern of development.

A brief summary of major findings and a consolidated report on the research programme were presented to the Third General Conference of UNIDO at New Delhi in early 1980 (UNIDO ID/CONF. 4/9 and UNIDO ICIS/136 respectively). Following the deliberations of the Conference on this subject matter, the UNIDO Secretariat was requested in the New Delhi Declaration and Plan of Action (ID/CONF. 4/22, para. 143) to carry out "continuous surveillance of the industrial restructuring process, analysis of the changing international division of labour, locating and identifying natural, sectoral endowments and examination of prospects of and obstacles to redeployment". Under this mandate, UNIDO is pursuing its programme of research into the industrial restructuring process.

In so doing, it would seem essential that besides global analyses of the international restructuring process, the issue also be brought down to the regional and country levels. This implies either that the international processes be analyzed from the point of view of individual countries and regions, or that strategies, policies and development prospects of individual or various groups of countries for the international restructuring process be reviewed. In this way, the role of various groups of countries in this process could be singled out in the analyses. The countries could be

grouped according to their geographical location, economic systems, level of development, or membership in particular country groupings. The advantage would be that, by viewing the international restructuring process from different angles, a number of essential issues could be identified as having a bearing upon the on-going debate as well as upon current research activities.

One group of countries that is seen to constitute a particular category in terms of the international restructuring process is those countries that are on the periphery of the EEC. They have a particular economic position and role in the international restructuring process. It is considered important to highlight this position and role. At the same time, it is obvious that these countries, which are here briefly described as "countries on the European periphery", differ in their internal economic make-up. They include developed market economies (Northern, Western and Southern Europe), developed centrally-planned economies (Eastern Europe), and developing countries (Yugoslavia and Turkey). There is also a vast difference between the countries in terms of policies, level of development, trade patterns, relation with the EEC, etc. The identification of these countries on the European periphery does not imply an expression of any opinion on the part of the UNIDO Secretariat concerning the legal status or policy orientation of any country.

This paper aims at providing brief background on the subject of the participation of these periphery countries in the international industrial restructuring process and at highlighting major issues of concern to the international community.

II. INTERNATIONAL INDUSTRIAL RESTRUCTURING: FACTS AND FORCES

Industrialization and restructuring during the 1980s will occur in an economic and trading environment which differs significantly from the environment of previous decades. This changed environment is likely to affect both the pace and the characteristics of the restructuring process and has significant and varying socio-economic implications for individual countries. In order to understand and eventually be in a position to anticipate structural change, it is necessary to examine the major determinants of the processes of industrialization and structural change and the environment in which they operate.

Recent developments indicate three major trends that would seem to be particularly essential to international restructuring in the years to come. First, there is a trend towards a far-reaching inter-nationalization of industrial production. Second, basic politico-economic parameters are undergoing dramatic changes which are likely to influence significantly the restructuring process. Third, national socio-economic considerations, adjustment and development constraints and industrial priorities tend to affect increasingly the international restructuring of industry.

II.a. The Internationalization of Industrial Production

The Internationalization of production has a long history. However, its pace and magnitude seem to have reached an unprecedented level during the Seventies. An increased international mobility of capital, labour, technology and management know-how have made it possible to locate and re-locate production capacities on an international basis outside "traditional" industry centres and thus increase industry's "footlooseness". Technological progress in transport and communications has significantly reduced the costs and time for international transportation of goods and services. These factors have facilitated world-wide industrial operations. Recent research findings reveal that industrial production and growth in GDP of the individual member countries (OECD) are now very closely synchronized and co-ordinated.

Since vast differences prevail between countries in terms of wage

costs, availability of labour, and raw material, these developments have created conditions for a rapid expansion of the international production network. Large production and trading companies, operating world-wide, are in a position to utilize opportunities for resource mobilization, production and marketing on an international level. The production and trading pattern thus seem to be increasingly characterized by offshore assembly, sub-contracting and intra-company and international trade. This has had very major effects on the developing countries and on the dominant forms of organization in business. It is estimated that roughly 1/3 of international trade in manufactures now consists of intra-firm trade, that is trade between related parties. In the US it is approaching 50 per cent of total trade in manufactures.

II.b. Changing Parameters

It is fairly clear that the environment of the 1980s in which the industrialization process occurs will differ from that of the previous decade. This section attempts to draw out the implications and policy reactions, resulting from the different environment for industrialization and restructuring in the eighties.

The external environment facing developing countries and industrialized group in their restructuring process will be determined partly by:

- the Macro-economic outlook in the developed group (which has substantial indications on the level of world trade);
- changes in the real price of energy;
- the emergence of regional groupings (the focus of discussion at this seminar); and
- changes in trade policy and trade rules

The ordering of these factors emphasizes the view that the economic and social environment will imply changes in policy, but it must also be stressed that changes in trade policy which result from changes in the environment at aggregate level can in fact have a substantial impact on the environment of individual countries.

(1) The Macro-economic Outlook

The macro-economic outlook is not particularly optimistic. For the majority of developed market economies, the current high levels of inflation, low levels of economic growth, low rates of investment and high unemployment, as well as low levels of productivity growth seem to aggravate the adjustment problems significantly. Without adequate investment and market growth, manufacturing industries will not be able to adjust sufficiently to changing conditions. The developed countries are thus likely to continue to find it difficult to accommodate the necessary structural adjustment if, as can be expected, the macro-economic outlook for the 1980s remains unchanged. Moreover, the depressed rates of growth for advanced economies means that exports from developing countries will be hampered by the reduced rate of growth in their principal markets.

(2) The Increasing Cost of Energy

The dramatic rise in the real price of energy could be singled out as a second major factor affecting the international restructuring process. In the medium and longer term, the increased real price of energy will affect both investment and consumption patterns and the types of technologies employed in industry. These effects vary, of course, between developed and developing countries and between energy-importing and energy-exporting countries.

For developed countries that import oil, the increasing price of oil creates balance of payments deficits and thus increases pressures to export manufactures. This implies that the international competitiveness of these countries' industries would need to be enhanced. There is, therefore, a push towards adjustment of the industrial structure in order to attain greater efficiency. By way of contrast, developed countries exporting energy may experience real exchange rate appreciations and internal resource reallocation which would tend to reduce motivation for their manufacturing industry to compete internationally. The pressure for industrial redeployment and restructuring may thus increase in both categories of developed countries in response to the increase in oil prices. It should be noted, however, that when this acceleration of structural change is super-imposed on the reduced rate of output growth in the developed economies, an increase in protectionism

cannot be ruled out.

For the oil-importing developing countries, increased oil prices seem to affect their industrialization in two ways. First, the increased import bills for oil constrain the imports of capital goods and other inputs required for their industrialization. Second, in their attempts to offset balance of payments deficits through an increase in manufactured exports, they encounter both increased competitive pressures and protectionist policies from oil-importing developed countries.

For the oil-exporting developing countries, the increased income obviously facilitates financing of manufacturing capacities. The emerging industrial structures may, however, be subject to strong competitive pressures on international markets because of high production costs and global excess capacity in certain basic industrial sectors.

(3) Productivity and Technology

A further crucial factor influencing the industrial restructuring process is technological development. For instance, the application of micro-processors, computer-aided design, industrial robots, mini-computers, etc. to manufacturing processes has the potential to change drastically the requirements for labour, capital, research and development, and to affect national and international production and employment patterns. It is, therefore, possible that reversals of comparative advantages of developing countries vis-á-vis developed countries may occur in certain industries due to the application of new technologies in manufacturing processes and products.

The evaluation and application of the existing technology will alter the comparative advantage of individual countries and their firms with consequent shifts in trade patterns between countries. For example, in the case of footwear, the introduction of new processing techniques has permitted the domestic industry to re-emerge in the US. It is possible that this could occur with micro-electronic technology. It is also possible that micro-electronic technology will rapidly have a significant impact on production and trade. Hence, the pertinent question is:

How quickly and which groups (countries, industries and occupations) are going to be affected?

(4) Trade Policy

In the past two decades there has been a major shift in trade policies of the developing countries which have increasingly moved away from incentives favouring import substitution towards policies aimed at export oriented growth. One of the questions which may be discussed later is whether this trend will continue. But one can note that there are some new ingredients in the trade policy/ trade incentive area, with implications for restructuring.

First, the tariffs have fallen generally for manufactured products. However, there is an increasing reliance on non-tariff barriers in the developed world, especially for the EEC. There has been little or no change on trade barriers for agriculture. So the picture remains gloomy.

The introduction of GSP arrangement and increasing use of preferential provisions for offshore assembly, particularly in the US, has been of special relevance to the developing countries. Exports to the US trade under the offshore assembly provisions now account for approximately 15 percent of US imports. The volume is therefore substantial. Moreover, it is growing at about 30 to 40 percent per annum. The tendency for selective reductions in tariff and non-tariff barriers has had its counterpart in increasingly selective protection for specific industries, i.e., textiles, clothing, footwear, and motor vehicles have been identified by governments for especially favourable treatment Increased reliance on non-tariff barriers are likely to be more important in the 1980s.

(5) Institutional Framework

Due attention should also be given to the changing institutional framework. One aspect concerns the role of individual governments in directing structural changes.

The role of governments in developed market economy countries seems to have undergone a gradual change towards assuming more specific inter-

ventionist functions. Public support for research and development and export credit, government subsidies to companies, branches and regions, and an increased protectionism in trade are indications of this change.

Attention should be drawn to the implications arising out of the trend towards regional groupings and associations of countries. The envisaged enlargement of the EEC is one such example.

Yet another dimension of the restructuring process must be taken into account. This is the importance that individual governments attach to the pace and direction of industrial restructuring. Adjustment resistance is increasing in developed market economies in which low growth, high unemployment and regional disparities coincide. In many countries, an increased international division of labour - at least in terms of imports - is seen to conflict with national interest in terms of maintaining a certain degree of self-sufficiency and a more balanced regional development. The concentration of industries that are under increasing competitive pressure in specific regions and an apparently growing resistance of the labour force to further geographical mobility call for an identification and a realization of alternative economic activities with a long-term growth potential. Otherwise, a preservation of the present structure seems to be politically unavoidable. Government assistance programmes to seriously affected industries and regions are being launched to overcome short-term rigidities of the long-term restructuring process.

With the increased government involvement in steering the restructuring process, it is possible that the hitherto, mainly ad hoc, use of public funds will be replaced by more systematic and consistent policies for industrial restructuring.

Recent industrial policies have led perhaps to greater social concern and equity, but they have also led to rigidities in the economic system at the very time that there is an increased need to reallocate resources. There has been a redefinition of full employment in terms of "frozen" employment. In the seventies, the employment objective has been redefined to include specific job guarantees in specific regions. If the redefined employment objective is accepted, the relocation of labour will become practically impossible; this will inhibit new manufacturing opportunities.

The developments outlined above, partly complement and partly counteract in their effects on the international industrial restructuring process. There are forces strengthening the internationalization of industrial production and forces that tend to conserve the existing production structure. While the economic interdependence of countries has reached an unprecedented level, national constraints of a political, economic and institutional nature suggest that industrial restructuring in the eighties may be less smooth and less rapid. The on-going international restructuring process is not seen as a process which in itself creates equitable distribution of benefits within and between countries. The emerging pattern of the restructuring process tends to create a widespread uncertainty among decision-makers.

It is against this background that the call for a greater share of developing countries in total world industrial production should be seen. This also gives rise to the question as to how the Lima target* could be most easily attained. In the context of this Seminar, this question is directed primarily at the countries on the periphery of Europe and their relations with the EEC and the developing countries.

III. ISSUES

The purpose of the Seminar is to shed light on several key issues of broad significance: (a) does industrialization of the South imply de-industrialization of the North? (b) the role of productivity and technical change in structural change; (c) recent growth of protectionism; particularly in the developed countries; (d) effects of higher energy prices on industrialization; and (e) political attitudes to structural adjustment.

In the context of current development trends and policy orientation, a number of essential questions and issues arise that require special attention by the international community and - within the framework of the on-going economic research in this field - by economists in both the developed and developing countries.

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* Lima Declaration and Plan of Action on Industrial Development and Co-operation, Second General Conference of the United Nations Industrial Development Organization, Lima, Peru, 12-26 March 1975, document No. PI/38.

Some of the most pressing issues are outlined below.

1. The International Industrial Restructuring Process

The current international economic situation constitutes the background for the restructuring process. The task is to identify the major effects that recent developments in such fields as finance and energy have on the restructuring of industry and how these developments are likely to continue in future. Can one talk of an extended international economic crisis? If this is accepted, which countries and which industrial sectors are affected the most? What is the impact on the international restructuring process?

The industrialization of developing countries is seen as a major determinant of redeployment of the international division of labour. The question can be asked: Does the industrialization of the Third World imply de-industrialization of the First? (Connected issues relate to shifts in comparative advantages of developed countries vis-á-vis developing countries, and the effect on employment in developed countries that could result from increased trade with developing countries). When examining recent trends in the international division of labour, there is a tendency to base the analyses primarily on international trade data. The question could be raised as to the actual significance of trade in an analysis of the restructuring process.

2. The Restructuring Process within the European Economic Community

The issues to be raised in this context concern major trends in EEC manufacturing industry and the main determinants of its restructuring. What is the role of the various major trading partners in this restructuring process? What major implications arise from the entrance of Greece, Portugal and Spain to the EEC or how does this expansion affect the industrial structure of the present EEC Member States? Will the adjustment difficulties of the EEC be exacerbated or will the entrance of the three South European countries stimulate industrial growth in the Community? These questions should be geared against the general issue of adjustment assistance or resistance by the various EEC member countries.

3. The Restructuring Process within Countries on the EEC Periphery

Seen in relation to the EEC, a number of countries seem to form a special, though heterogeneous, group of trading partners and competitors: mainly the countries in Southern Europe and Eastern Europe, as well as the Nordic countries. How will the industrial restructuring process within each of these countries or within the group as a whole proceed in relation to the EEC and to other developing countries? How will these countries be affected by the adjustment policies and processes of the EEC; and, in particular, by the enlargement of the EEC? What are the likely consequences for the industrial structure of the three countries entering the EEC? The situation and the role of the East European countries in respect to the industrial restructuring among the various groups of countries should also be reviewed.

Two major issues seem to be of particular relevance in assessing the prospective role of the developing countries in the on-going international restructuring process. The first issue concerns these countries' industrial development priorities and prospects. To what extent do the industrial development and trade patterns emerging in the developing countries - especially the larger and/or more advanced of these countries - imply a challenge to existing industrial structures in the developed countries and to prevailing forms of industrial co-operation? The second issue refers to the implications of the changing position and policies of the EEC and of countries surrounding the EEC for the industrial development endeavours of the developing countries. What are the likely consequences of the EEC enlargement for the more advanced/export oriented developing countries?

4. Policies in the Restructuring Process

The question thus refers to the selection of appropriate policies and/or how are companies induced to adjust to the need for technological development and/or for locating productive capacities in the country concerned?

Of fundamental importance in this respect is the assessment of the

roles of government, transnational corporations and domestic companies in the restructuring process. Given different institutional and political frameworks in the various countries concerned, it is necessary to differentiate between various types of government induced policies.

The issue is to what extent governments are development-oriented and to what extent the market mechanism constitutes the basis for national economic decisions. Is the restructuring process (nationally and internationally) increasingly becoming a matter of negotiation between the actors? What then are the long-term objectives of the sectors? What importance is attached by countries to reliance on transnational corporations for providing the required resources and marketing facilities and infrastructure? What is complementary between national and international objectives and between objectives of foreign companies and host governments? What are the implications of the changing institutional framework in which the restructuring process takes place?

Is the production costs competition being replaced by a competition in public support for research and development activities?

5. Research on Restructuring

Research on the various aspects of the industrial restructuring process is being carried out by national and international research institutions and organizations. It would seem to be important to stock-take these on-going economic research activities and on the basis of the "state-of-the-art", identify priority areas and suitable approaches for future work.

A basic issue, however, is to what extent economists really can provide answers to the questions faced by governments and enterprises in the industrial restructuring process. More specifically, what can be the role of a general surveillance of the international division of labour for reducing uncertainties among decision-makers? Can such surveillance assist in avoiding disruptive adjustment measures and so lower the resistance to adjustment?

How do developing countries view the relevance of the direction and approach of the on-going research? In respect to the approach, and in prospective analysis of the restructuring process, the question is raised as to how the changing institutional factors - particularly the apparently growing role of direct government intervention - should be reflected in the research.

ANNEX III - 2

Seminar on International Industrial
Restructuring and the European Periphery
Countries

Sesimbra, Portugal, 22-24 October 1980

INDUSTRIALIZATION OF THE THIRD WORLD AND 'DE-INDUSTRIALIZATION' IN ADVANCED COUNTRIES: DOES SOUTHERN INDUSTRIALIZATION DE-INDUSTRIALIZE THE NORTH?

by

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I. INTRODUCTION

This paper[1] has two main aims. First, it seeks to analyse the main features of two long run tendencies which characterise the world economy, namely industrialisation in the third world economies and de-industrialisation in advanced countries. Secondly, it attempts to explore the nature of the relationship between these two phenomena: to what extent, if any, is 'de-industrialisation' in rich countries being caused by cheap labour imports from the third world? Is the former likely to be an inevitable consequence of industrial development in the South?

The paper is organised in the following order. Sections II and III examine various aspects of third world industrialisation: its rationale, its record during the last two decades, and its comparative structural characteristics. The question of 'de-industrialisation' in the advanced countries raises difficult conceptual issues. These as well

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(1) In this paper, I have drawn on material from my two previous essays on the subject: (a) A. Singh 'The basic needs approach to development versus the new international economic order: the significance of third world industrialisation' World Development, June 1979; and (b) A. Singh 'Third World industrialisation and the Structures of the world economy in D. Currie, D. Peel and W. Peters (ed.) Micro economic Analysis: Essays in Microeconomics and Development, London, Croom Helm, 1981. I have also used passages from these papers.

as the empirical material bearing on them are considered in Section IV. In the light of this discussion, the relationship between third world industrialisation and de-industrialisation is examined in Section V. Finally Section VI briefly considers some questions of economic policy and prospects for third world industrialisation in the context of a long-term deceleration in world economic growth.

II. INDUSTRIAL DEVELOPMENT IN THE THIRD WORLD: THE ECONOMIC AND SOCIAL IMPERATIVES.

There are good economic reasons why the third world countries should regard rapid industrialisation as being essential for raising the standards of living of their people and for changing the current unequal structure of the world economy. A wide range of historical and cross-section studies indicate that manufacturing industry plays a leading role in economic development in the specific sense that a 1% increase in gross domestic product is normally associated with a more than 1% increase in value added in manufacturing.(2) Further, there is evidence that the growth elasticity of manufacturing is greater the lower a country's per capita income. Table 1 reports the results of a recent comprehensive study based on data from nearly 100 developing and developed countries over the period 1960-75. The table gives pooled cross-section and time-series estimates of the growth elasticities of manufacturing for various groups of countries, distinguished by their size and

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(2) See for example N. Kaldor, Strategic Factors in Economic Development, Ithaca, Cornell University Press, 1967; S. Kuznets, Economic Growth of Nations, Cambridge, Mass., 1971 T.F. Cripps and R.J. Tarling, Growth in Advanced Capitalist Economies, Cambridge 1973; H. Chenery and M.Syrauin, Patterns of Development: 1950-70, World Bank, Washington, D.C. Oxford University Press 1975.

Table 1: Estimates[a] of the elasticities of manufacturing value added with respect to GDP for six country groups (based on pooled times-series for 1960-1975

Country[b] sample	Manufacturing elasticity			Per capita GDP (1979 US dollars)		
	Maximum	Minimum	Mean	Minimum	Maximum	Mean
L_h	1.59	0.99	1.23	467	5 349	1 990
L_l	2.13	1.47	1.81	58	670	192
S1	1.85	1.31	1.59	42	1 326	221
S2P	1.42	1.02	1.16	102	3 460	952
S2I	1.66	1.14	1.35	159	4 517	1 142
CP	1.62	1.08	1.30	227	2 099	841

a The estimates are based on the following regression equation

$$\ln v_{it} = \alpha_i + \beta_1 \ln y_{it} + \ _2 (\ln y_{it})^2 + U_{it}$$

where v is per capita manufacturing value added.

y is per capita GDP

I is country subscript

t refers to the year

U represents the disturbance term.

b L_h : large high income countries

L_l : large low income

SI : small low income

S_{2P} : small with primary orientation

S_{2I} : small with industrial orientation

CP : centrally planned economies

For further details see note 2.

Source: UNIDO World Industry since 1960: Progress and Prospects, United Nations, New York, 1979.

certain other characteristics.[3] These estimates suggest that at the average levels of per capita income in the third world countries, the value of this elasticity is about 1.5.

On the basis of an analysis of economic growth in developed countries during the 1950 and 1960's Professor Kaldor (1967) put forward a related, but stronger proposition, namely that the "faster the overall rate of growth, the greater is the excess of the rate of growth of manufacturing production over the rate of growth of the economy as a whole". This hypothesis has been examined for the developing countries, on the basis of cross-section data from 15 semi-industrial economies covering successive sub-periods over the years 1950-78. The results are reported in table 2.

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(3) The number of countries in the 6 country groups identified in table 1 is as follows:

L_H 11; L_P 13; S_1 18; S_{2P} 19; S_{2I} 28 and CP 9.

The stratification of the countries into the various groups was determined by means of cluster analysis using the following criteria: (a) size, (b) resource endowment and (c) production orientation towards primary or manufacturing development. The number of pooled time-series and cross-section observations for the period 1960-75 for the respective groups were 176, 108, 288, 304, 448 and 144. The regression equation given in table 1 provided a very satisfactory fit in each of the country groups, as measured by R^2 and the standard error of the estimates.

Table 2: Regression Analysis[(1)] of the Relationship between the Growth of GDP and the Growth of Output in Various Sectors:

(15 Semi-Industrial Countries, Successive Subperiods 1950-1978)

	α_o	α_1	R^2	No of observations
Manufacturing	2.250 (.268)	0.436 (.032)	.791	52
Construction	4.183 (.299)	0.220 (.038)	.397	54
Electricity	1.572	0.393	.435	51
Agriculture	4.211	0.386 (.135)	.134	55
Minerals	5.057 (.436)	0.068 (.059)	.026	53
Transport	3.212 (.386)	0.309 (.046)	.514	45
Commerce	2.291	0.528	.566	45
Other Services	4.396 (.769)	0.195 (.129)	.065	35

(1) The following regression equation was fitted:

$$\dot{y} = \alpha_o + \alpha_1 \dot{x} + U$$

where $\dot{y}$ is the rate of growth of g.d.p. in constant prices

$\dot{x}_i$ is the rate of growth of production in the 'i' the sector

U is the disturbance term

Source: A. Singh, Industrialisation, Employment and Basic Needs in a Fast-Growing Agrarian Economy: a Case Study of Punjab, Mimeo, 1981

The table provides striking support for Kaldor's proposition. The results of the regression analysis show that there is a much closer relationship between the rate of growth of g.d.p. and that of manufacturing industry than that of any other sector. The relationship between g.d.p. growth and growth of agriculture is very weak, despite the fact that agriculture accounts for a large share of g.d.p. in these economies (usually much larger than that of manufacturing). It is also remarkable that the relationship between manufacturing and g.d.p. growth is stronger than that between the later and the growth of commerce; expansion of commerce might have been expected to closely mirror the growth of production in the economy as a whole. Further, a regression coefficient of considerably less than unity (.43) relating g.d.p. growth to manufacturing bears out the view that the larger the value of the former, the greater needs to be the positive difference between the rate of growth of manufacturing and that of g.d.p.

There is a systematic body of economic thought which not only explains why manufacturing industry should expand at a faster rate than the economy as a whole during the course of economic development, but which would also assign strategic causal significance to manufacturing in raising the overall rate of growth of productivity in the economy. Very briefly,[4] first, at the simplest level, as the income

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(4) This is necessarily a brief outline of a vast subject. See further the references listed in notes 1 and 2 above.

elasticity of demand for manufacturing is considerably greater than that for food and for agricultural products, manufacturing can be expected to grow relatively faster. Secondly, following the classic work of Allyn young (and of course before that, of Adam Smith and other classical economists), the economists with a structural approach to economic growth argue that manufacturing is subject to increasing returns, both in the static and, more importantly, in the dynamic sense of Kaldor. Because of these favourable demand elasticities and the dynamic economies of scale, manufacturing industry not only grows more quickly than other sectors, but its growth is normally associated with increased employment. In agriculture, on the other hand, where there is usually considerable disguised unemployment, expansion of productivity and output is normally connected with a reduction in the labour force employed. The expansion of manufacturing industry thus helps to raise the rate of growth of productivity in agriculture in two ways: (a) by absorbing redundant labour, and (b) by providing modern industrial inputs, which incidentally raises both land and labour productivity. Thirdly, it is argued that the expansion of manufacturing industry also increases the pace of technical change and helps raise productivity growth in sectors other than agriculture.

It is sometimes suggested that agricultural development is a pre-condition for industrialisation since agriculture must in some sense provide 'surplus' for industrial expansion. However, both in a priori terms and in the light of results of recent empirical research with respect to Soviet Union (Ellman), China and Japan (Ishikawa) which at the very least casts serious doubt on these surplus theories, it does not seem to be a helpful approach to an analysis of the relationship between agriculture and industrial development. The two are best regarded as being linked through a chain of cumulative and circular causation. The growth of agricultural productivity requires modern industrial inputs; at the same time increased agricultural productivity makes possible higher farm incomes and greater demand for industrial products.(5) Such a perspective is particularly important to a discussion of economic policy in third world economies.

The structural approach to the process of economic growth not only stresses the key role of manufacturing but it also suggests that within manufacturing, capital goods industries need to grow at a faster rate than consumer goods industries. Again, both historical and cross-section studies of industrial development confirm that the growth

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(5) For a further discussion of these issues see A. Singh Industrialisation, Employment and Basic Needs in a Fast Growing Agrarian Economy, op. cit.

elasticity of producers goods industries is usually considerably greater than that of consumer goods industries: i.e. an x% increase in GDP is associated with kx%, and k'x%, increase in the production of capital goods and consumer goods respectively where k is greater than k'; the value of k normally tends to be well above 1.5.(6) The reasons for this phenomenon again lie partly in demand conditions and partly in production conditions, but, more importantly, in the interaction of the two. It is argued that in capital goods industries such as engineering and machinery equipment, there is great scope for dynamic economies and technological change. Further, as Kaldor has observed: "The expansion of capacity in the investment goods sector feeds upon itself, by increasing the growth rate of demand for its own output, thereby providing both the incentives and the means for its own further expansion. The establishment of an investment goods sector thus provides for a built-in element of acceleration in the rate of growth of demand for manufactured goods".(7)

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(6) See further, UNIDO, 1979 op. cit. There is no implication here that every country should develop its own steel industry, however, this analysis does suggest the importance of the development of appropriate capital goods industries for a country to achieve fast economic growth.

(7) Kaldor, op. cit., p.30.

Finally, it is important to consider the relationship between industrialisation and the desire of the third world countries to meet as quickly as possible the basic needs - food, shelter, clothing - of their poorest people. The ILO which first put forward the concept of basic needs, has estimated that if these minimal needs of the poorest 20% of the third world population are to be satisfied by the end of the century national incomes in the third world countries should on average grow at a rate of 7 to 8% per annum.(8) This calculation allows for the feasible redistribution of incomes within these countries. If such a goal for the required rate of economic growth to remove absolute poverty were accepted, it would entail, in terms of the elasticity estimates in table 1, an expansion of manufacturing industry in the third world of over 10% per annum.(9) By past standards, the latter figure, as we shall see presently, implies very fast industrialisation of these economies.

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(8) ILO, Employment, Growth and Basic Needs: a One World Problem. Geneva, 1976.

(9) For a fuller discussion of the relationship between the satisfaction of basic needs and industrialisation, see Singh, 1979, op. cit.

III. THIRD WORLD INDUSTRIALISATION AND THE STRUCTURE OF THE WORLD ECONOMY: LONG TERM TRENDS

At a time when most third world economies are experiencing acute economic difficulties with very low or even negative rates of economic and industrial growth, it is easy to overlook the long-term record of third world industrialisation. This record is much more positive. During the two decades, 1960-80, the third world's share of world manufacturing production, though still small, increased significantly: from 6.9 per cent to 10.2 per cent, a rise of nearly 50%. (see table 3). A group of third world countries - the so-called semi-industrial countries or the NICs - have been particularly successful in creating their own industrial capacities and capabilities. These countries are now providing actual and potential competition for the older industrial nations, not just in labour-intensive products but also in a range of capital-intensive industries like steel and shipbuilding.

Table 3 brings out in a summary form the major long-term structural changes which have taken place in the world industrial economy between 1960 and 1980. Along with the developing nations, the socialist countries have also recorded a large increase in their share of world manufacturing - again about a 50% increase (from 17.1 to 26.6%). There have also been very important changes in the structure of production within both the developing and the socialist countries. Among the former, the contribution of

Table 3: Structural Changes in the World Industrial Economy: 1960-80

Manufacturing output (value added) for major economic groups

	1960	1970	1980
Value added			
(Billions US dollars at 1975 prices)			
Developing countries	49	101	218
DMEC[a]	533	942	1358
Socialist countries	119	283	572
Total	701	1326	2150
Contribution to GDP (per cent)			
Developing countries	13.4	15.7	19.7
DMEC[a]	24.3	26.5	27.8
Socialist countries	24.6	30.7	36.7
Total	23.1	25.9	28.4
Share in world manufacturing output (per cent)			
Developing countries	6.9	7.6	10.2
DMEC[a]	76.0	71.1	63.2
Socialist countries	17.1	21.3	26.6
Total	100.0	100.0	100.0
		1960-1970	1970-1980
Average annual growth (per cent)			
Developing countries		7.6	8.0
DMEC[a]		5.9	3.7
Socialist countries		9.0	7.3
Total		6.6	4.9

Source: UNCTAD, Trade and Development Report, 1981, New York, 1981

[a] Developed market-economy countries.

manufacturing to GDP increased from an average of 13.4% in 1960 to nearly 20% two decades later.

The statistics in table 3 also enable us to compare the industrialisation experience of the 1960's with that of the 1970's. It is important to observe that whereas there was a trend decline in world industrial growth during the last ten years compared with the 1960's, the developing countries actually recorded a trend increase in their pace of industrialisation over this period. The rate of industrial growth in developed market economy countries showed a sharp drop, from nearly 6% in the 1960's to less than 4% in the ensuing decade; it also fell, though not as much, in the socialist countries. In contrast, in the third world countries, industrial growth in the 1970's was slightly faster than before. If the experience of the 1970's were to be repeated over the next two decades (i.e. third world industrial development was twice as fast as that in the rich countries), the developing nations would easily be able to meet the Lima Target of 25% share of world industrial production by the year 2000.(10)

Disaggregated data for the individual industry branches shows that industrial development in the third world has been widely based. The developing countries share in world

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(10) See further UNIDO, 1979, op. cit. Singh, 'Third World Industrialisation and the Structure of the World Economy', op. cit.

production has risen in most industrial groups. Over the period 1960 to 1976, the third world countries' share of world output of heavy industry increased from 4.9% to 6.2%, and of the light industries from 11.8% to 12.4%. Table 4 presents data for the 1970's. It shows that with the sole exception of petroleum refineries, the developing countries increased their share in every industrial group.

The above generally favourable long-term record of industrialisation in the third world needs to be qualified in two very important ways. First, the data presented in tables 3 and 4 treat all developing countries as one group: there are of course very great differences in performance and industrial potential between these countries. More specifically, the UNIDO study cited earlier has shown that only 10 countries accounted for nearly three quarters of the total growth of manufacturing production in the third world between 1966 and 1975. These countries - Brazil, Mexico, Argentina, Korea, India, Turkey, Iran, Indonesia, Hong Kong and Thailand - are listed in table 5 in descending order of their contributions to the total increase in manufacturing value added in all developing countries during this period. It would, however, be wrong to infer from this that third world industrialisation has only been a limited process, restricted to a small select group of countries. It should be remembered that in 1975, the ten countries listed in table 5, accounted for 60% of the total population of the developing countries (included in the 'third world' or

Table 4

Share in world manufacturing value added, by branch of industry and economic grouping[a]

(percentage)

Branch	ISIC	Developed market economies			Centrally planned economies			Developing countries		
		1970	1975	1978	1970	1975	1978	1970	1975	1978
Food products	311/2	65.2	62.8	62.7	22.8	25.0	24.3	12.0	12.2	13.0
Beverages	313	69.2	66.1	64.2	19.2	20.7	20.5	11.6	13.2	15.3
Tobacco	314	61.0	57.7	56.4	13.3	14.7	14.6	25.7	27.6	29.0
Textiles	321	61.4	55.4	54.3	23.8	27.8	28.8	14.8	16.8	16.9
Wood and cork products	331	74.2	70.3	70.9	16.7	20.2	19.3	9.1	9.5	9.8
Industrial chemicals	351	76.4	68.8	69.8	18.6	24.1	23.1	5.0	7.1	7.1
Other chemicals	352	83.9	79.5	79.8	5.2	6.8	6.4	10.9	13.7	13.8
Petroleum refineries	353	54.7	53.5	50.2	9.2	14.2	14.8	36.1	32.3	35.0
Miscellaneous products of petroleum and coal	354	52.7	48.1	46.4	35.7	38.1	38.1	11.6	13.8	15.5
Pottery, china and earthenware	361	58.7	50.1	48.3	29.8	37.2	38.8	11.5	12.7	12.9
Glass	362	75.9	68.1	67.4	17.1	22.8	23.7	7.0	9.1	8.9
Other non-metallic mineral products	369	64.6	57.7	58.1	27.8	32.8	31.6	7.6	9.5	10.3
Engineering goods	381/2 383/4	67.1	..	56.0[b]	29.4	..	39.3[b]	3.5	..	4.6[b]

Source: World Industry in 1980, UNIDO, ID/269,

a - Based on data in 1975 United States dollars.

b - 1977.

Table 5: Contribution of Selected Developing Countries and Areas to the Increase in Manufacturing Value Added of all Developing Countries, 1966-1975[a]

Country or area	Contribution (percentage)
Brazil	23.9
Mexico	10.7
Argentina	9.4
Republic of Korea	8.2
India	5.9
Turkey	5.0
Iran	2.9
Indonesia	2.5
Hong Kong	2.4
Thailand	2.3
TOTAL	73.2

Source: UNIDO, op. cit.

(a) Calculated in 1970 prices.

'developing countries' aggregate in the discussion of this section).[11]

Secondly, and more importantly, as the experience of the past two years demonstrates, there is no guarantee that the pace of industrial development achieved by the third world countries in the 1970's can be maintained in the future. This is because of a whole complex of reasons connected with major changes in the state and prospects f the world economy, to a discussion of which we shall return in the final section.

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(11) China is not included among the developing countries in the statistics presented in table 3 to 5.

IV. DE-INDUSTRIALISATION IN ADVANCED COUNTRIES: MAIN FEATURES AND CONCEPTUAL ISSUES

In popular conception 'de-industrialisation' is associated with a long-term decline in industrial employment and increasing overall unemployment in the economy. In the former sense, as table 6 shows, several advanced industrial economies have suffered from de-industrialisation since about the late 1960s. Between 1960-75, the proportion of labour force employed in industry fell appreciably in the U.K., Belgium, the Netherlands, Sweden and the U.S. The trend decline in manufacturing employment appears to have accelerated towards the late 1960's in most of these economies. In the U.K. in 1976, there were 1.1 million fewer workers employed in manufacturing than in the comparable year 1969. During this seven year period, the proportion of U.K. labour force employed in manufacturing fell from 34.7% to 30.1%. EEC statistics, covering a later period, indicate that even in France, W. Germany and Italy - the three countries in table 6 which do not show any long-term trend decline in the proportion of manufacturing employment - a significant reduction in industry's share in total employment occurred between 1974 and 1978.(12)

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(12) It is difficult to obtain comparable data for the late 1970s for the various countries. On a slightly different basis from that in table 6, OECD have provided comparable figures on industry's share in total employment for several countries up to 1977. These are shown in chart 1.

Table 6: The proportion of manufacturing employment in total employment in advanced industrial countries[a]

1950-1975 (%)

	UK	Japan	Italy	Belgium	France	Germany	Netherlands	Sweden	USA[b]
1950	34.7	-	-	32.7	-	-	30.2	-	34.4
1955	35.9	18.3	22.8	33.1	26.8	-	30.2	-	35.3
1960	35.8	21.3	26.6	33.5	27.9	34.7	28.6	32.1[c]	33.6
1965	35.0	24.3	28.9	33.9	28.3	36.3	28.2	32.4	32.8
1970	34.7	27.0	31.7	32.7	27.8	37.4	26.2	27.6	32.3
1971	34.0	27.0	32.0	32.3	28.0	37.0	25.7	27.3	31.9
1972	32.9	27.0	32.1	31.9	28.0	36.6	25.1	27.1	31.2
1973	32.3	27.4	32.2	31.8	27.9	36.1	24.1	27.5	31.6
1974	32.3	27.2	32.6	31.5	28.1	36.6	24.5	28.3	31.0
1975	30.9	25.8	32.6	30.1	27.9	35.9	24.0	28.0	29.0

Source: C.J.F. Brown and T.D. Sheriff, 'De-industrialisation, a background paper', in F.T. Blackaby (ed.), De-industrialisation, London 1979.

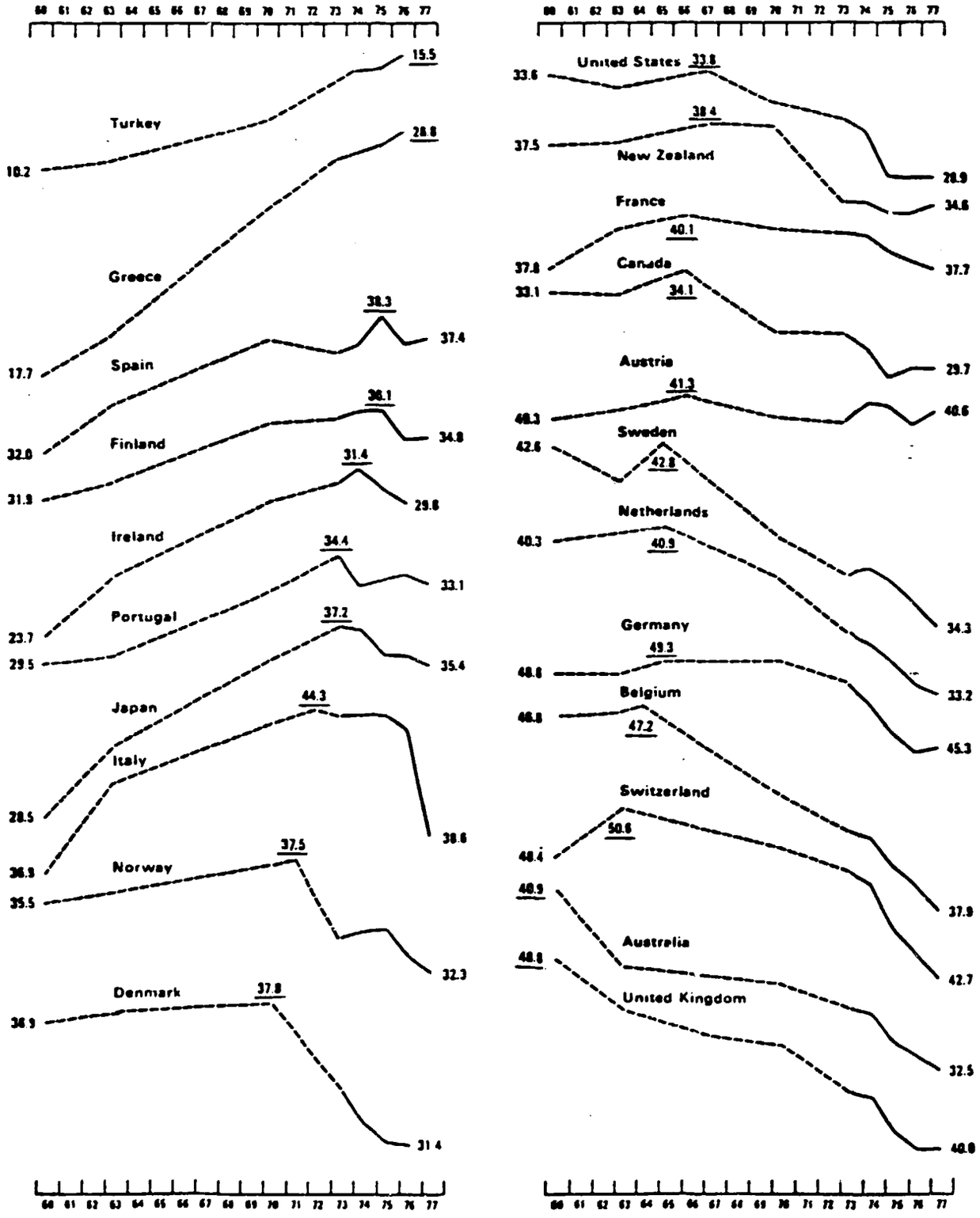
a The series presented is an estimated reference series which makes allowance for discontinuities in official labour statistics, due to changes in industrial classification, methods of collection, etc. In some cases, particularly the UK, there are substantial differences between this series and the published inconsistent one.

b Industrial employment

c For 1961: 1960 not available

Chart 1

Employment in Industry, 1960 to 77, various Countries
(as percentage of civilian employment)



Note: Figures underlined represent peaks.

Source: OECD The impact of newly industrialising countries on production and trade in manufactures, Paris, 1979

However, if we examine long-term changes in the share of manufacturing production in total production, a rather different pattern is observed. Brown and Sheriff's statistics covering the same period, 1960-75, show[13] that when output is measured in constant prices, there does not appear to be any long-term decline in the output share (similar to that observed for employment) in any of the countries, including the U.K. In the U.K. (as well as in some of the other countries), the share did fall in the recession years 1974 and 1975, but at the cyclical peak in 1973, it was similar to that at the earlier peaks. If manufacturing output is measured at current prices, there is, indeed, a trend decline in manufacturing's share in virtually every industrial country.[14] This is not surprising; as productivity rises faster in manufacturing than in other sectors (particularly services), prices of manufactured goods would be expected to rise relatively less than average.

Turning to unemployment, all industrial countries have experienced very high rates of overall unemployment in the 1970's. A recent detailed analysis of unemployment in the EEC countries shows that unemployment increased from 2.5 million workers in 1973 to 6 million in 1979 and is

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(13) Brown and Sheriff, op. cit.

(14) Brown and Sheriff, op. cit; UNIDO, World Industry in 1980, New York, 1981.

estimated to be 9 million in 1981.[15] It is projected to reach a figure of over 13 million by 1985 if present trends continue. Table 7 ascribes the observed (and projected) increase in EEC unemployment to three factors: (a) changes in population of working age; (b) changes in participation rate and (c) changes in employment. The table shows that the rise in unemployment by nearly 6 million between 1973 and 1981 is largely due to an increase in the recorded labour force (5 million) and only to a very limited extent (1.3 million) the result of a reduction in the total level of employment.

In a earlier paper,[16] I have argued that, for an open industrial economy, the popular notions of de-industrialisation of the kind mentioned above are analytically unsatisfactory. This is for the simple reason that a decline in the proportion of manufacturing employment, or even output, or a deceleration in its rate of growth, may reflect no more than a normal adjustment of the economy to the changing domestic and world market conditions, leading to the expansion of some sectors and contraction of others. I have, therefore, suggested that

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(15) Cambridge Economic Policy Review, Volume 7, No.2.

(16) A. Singh, 'The U.K. industry and the world economy; a case of de-industrialisation', Cambridge Journal of Economics, 1977.

TABLE 7: Trends of unemployment, employment and population in the EEC

	(millions)				changes	
	1955	1973	1981[e]	1985[p]	1955-73	1973-85[p]
Population	221.7	255.7	260.8	263.2	+34.0	+7.5
Children	51.5	60.3	53.3	50.7	+8.8	-9.6
Elderly	22.7	32.9	36.3	34.8	+10.2	+1.9
Population of working age	147.5	162.5	171.2	177.7	+15.0	+15.2
Employment	97.7	104.6	103.3	102.1	+6.9	-2.5
Recorded unemployment	3.7	2.6	8.8	13.4	-1.1	+10.8
Recorded labour force	101.4	107.2	112.1	115.6	+5.8	+8.4
	(per cent)					
Ratio of recorded labour force to population of working age	68.7	66.0	65.5	65.0	-1.7	-1.0
Ratio of recorded unemployment to recorded labour force	3.6	2.4	7.9	11.6	-1.2	+9.2

Note: Population projections based on "The economic implications of demographic change in the European Community : 1975-1995". Report published by Commission of the European Communities, Directorate-General for Economic and Financial Affairs, Brussels, June 1978.

p = projected

Source: Cambridge Economic Policy Review, vol. 7, no. 2, p.5.

the question whether de-industrialisation in this sense implies any structural maladjustment of the economy can only properly be considered in terms of the interactions of the economy with the rest of the world, i.e. in terms of its overall trading and payments position in the world economy. The structural characteristics of the domestic economy alone are not adequate for such an assessment.

In the specific case of the UK economy, whose historical evolution has been such that it is a new importer of food and raw materials, which have largely to be paid for by exports of manufactures, I have proposed the following definition of the optimum size and structure of manufacturing industry. Given the normal levels of the components of balance of payments, an efficient manufacturing sector is one which not only satisfies consumer demand at least resource cost, but also yields sufficient net exports (currently as well as potentially) to pay for the country's import requirements at socially acceptable levels of output, employment and the exchange rate.(17) The latter restrictions are important, since at low enough levels of

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(17) For detailed justification of this definition, see Singh, op. cit. It should be noted that this conception of an efficient manufacturing sector does not in any way deny the structural importance of manufacturing in the process of economic growth, in the sense discussed in section II. The longterm balance-of-payments considerations further strengthen the case for developing and sustaining a successful manufacturing industry.

output and employment, or more arguably at a sufficiently low exchange rate, almost any manufacturing sector may be able to meet this criterion of efficiency. (The exchange rate should be regarded here as an indicator of the acceptable levels of inflation and inequality of income distribution). It is also necessary to emphasise the significance of the qualification that, to be efficient, the manufacturing sector must be able to fulfill the above requirements not merely currently, but also in the long run. For instance, a windfall gain to the balance of payments (e.g. from North Sea oil) may put it temporarily into surplus (at desired levels of output, employment, etc.), although manufacturing industry may be incapable of ensuring this when 'normal' conditions return.(18)

Considered in these terms, there is a large body of empirical evidence which suggests that UK manufacturing industry is characterised by long-term structural disequilibrium, which is becoming more acute over time. Industry is losing ground in both home and foreign markets and is increasingly unable to achieve a current account balance at full employment, despite cost and price

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(18) For a discussion of the implications of this conception of de-industrialisation, see A. Cairncross, 'What is de-industrialisation?' in Blackaby (ed.), De-industrialisation, op. cit.; A. Singh, 'North Sea oil and the reconstruction of U.K. Industry', also in Blackaby (ed.) De-industrialisation, op. cit.

competitiveness (achieved by currency depreciations).[19] It is because of this long-term disequilibrium the de-industrialisation (in the popular sense of a fall in manufacturing employment) is a matter of grave concern for the UK economy.

It is important to observe that in terms of the above conception not all industrial countries are likely to be in the same situation as the U.K. Table 8 examines the relative exports performance of the leading economies during the period 1964-1977. It shows that some countries, notably Japan, have been improving their share of world exports;

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(19) For a detailed analysis of the evidence leading to these conclusions, see the references cited in notes 16 and 18. It is important to note that the statements in the text refer to long-term trends in the U.K. economy, rather than its behaviour during the last two years. In 1980 and 1981, as a consequence of the new economic policies of the U.K. government, the economy, and particularly the manufacturing sector, underwent an unprecedented contraction. Manufacturing production fell by more than 15 per cent during these two years; unemployment rose to over 10% of the labour force. Because of high interest rates and other factors, there was a large appreciation in the exchange rate for sterling during this period, despite U.K.'s rate of inflation being generally higher than in competitor countries, leading to a large decline in cost-price competitiveness (of the order of 30% measured in U.S. dollar). The current account moved into a growing surplus. At the existing low levels of output and employment, the economy is therefore not immediately constrained by balance of payments. However, because of the long-term structural disequilibrium of the U.K. industry, described in the text, which if anything has been worsened by the severe recession of the last two years, only a very limited expansion of the economy is now feasible. Despite North Sea oil, an expansion is likely to lead to balance of payments difficulties before any significant reductions in the rate of unemployment has been achieved.

Table 8 Export performance, export-price competitiveness and efficiency wages: UK and other advanced countries

1964-77

	U.S.	Japan	Germany	France	Italy	UK
Share in world exports of Manufactures (%)						
1964	21.5	8.1	19.3	8.7	6.3	14.4
1970	18.5	11.7	19.8	8.7	7.2	10.8
1974	17.2	14.5	21.7	9.3	6.7	8.8
1977	15.9	15.4	20.8	9.9	7.4	9.3
Export unit values of Manufactures ($US) (annual % change)						
1964-74	5.4	7.5	7.2	5.9	5.1	5.6
1970-74	8.2	16.0	14.5	12.8	11.4	11.2
1970-77	11.0	14.5	16.3	15.7	15.3	14.2
Wage costs per unit of output ($US) (annual % change)						
1964-74	2.1	8.6	8.3	4.2	7.0	5.2
1970-74	3.1	19.1	14.4	11.6	11.2	9.7
1970-77	8.0	23.7	19.3	15.6	14.7	13.7

Source: See Singh, 'Third World industrialisation and structure of the world economy', op. cit.

other like France have been more or less holding their own. However, the U.S. like the U.K. has been losing its share of world markets in manufacturing, despite the lowest relative increases in wage costs and export prices.(20) There is some empirical evidence that the U.S. industrial economy could now well be in a position of long-term disequilibrium of the kind which has been characteristic of the U.K. economy.(21)

This analysis of 'de-industrialisation' for an open developed market economy also provides a useful framework within which to analyse the general question of the relationship between 'de-industrialisation' in the advanced countries and the industrialisation of the third world. Two central issues are raised: First, to what extent, if any, is a particular industrial country or a group of these countries in long-run disequilibrium in the sense that their economies are prevented by their balance of payments situation from achieving (say) full employment?

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(20) It should be noted that table 8 provides statistics only on export performance. The fact that a country is losing (or increasing) its share of the world exports of manufactures does not by itself show whether or not it is in long-term disequilibrium in the sense discussed in relation to the U.K. economy. To establish the latter proposition, it is necessary to study inter-alia the behaviour of imports, the movements in the other components of balance of payments, as well as current and prospective changes in the structure of domestic production.

(21) See Cambridge Economic Policy Review, volume 5, 1979.

Secondly, if they are so constrained, to what extent could this be ascribed to competition from third world manufactures? It should, however, be observed that in principle, even if industrialisation of the third world does not impose a balance-of-payments constraint on the rich countries, it could harm their economic development in another way. It could lead to a change in the structure of these economies, say towards services - a specialisation which may be unfavourable from the point of view of the future growth of productivity. This argument is of course similar to that used in the past by the developing countries themselves - that trade with the rich countries had pushed them into 'unfavourable' patterns of production, for which the terms of trade moved against them in the long run, and for which growth potential was low.

V. DOES THIRD WORLD INDUSTRIALISATION CAUSE DE-INDUSTRIALISATION IN ADVANCED COUNTRIES?

The statistics on third world exports of manufactures have been provided in volume I of the Research Seminar Report. For the purposes of this paper, the main characteristics of these exports may be summarised as follows.

(i) Although still very small, the third world's share in world exports of manufactures has increased appreciably, particularly during the 1970's. The share increased from a mere 3.9% in 1960 to just 5.0 per cent in 1970; but over the next decade, it nearly doubled and was 9.0 per cent in 1980.(22) In the 1960's, in the developed market economies, imports of manufactures from the third world increased at much the same rate as the former's imports from the rest of the world (chiefly their intra-trade). However since 1970, third world imports have been increasing at about twice the rate of the latter, thus leading to concern about de-industrialisation on accounting of 'cheap labour' imports.

(ii) The expansion in third world manufactured exports has been fairly widely based; it has not been confined to traditional products, such as food, textiles, or leather and footwear. There has been, for example, a very impressive increase in the exports of engineering and metal products

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(22) UNIDO, World Industry in 1980, op. cit.

notwithstanding the fact that their initial level was extremely low.

(iii) The third world exports of manufactures are highly concentrated in a small group of countries. In 1976, the 12 leading exporters of manufactures (excluding petroleum products and unwrought non-ferrous metals) accounted for 83% of total developing countries exports to the developed market economies.

(iv) The subsidiaries of the multinationals, particularly of those from the U.S., have played a leading role in such exports.

As for the impact of third world exports on output and employment in the industrial countries, there is a large body of empirical studies on these issues, dating back to the early 1960s.[23] These studies have normally been carried out at a fairly high level of product disaggregation for the various countries, but all broadly follow a similar methodology. They invariably use the following model for analysing the effects of trade on industrial employment.

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(23) For a recent comprehensive review of this research, see, UNIDO, 'The impact of trade with developing countries on employment in developed countries', Vienna, 1979. See also OECD, The impact of newly industrialising countries, op. cit.

$$dE = \frac{1}{P_t}(dD + dX - dM - E_{t+1}\, dP)^{(24)} \quad \ldots\ldots\ldots\ldots (1)$$

where E = Employment

D = home demand (volume)

X = Exports (volume)

M = Imports (volume)

P = Productivity per worker year

t, t+1 are the time periods being considered, and

d indicates the change between t and t+1.

In other words, given the level of productivity, the model ascribes changes in employment between any two periods to the growth of home demand, to the growth of exports and of imports; the last term indicates the effect of changes in productivity. It is thus a comparative static model, in which the variables on the right-hand side act independently and their effects on employment are additive.

For both the U.K. and the U.S. the application of the model yields two kinds of conclusions:[25] First, relative

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(24) The equation is derived from the following two identitied:

$$O = D + X - M$$

and $P = O/E$

where O is gross output and the other symbols are as above.

(25) For the U.K. see V. Cable, 'British protectionism and imports', ODI Review, 1977, Foreign and Commonwealth Office, 'The newly industrialising countries and the adjustment problem, London, 1979. For the U.S., see for example C.R. Frank Jr, Foreign Trade and Domestic Aid, Washington, 1977.

to the growth of productivity and changes in home demand, trade (with both the developed and the developing countries) has a relatively small effect on reducing manufacturing employment. Secondly, the effect of trade with the less developed countries on aggregate unemployment in the two economies has been (absolutely) negligible. For example, the Foreign and Commonwealth Office report estimated that between 1970 and 1977, increased imports of manufactures (SITC categories 5-8) into the U.K. from newly industrialising countries is 'unlikely to have displaced more than 2 per cent of the 1970 labour force of the industries concerned.' However, over the same period, the increase in UK manufactured exports to the developing countries is thought to have led to an increase in employment of a similar order of magnitude. Thus it is concluded: 'Any net displacement [of labour, due to trade with the developing countries] appears to have been quite small'

In general for the developed countries, empirical studies indicate that, taking into account both the negative effects of increased third world imports and the positive effects of the resulting increased exports (arising from the high import propensity of the developing countries), the net impact on employment is slightly negative. This is because imports tend to replace labour in the labour-intensive industries, and exports generally accrue to the more capital-intensive industries (e.g. machinery) whose products are imported by the developing nations. However, although

the overall employment effects are regarded as being very small, it is recognised that they would nevertheless be important adjustment problems in the advanced countries, since they tend to be concentrated in particular regions and confined to particular categories of workers (e.g. women).[26]

These conclusions seem reasonable enough, but unfortunately there are serious reservations concerning the model (equation (1)) on which they are based. First, as noted earlier, it is an additive model, which precludes any interaction, amongst the independent variables. Thus increases in productivity, in terms of the model, always lead to a reduction in employment, which is clearly unsatisfactory. It is more reasonable to envisage the growth of productivity leading to a reduction in domestic prices and thereby interacting with all the other variables - for example reducing the level of imports from what it otherwise would have been, increasing domestic demand, and on account of both these factors increasing domestic output and employment. Secondly, the model does not consider the competitive effects of imports on the home country's export markets in third countries. Thirdly, and most importantly, equation (1) is singularly inappropriate for analysing the effects of trade in balance of payments - constrained economy such as that of the U.K. In such an economy, an

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(26) See the studies cited in note 23.

increase in trade imbalance has a multiple effect on the level of domestic output and hence on unemployment. These effects manifest themselves at the level of the economy as a whole and not simply as indirect microeconomic effects of the kind which are often allowed for in the empirical studies. Apart from the direct and indirect impact at the microeconomic level, the deterioration of the trade balance in a particular industry means that unless there is an equal improvement of the balance in another industry, the government (through fiscal and monetary policies) is forced to run the economy at a lower level of output and employment than it otherwise would.

In view of the above difficulties, an alternative approach to examining the impact of third world industrial exports on the advanced countries, which fits in with the earlier analysis of de-industrialisation, seems more useful. In recent contributions, a group of Cambridge economists have argued that because of long-term structural features which cause adverse and probably cumulative time trends in imports and exports, some advanced countries are in long-term disequilibrium in the sense discussed in section IV, i.e. they are balance-of-payments constrained; others

however are not.[27] The second group (which would include countries like Japan and West Germany) may choose price stability rather than full employment, but they are not prevented by balance-of-payments reasons from achieving the latter.[28] On the other hand, it is an underlying assumption of this approach that countries like the U.K. and most likely the U.S. which are balance-of-payments constrained, are unable to correct the disequilibrium by exchange rate depreciation for all the reasons discussed in the recent literature. They are, therefore, forced to have

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(27) For a detailed description of the world trading system in these terms and of the underlying analytical model, see Cambridge Economic Policy Review, Vol.5 1979, chapter I and Appendix L See also T.F. Cripps, 'Causes of growth and recession in world trade', Cambridge Economic Policy Review, 1981; N. Kaldor 'Foundations and implications of free trade theory', in E. Malivand and J.P. Fitoussi (ed.), Unemployment in Western Countries, London, 1980.
The adverse long-term time trend terms in the import and export functions for manufactures have, for example, been observed in a number of econometric studies for the UK economy. See for example M. Fetherston, B. Moore and J. Rhodes, 'Manufacturing export shares and cost competitiveness of advanced industrial countries', Cambridge Economic Policy Review, 1977.

(28) This is not to say that even Japan or W. Germany may sometimes be forced by a short-term worsening of its trade balance (due to say, a large increase in the oil bill) to take immediate remedial action, as indeed they have done in the past. The argument in the text refer to the long-run structural trends. For example, in Japan, excluding fuels, the current account balance has risen rapidly and consistently from $1.4 billion in 1960 to $36.7 billion in 1977 (at constant 1975 prices for manufactures). See further G. Gudgin and W.H. Godley, 'International trade and output as a system', Dept. of Applied Economics, mimeo, 1979 and Cambridge Economic Review, vol.5, 1979.

low rates of growth of output and employment and therefore investment, which in a free trading system could in fact worsen the initial disequilibrium.(29)

The impact of third world manufactured exports on the industrial countries may, therefore, be studied at two levels. The first is the extent, if any, to which these flows contribute to increasing the imbalances in the international trading system as a whole. Since third world countries have a high propensity to import, their exports to the advanced countries should at first sight cause no disturbance to the system as a whole. However, if trade flows are such that the bulk of third world exports (say) go to balance-of-payments constrained countries such as the U.K., and their imports come from an unconstrained country such as Japan, this would obviously exacerbate the existing imbalances and reduce world trade, output and employment from what they otherwise would be. Although there is not sufficient research on this topic, there is evidence that the third world's trade in manufactures is to some degree a source of imbalance in the international system.(30) (For

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(29) See further A. Singh, 'The U.K. industry and the world economy: a case of de-industrialisation'. op.cit.

(30) Lydall's major study, Trade and Employment, ILO, Geneva, 1975 was also concerned with the impact of increased manufactured exports from the developing countries on the developed countries as a whole. However, he assumed 'a balanced increase in trade' between the two groups and did not consider the imbalances which, despite the overall balance, this may create in the individual developed countries.

example, there is a trend increase in Japan's share of third world markets).[31]

Secondly, within this framework one could consider the effects on individual countries. For example, previous studies have shown that the main cause of the U.K.'s long term disequilibrium is trade in goods rather than in services, and within the former it is largely due to trade in manufactured products. In order to examine the extent if any, to which the newly industrialising countries (the NIC's) and the third world contribute to U.K.'s trading disequilibrium in manufactures, table 9 shows changes in U.K.'s trade balance in finished manufactures (SITC 7 and 8), from 1964 to 1978, with the world as a whole, with NIC's and different sub-groups of NIC's, as well as for purposes of comparison with the advanced industrial countries. Average annual trade balance over three successive three-year periods is given to indicate long-term trends. The table shows that whereas the U.K.'s annual balance with the world increased by approximately £500 million between 1946-66 and 1970-72, over the next six years, there was a much larger increase of almost £1500 million. This is in striking contrast to the picture with respect to the advanced industrial countries. For example, in the case of the original six members of the European Economic Community (EEC), the trade balance in finished manufactures declined

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(31) Cambridge Economic Policy Review, 1979, Appendix A.

Table 9: UK's Trade Balance in Finished Manufactures (SITC 7 and 8) with NIC's and Other Regions and Countries 1964-1978

	(£m, current prices)			(As % of world balance)		
	(1964-66)	(1970-72)	(1976-78)	(1964-66)	(1970-72)	(1976-78)
World	1501.4	2014.7	3525.2	100.0	100.0	100.0
EEC (original six)	78.6	-41.6	-1377.7	5.24	-2.06	-39.08
Japan	2.7	-55.0	-655.5	0.18	-2.73	-18.59
W. Germany	-46.9	-149.0	-1005.5	-3.12	17.40	-28.52
U.S.	2.7	-30.2	-412.8	0.18	-1.50	-11.71
NIC's	328.1	512.1	1159.6	21.85	25.42	32.89
NIC's-Iran	309.3	455.2	765.1	20.60	22.59	21.70
Med + Israel (1)	115.5	200.4	462.5	7.69	9.95	12.10
E. Europe (2)	14.4	35.4	57.9	0.96	1.76	1.64
India	106.0	78.2	149.4	7.06	3.88	4.24
E. Asia (3)	43.2	48.6	-101.9	2.88	2.41	-2.89
Latin America (4)	30.2	92.5	233.2	2.01	4.59	6.62
Iran	18.8	56.9	394.5	1.25	2.82	11.19

Sources: Overseas Trade Accounts; Overseas Trade Statistics of the UK; Annual Statement of Trade of the UK.

(1) Portugal, Spain, Malta, Yugoslavia, Greece, Turkey, Israel

(2) Poland, Hungary, Romania

(3) Thailand, Malaysia, Singapore, Hong Kong, Philipines, Taiwan, S. Korea

(4) Mexico, Brazil, Argentina

by £100 million between 1964-66 and 1970-72, and at an accelerated pace over the subsequent six years. The negative time trend in the balance with certain individual industrial countries, such as Japan and West Germany was greater still.

As far as the newly industrialising countries are concerned, the pattern is similar to that for the world, i.e. a growing increase in trade balance over time. Although during the 1970's there was a particularly large increase in the balance with Iran, the broad picture remains unaltered even if Iran is excluded from the NIC's. Various sub-groups of NIC's identified in the table (Mediterranian and Israel, Eastern Europe, Latin America) also show approximately similar trends except for East Asia (i.e. Korea, Hong Kong, Singapore, Malaysia). The last three columns of table 9 indicate that inclusive of Iran, the NIC's accounted on average for nearly 22 per cent of U.K.'s trade balance in finished manufactures during 1964-66, and for about a third in 1977-78; without Iran, the corresponding figures are 20.6 and 21.7 respectively. Parathetically, it should be noted that if U.K.'s trade balance is considered in relation to the third world as a whole rather than the NIC's, the picture will be even more favourable. The main reason for this is that the great bulk of third world imports of finished manufactures into the U.K. emanate just from the NIC's.

The data in table 9 thus provide a prima facie case for arguing that, despite the fast pace of industrialisation in the NICs and a large increase in their manufactured exports to the U.K., the U.K.'s trade in finished manufactures with the NICs leads to an increase in domestic output and employment rather than a reduction.(32) It is trade with the Japanese and with the other advanced countries, by contributing to a further tightening of the balance of payments constraint, which causes losses in jobs and production. It could well be the case that in the other balance of payments constrained countries, manufacturing trade with the third world has become disequilibrating. Nevertheless, it is likely in general to be a far smaller source of disequilibrium than trade with Japan and other industrial countries.

Therefore, quite apart from the effects of the rise in oil prices, imbalances in trade in manufactures are, indeed, an important cause of the slow growth of output, and hence of an increase in unemployment in developed economies such as the U.K. However, these imbalances, at least up to now have essentially been due to trade amongst the industrial

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(32) For a fuller examination of these issues and for a disaggregated analysis of the U.K.'s manufacturing trade with the third world countries, see A. Singh, 'Structural Changes in the U.K. economy: a long term structural analysis of U.K.'s trade with less developed countries and its impact on the U.K. economy', UNIDO, Vienna, 1982.

countries themselves rather than their trade with the third world.

It is of course possible that with further industrialisation in the NIC's and elsewhere in the third world, their trade with the advanced countries may become as disequilibrating as is the present manufacturing trade of the U.K., the U.S. etc., with Japan. But this need not inevitably be so. In this context, it is important to reflect on the fact that during the last two or three decades, there has already been intensive industrialisation of one region of the world which has not harmed industrial development in the old industrial countries. As seen in Section III, between 1960 and 1980, the share of centrally planned economies of Eastern Europe in world manufacturing increased from 17 per cent to about 27 per cent; it would be difficult to argue that this was at the expense of western industrial economies.

VI. DECELERATION OF WORLD ECONOMIC GROWTH AND PROSPECTS FOR THIRD WORLD INDUSTRIALISATION.

Let us stand back a little and consider the present state of the world economy in historical terms. We can see that the two decades before the collapse of the Bretton Woods system and the oil price rise of the early 1970's were a golden age for the western industrial economies, and in many ways for the world economy as a whole.(33) During this long period, countries like France, West Germany and Britain maintained virtually full employment: a rather unusual phenomenon for capitalist economies. In fact, these countries were not only able to employ their own available labour forces but also to give jobs to a significant number of workers from abroad. In the 1960's in West Germany and France, immigrant workers constituted something like 10 per cent of the employed labour force. In this golden age, as we saw in section III, a number of third world nations also made major industrial strides.

The historically high long-term rates of growth of output, consumption, and employment achieved by the advanced countries in the 1950's and 1960's were accompanied by an enormous increase in world trade. World exports of

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(33) There is no implication here that these two events were the causes of the demise of the 'golden-age' - they just mark significant landmarks in post-war economic history.

manufactures grew at a long-term rate of over 10% per annum - an expansion in which again a number of third world countries also participated.

But the world economy is today in deep crisis. In 1980, world trade rose by only one per cent, and in 1981 it may not have increased at all. Although, for a number of reasons, the third world as a whole was relatively unscathed (in terms of industrial development) by the first oil-price rise in 1974 and the subsequent slow-down in world trade, most third world countries, have found themselves during the last two years in serious balance of payments and external financial difficulties. The causes of this phenomenon have been examined elsewhere and it will take me too far afield to go further into that issue here.(34)

As a direct consequence of these external disequilibria, third world countries have been forced to curtail severely their industrialisation and development programmes. Even the most industrially developed of the third world nations like Brazil, Mexico and India, have been very much affected by the present downturn in the world economy. However, as noted in Section II, the third world countries require an annual rate of economic growth of 6 to 7 per cent and of industrial growth of about 10 per cent for compelling economic and social reasons: to reduce absolute

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(34) See for example UNCTAD Trade and Development Report, 1981, op. cit.

poverty and to expand employment opportunities for a growing and increasingly urban population.

Given this inescapable objective, what can the third world countries do in the current circumstances of the world economy? One obvious answer is that their efforts should be directed towards stimulating the growth of the whole world economy. For if the advanced industrial countries and the world economy grew faster, the third world would benefit from the increased capacity of the advanced countries to import their manufactures, increased commodity and raw-material prices, and hopefully also from the larger amount of foreign aid, loans or investment which the industrial countries might then be willing to provide. However, the developing countries (because of their small share in the world economy) cannot do all that much to increase world economic growth. Only the U.S or the advanced countries together have between them the initiative and the ability to do so. Unfortunately, all the signs, including those from meetings such as at Cancun and Versailles, are that they are not likely to take that course. Probably, therefore, the growth rate of the world economy during the current decade will lie in the lower range of the available estimates - which vary from a pessimistic -2% p.a. to a highly optimistic +3%.

The crucial consequence for the third world of the expected long-term deceleration in world economic growth is that world trade will expand much more slowly than in the 'golden age'. In my view this will necessitate a re-examination of the general third world perspective (as illustrated by the traditional UNCTAD view), on the relationship between trade and development. For if overall trade increased very slowly, then even if there were no tariff or non-tariff barriers in advanced countries to imports of third world manufactures, the latter would still probably only be able to grow at a pace inadequate to generate the socially required rates of economic expansion in the developing countries (in the sense mentioned earlier).

The policy conclusion which I draw from this analysis is that in the coming decade the countries of the South will have to rely much more on their internal dynamics, on the growth of internal demand, rather than on world market forces to generate economic expansion. They will need greater import substitution, more internal technological development and more economic and technological cooperation among themselves.

It must be recognised that such a programme is easier for the large semi-industrial countries like Mexico, Brazil or India to implement than for the smaller or less developed economies. This is for two reasons. First, the 'large' size of the former means that they are much more capable of

insulating themselves from the impulses of the world economy; foreign trade normally accounts for a relatively smaller proportion of the g.d.p. as they usually have large enough internal markets for reaping economies of scale. In principle, the rate of growth of such economies is, therefore, much less dependent on the growth of the world economy. Secondly, the semi-industrial economies already possess fairly diversified industrial sectors with trained manpower, managerial and organisation skills, so that on the supply side, they have the possibilities of self-sustained internal growth to a degree which are much less open to economies at lower levels of industrialisation.

It is important to stress that the policy emphasis on internal growth does not mean that export opportunities or the export effort should be neglected. For example, many semi-industrial developing countries have an enormous export potential in the oil producing countries as well as in other developing economies. Some of them (e.g. India, China, Korea) also have opportunities for increasing their foreign exchange earnings by 'export' of labour to the oil-producers. In view of the external financial gap which third world countries will face for a long time to come (not least because of previous debt accumulations), it is clearly necessary for them to make full use of such opportunities to the mutual benefit of themselves as well as of the oil

producers. The main burden of the analysis presented here is that in order for the NICs to continue to achieve fast growth in a slow-growing world economy, the essential dynamic will have to be provided increasingly by internal factors rather than by the external economy.

ANNEX III-3

Seminar on International Industrial
Restructuring and the European Periphery
Countries

Sesimbra, Portugal, 22-24 October 1980

PATTERNS OF THE INDUSTRIAL DIVISION OF LABOUR AND THE FRAMEWORK OF AN ENLARGED EUROPEAN COMMUNITY

by

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This paper sets forth the general tendencies in the international division of labour within an enlarged EEC, despite the differences in the inherent characteristics of Community Countries and Aspirants.

The EEC export possibilities for capital goods sector will continue to preponderate the composition of trade, and the direction of trade may not undergo fundamental changes in the sense that new markets will be spiraling to totally new areas. The reason is that the export structure of the Economic Community, to a large extent reflects the import structure of countries entering the Common Market. Much importance can be attached to the intra-industrial effects of trade creation caused by the enlargement. The available opportunities do not seem to be fully utilized. Accelerated industrial development in countries entering the EEC is likely to create new possibilities in the composition of trade between the EEC members. On the other hand, competitive pressure will be largely increased in the labour intensive consumer industries. This development will affect particularly the textile and clothing industry, as well as the shoe and leather products industry. When approximately one-fifth of the original employees lost their jobs in these branches, it magnified the problem of unemployment in the European Community.

Spain could, just as the EEC, derive profits from increased trade, above all, in the capital goods industries. It is, on the other hand, less likely that the consumer industries would be significantly favoured by the country's entry into the EEC. There are two reasons for this: First, these industries will lose competitiveness; and secondly, the enlargement of the market for domestic capital goods and basic industries will have a negative impact on the competitive position of the consumer goods industries in the Spanish factor markets (transport equipment and accessories for the automobile industry, electro-technical products and chemical products are likely to gain importance in the industrial exports).

For Greece, it is expected that the entry into the EEC will enhance the inter- and intra-industry trade. The country's comparative advantages in competition and specialization are in those industrial branches in which the EEC and Spain show comparative disadvantages. These industries are

predominantly the consumer goods industries. Moreover, the division of labour with the EEC in the various industrial branches is not as intensive as it could have been, in view of the export and import structures of the EEC and Greece. Thus, there are specialization possibilities in the production of spare parts for investment goods; the assembly of commercial vehicles, the production of simple machines and in shipbuilding and the maintenance industry.

Portugal has an intermediate position between Spain and Greece. The chances for this country are likely to lie in the field of a stronger intra-industry division of labour in the capital goods sector, for instance, the agricultural machinery, textile machinery and machine tools industries, rather than in an inter-industry division of labour through which the country would increasingly become the supplier of consumption goods in the present EEC, thereby reducing the scope for previous suppliers in the Economic Community. In any case, the entry of Portugal might stimulate the consumer industries, particularly sophisticated textile and clothing products, as well as shoes. It should be considered that the total opening of the EEC market for this relatively small country means a significant enlargement of the potential demand for products for which the country possesses clear comparative advantages in competition.

To what extent an optimal locational structure will develop in the enlarged areas of the Common Market will largely depend on the economic policy in the countries entering the Common Market and in the present member countries. An efficient economic policy in the countries entering the EEC would require the following principles:

1. The investment activities of private and public companies should not be directed by government regulations, subsidies and sales and price guarantees, which are presently the case.

2. Further industrial development should be directed towards the world market. It is imperative that export activities should be given equal importance.

3. The changes in the production structure, caused by integration and constituting a prerequisite for growth should be facilitated by measures conducive to adjustment befitting the changing locational conditions. It should not be attempted to preserve companies or industrial branches which are in structural difficulties.

4. The mobility of capital and labour between individual branches and regions should be promoted in order to ease the structural adjustment pressures, induced by the integration, from constraints. Special attention should be given to labour training schemes, to development of efficient capital markets and to the relaxation of regulations preventing lay-offs of workers.

5. The fusion of companies should be promoted to the extent necessary, in order to rationalize production processes and to achieve real cost reductions. At the same time, however, it would be necessary to encounter possible risks of monopolization.

6. Foreign investors should be granted a high degree of legal security. Tax and other incentives to foreign investors should, however, effect healthy competition with other capital importing countries. This may result in a significant reduction of the benefits accruing to the country from capital inflow.

In the countries entering the Common Market, the economic policy reforms described above have already been initiated, or are seriously being considered. These reforms could probably not be realized abruptly due to the involved political risks. In Portugal and Spain, the practical implementation of these reforms calls for conscientious scrutiny as they have not yet competed the consolidation of re-oriented domestic policies. In order to create as much transparency as possible, and to positively influence the expectations by the entrepreneurs, employees and consumers, the envisaged reforms need to be announced well in advance in the respective time. The

envisaged reforms should, in any case, be declared openly. The direct consequences of the enlargement of the EEC for those countries that presently belong to the community are likely to be limited concerning the industrial sector as a whole, since the three entrants are relatively insignificant trading partners for the EEC countries. A change in the composition of trade does not necessarily initiate a change in the direction of trade. On the other hand, in specific sectors, export drive and import competition could have an impact. Thus, it is expected that the shrinking processes in the consumer goods industry will be further aggravated. One can also count the increasing pressures in the basic industries, such as chemical products and in the capital goods sector, transport equipment, machinery, electro-technical products. This pressure will be particularly noticeable in the case of relatively standardized products and production processes. However, unlike the predominant part of the consumer goods industry, these industrial sectors have large possibilities to redirect the sales to other markets, or to capture new markets through product and process innovations. Therefore, one should hardly expect any negative impact on production and unemployment. Increased exports of these branches would be redirected to the new entrants.

The concentration of adjustment pressures on frequently shrinking industries in weak regions might necessitate the need for introducing restrictive trade policies which are uncongenial to the entrants. Obviously, neither the division of labour between the Community and the entrants would gain anything from a conservation of redundant industrial locations. New entry into EEC would confer the responsibility on Community members to acclimatize themselves to structural adjustment. The main task is to make companies accede to product, productive process, innovations, and to increase the professional and regional mobility of the labour force. These are economic policy requirements which, although not new, are crucial for a successful enlargement of the Community. It is also essential that international locational innovations i.e. redeployment of companies and productive processes from the present EEC to the three new entrants, would not be hindered but promoted. Indeed, if such innovations are hindered, production and employment would in the long run be jeopardized. Obstacles to redeployment would also eclipse the entrants' scope for a rapid industrial transformation with the aid of human capital and technology - without which the

redeployment process would be entangled in the web of severe difficulties.

It is important to know that the entry into the Community and a constructive adjustment policy of the nine Community countries in itself do not automatically produce a solution to the manifold structural problems, which the Greek, Portuguese and Spanish industries are facing in varying degrees.

Rapid progress can be achieved only by a firm rejection of any illusion that the problems can be sunk through the prolongation of a transition period (seven years for Portugal and ten years for Spain) for full integration.

The reduction of protective measures should proceed gradually in order to avoid difficult adjustment problems which could arise through company bankruptcies and increased unemployment. However, the risk is that governments, companies, and the labour force would be inclined not to actively pursue the adjustment if the entry period would be postponed to a di tant future.

One result of the potential entrants' obligatory compliance with the desired adjustment measures within the transition period of five years, as agreed to with Greece, would be the exit of weak and marginal companies which fail break-even.

ANNEX III-4

Seminar on International Industrial
Restructuring and the European Periphery
Countries

Sesimbra, Portugal, 22-24 October 1980

A COMPARATIVE ANALYSIS OF THE IMPACT OF TRADE IN INDUSTRIAL PRODUCTS ON THE EMPLOYMENT PATTERN IN SIX EEC COUNTRIES: REPORT ON A RESEARCH PROJECT

by

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CONTENTS

I. INTRODUCTION:

This marginal summary attempts to present an integrated discussion of the results of research carried out in Deutsches Institut für Wirtschaftsforschung on behalf of the German Federal Ministry for Economic Affairs. Although the broader topic of impact of trade on employment in individual developed countries has been covered by many research studies, a comparative elucidation, with classificatory analytical exposition of the set of inter-relationships between trade in industrial products and employment pattern, has remained unexplored in the empirical literature on EEC countries. The countries selected for this purpose are Federal Republic of Germany, France, Italy, United Kingdom, Netherlands and Belgium.

The analysis, conducted within the framework of a well defined methodology, is designed to highlight the role of trade in industrial products and its impact on employment. With the aid of 6 tables (attached to this paper), this research project illustrates:

- the effects on total employment;
- the effects on different categories of workers; and
- the effects on sectoral employment pattern.

II. METHODOLOGY:

The input-output analysis (the open static Leontief model) has been used as a recourse to translate trade flows into employment figures. This approach takes into account the direct effects in industries exposed to foreign trade, and the indirect effects from inter-industrial linkages, i.e. the production of intermediate inputs generated by exports on the one hand and the decrease in demand for intermediate inputs, when domestic production is replaced by imports, on the other.

The data were taken from EEC and OECD sources.

The sectoral breakdown consists of 24 branches, 16 of which are within manufacturing.

The calculations are based on 1977 trade flows and sectoral labour-output ratios of that year. The standardized input-output tables relate to 1970, i.e. all values are expressed at 1970 prices.

In view of the high level of technological know-how in the developed countries, competitive imports are defined as manufactures and semi-manufactures except for food and petroleum products. Industrial products, on export and import sides, have been considered in terms of international trade statistics (SITC divisions 5-8). The six tables reveal the impact of trade in industrial products on employment and production in various groups of countries. The decimal point is represented by a coma.

Owing to reasons of restrictive assumptions in the theoretical assessment and inaccuracies in the data employed, the results of the mathematical models should not be interpreted with too high expectation of accuracy. However, their order of magnitude and their direction allow a useful picture to be built up. Since the distortions tend to move in the same direction for all the EEC countries, the comparison of effects between these countries is not significantly prejudiced.

III. EFFECTS ON TOTAL EMPLOYMENT:

In 1977, in the six EEC countries, nearly 14 million employees depended on export production. The production of export oriented products (to developing countries) alone required 3.7 percent of total employment in the individual countries; this represents 3-4 percent of total employment in the respective countries. In manufacturing alone, around 10 percent of the labour force worked for deliveries to the Third World. On the other hand, the employment equivalent of the imports of industrial products from developing countries amounts only to one third of the positive employment effect of exports in the four big countries, and to half of the employment effects of exports in the two small countries. (The employment forgone due to imports is shown in the third column of the tables).

For reasons of comparison, the employment effects are also given per 100 million US $-exports and imports respectively. They differ

significantly between the EEC countries. E.g., production of total exports requires more than 14,000 persons per 100 million US$ (at 1970 prices) in the United Kingdom, nearly 12,000 in Italy, 8,500 - 9,000 in the FRG and France, and only around 6,000 in Belgium and the Netherlands. The differences can be explained - to the extent that they are not the result of different product structures for exports - by differing import intensities and productivity. Thus in the Netherlands and Belgium output leads directly and indirectly to imports of intermediate goods amounting to 40 percent of the export value; this leaves only 60 percent as a contribution to the GDP, with a correspondingly small effect on employment. In the larger EEC countries, on the other hand, around 80 percent of the export value is produced internally. The high numbers obligated to be employed in Italy, and even more so in the United Kingdom, are above all the result of low productivity.

IV. EFFECTS ON DIFFERENT CATEGORIES OF WORKERS:

Besides the effect on total employment, the effects on different categories of workers (males, females and several qualification levels) have been calculated, with a focus on the requirements of fixed capital and the effect on GDP. The differences in the factor content of exports and imports will be revealed, when we divide the effects of exports by the effects of imports. These ratios are compiled on the right-hand part of the tables. The first line on the FRG table shows that the total employment requirements to produce exports to developing countries amount to 92 percent of the employment content of an equal amount of imports from developing countries. The share of females on the export side is less than two thirds of the share on the import side. The share of unqualified workers on the export side is three quarters of that on the import side, etc.

The figures reveal that - in contrast with an increased division of labour with other industrialized countries, which in general leads to only a slight shift of the labour force - the changes resulting from an extension of trade in industrial products with developing countries are considerable. It is not so much the negative net effect on total employment that is important, but rather the concentration of the displacement of disadvantaged groups of workers, i.e. women and unqualified workers. Thus, structural

changes arising from an increased division of labour with developing countries require highly qualified employees with specific experience and the training of women in occupations which, so far, are the domain of men. The changes in the labour market caused by trade with developed countries outweigh the changes caused by trade with the three entrants aspiring for membership in the Community.

V. EFFECTS ON SECTORAL EMPLOYMENT PATTERN:

In the case of trade with developing countries, the effects are mainly characterized by shift from the consumer goods industries to the capital goods industries. The loss of jobs, resulting from trade with developing countries, is severe in the textile and clothing industries. The capital goods industry created new avenues and paved the way for generating employment opportunities. This applies in particular to the engineering industry. The effects on employment in the basic products field vary and, as a rule, are considerably less: in the chemical industry increased division of labour with the developing countries is leading to a growth in employment; in the United Kingdom this also applies to the metal industry, and in Italy, above all, to the manufacture of mineral products. The metal industry in Italy and France, and the manufacture of mineral products in the Netherlands and the United Kingdom, on the other hand, are losing jobs. In Belgium this is true of both industries. The structural changes caused relatively high loss of jobs even in the basic products branch.

As an indicator for the magnitude of the sectoral structural change, we can take the number of those workers displaced by imports who have to move into another sector in order to find a job in export oriented industries. This figure will be larger when there is a greater division of labour between sectors. According to the calculations, conducted within the framework of equal amounts of exports and imports, the United Kingdom and Italy are worst affected by the sectoral shift, followed by the FRG, the Netherlands, France and Belgium. With an increased division of labour in the Third World, 30 percent of the jobs for exports production would be in branches of the economy other than redundancies caused by imports. In trade with the other western industrialized countries outside the EEC this

figure is only 20 percent, and within the EEC as low as 10 percent. Only Italy would experience a sizeable sectoral shift as the result of trading even with the industrialized countries.

VI. CONCLUSION:

(1) The mathematical models relating to exports and imports of equal size show that a division of labour with the developing countries leads in the EEC countries to a higher net loss of jobs and to greater shift in structure than trade with other industrialized countries. However, in all EEC countries under consideration the structural changes arising from trade with developing countries are small if compared with total employment or with structural changes from other sources (e.g. productivity increases, shifts in final demand).

(2) The weight of the effects on employment is sharply distinguished between the individual EEC countries. This fact and differences in the overall economic performance must be taken into account in order to formulate realistic proposals in pursuit of removing trade barriers in the EEC.

Table No. 1. Effects on employment and production from trade in industrial products by groups of countries, 1977:

FEDERAL REPUBLIC OF GERMANY

Group of countries	Employment generated by exports		Employment forgone due to imports		Ratio of the effects from exports and imports each of US-$ 100 million[1]					
	Total	Per US-$ 100 million[1]	Total	Per US-$ 100 million[1]	Persons engaged	Share of females	Share of unqualified workers[2]	Fixed capital per person engaged[2]	GDP	GDP per person engaged
	in thousand persons									
All developing countries	956,8	8,6	358,0	9,4	0,92	0,60	0,73	1,13	1,05	1,15
European developing countries	251,9	8,6	116,6	9,3	0,92	0,68	0,78	1,13	1,03	1,12
Spain, Greece, Portugal	135,9	8,4	76,0	9,2	0,92	0,72	0,81	1,13	1,03	1,12
Yugoslavia, Turkey	116,0	8,7	40,5	9,6	0,91	0,63	0,74	1,14	1,05	1,16
Non-european developing countries (excl. OPEC)	321,1	8,4	223,8	9,4	0,89	0,59	0,71	1,21	1,05	1,13
Mediterranean countries	75,2	8,6	23,2	9,3	0,93	0,60	0,71	1,13	1,05	1,14
Latin America	102,0	8,2	43,7	9,1	0,90	0,64	0,74	1,13	1,06	1,18
South-East Asia[3]	54,0	8,4	107,3	9,5	0,89	0,58	0,71	1,31	1,05	1,18
Other developing countries	89,9	8,3	49,7	9,4	0,88	0,62	0,73	1,20	1,05	1,19
OPEC countries	383,8	8,8	17,5	9,5	0,93	0,55	0,70	1,07	1,08	1,16
China (People's Republic)	17,8	7,5	7,2	9,1	0,82	0,46	0,62	1,40	1,01	1,24
COMECON countries	248,0	8,5	102,7	8,6	0,99	0,73	0,83	1,00	1,04	1,05
Western industrialized countries (excl. EEC)	1 073,3	8,5	707,3	8,4	1,00	0,91	0,96	1,00	1,01	1,01
Japan	42,8	8,0	113,8	8,2	0,97	0,95	0,95	1,13	1,01	1,04
USA	273,6	8,4	188,8	8,1	1,03	0,81	0,94	1,06	1,01	0,98
Other western industrialized countries	756,9	8,5	404,7	8,7	0,99	0,93	0,97	1,06	1,00	1,01
EEC countries	1 757,9	8,4	1 404,9	8,5	1,00	0,90	0,94	1,00	1,01	1,01
All countries	4 053,8	8,5	2 580,1	8,6	0,99	0,83	0,90	1,00	1,01	1,02

1) At 1970 prices.- 2) In manufacturing industries only.- 3) Singapore, Taiwan, Philippines, Republic of Korea, Hong Kong, Malaysia.

Table No. 2. Effects on employment and production from trade in industrial products by groups of countries, 1977:

FRANCE

Group of countries	Employment generated by exports		Employment forgone due to imports		Ratio of the effects from exports and imports each of US-$ 100 million[1]					
	Total	Per US-$ 100 million[1]	Total	Per US-$ 100 million[1]	Persons engaged	Share of females	Share of unqualified workers[2]	Fixed capital per person engaged[2]	GDP	GDP per person engaged
	in thousand persons									
All developing countries	679,9	8,9	233,6	10,2	0,88	0,73	0,82	1,13	1,01	1,16
European developing countries	123,3	8,7	94,9	9.8	0,89	0,88	0,89	1,13	0,99	1,11
Spain, Greece, Portugal	94,2	8,8	84,9	9,7	0,90	0,91	0,90	1,13	1,00	1,11
Yugoslavia, Turkey	29,1	8,6	10,0	10,1	0,85	0,74	0,84	1,29	0,96	1,15
Non-european developing countries (excl. OPEC)	332,9	8,9	127,6	10,4	0,85	0,66	0,78	1,13	1,01	1,19
Mediterranean countries	100,8	9,0	18,8	10,7	0,84	0,60	0,77	1,31	1,01	1,20
Latin America	66,2	8,7	18,7	9,8	0,89	0,65	0,77	1,00	1,05	1,18
South-East Asia[3]	24,5	8,9	39,0	10,8	0,82	0,75	0,78	1,14	0,99	1,21
Other developing countries	141,4	8,9	51,1	10,3	0,87	0.67	0,78	1,06	1,04	1,20
OPEC countries	223,6	9,0	11,1	11,4	0,79	0,82	0,86	1,14	1,02	1,29
China (People's Republic)	3,4	8,2	8,0	11,1	0,74	0,51	0,62	1,58	1,02	1,38
COMECON countries	101,2	8,3	54,7	9,5	0,88	0,72	0,82	1,19	1,01	1,15
Western industrialized countries (excl. EEC)	338,0	9,0	435,6	9,1	0,99	0,99	1,07	1,00	0,97	0,98
Japan	17,9	9,2	62,8	8,9	1,03	1,40	1,18	0,94	0,92	0,90
USA	116,8	8,6	172,4	8,7	0,98	0,99	1,07	1,12	0,93	0,95
Other western industrialized countries	203,3	9,1	200,4	9,5	0,97	0,94	1,06	1,06	1,00	1,04
EEC countries	1 042,0	9,2	1 307,1	9,1	1,02	1,05	1,04	1,00	1,00	0,98
All countries	2 164,5	9,0	2 039,0	9,2	0,98	0,95	0,99	1,00	0,99	1,01

1) At 1970 prices.- 2) In manufacturing industries only.- 3) Singapore, Taiwan, Philippines, Republic of Korea, Hong Kong, Malaysia.

Table No. 3. Effects on employment and production from trade in industrial products by groups of countries, 1977:

ITALY

Group of countries	Employment generated by exports		Employment forgone due to imports		Ratio of the effects from exports and imports each of US-$ 100 million[1]					
	Total	Per US-$ 100 million[1]	Total	Per US-$ 100 million[1]	Persons engaged	Share of females	Share of unqualified workers[2]	Fixed capital per person engaged[2]	GDP	GDP per person engaged
	in thousand persons									
All developing countries	685,4	11,1	181,1	12,2	0,91	0,58	0,95	1,23	1,03	1,12
European developing countries	156,4	10,9	56,9	11,5	0,94	0,71	0,93	1,20	1,03	1,09
Spain, Greece, Portugal	94,6	10,9	32,4	10,9	1,00	0,80	0,94	0,94	1,04	1,04
Yugoslavia, Turkey	61,8	10,9	24,5	12,5	0,87	0,61	0,92	1,50	1,01	1,16
Non-european developing countries (excl. OPEC)	203,4	11,0	113,6	12,5	0,88	0,54	0,93	1,42	1,05	1,19
Mediterranean countries	80,5	11,2	12,6	12,7	0,88	0,53	0,97	1,14	1,00	1,13
Latin America	52,9	10,7	33,9	11,9	0,90	0,46	0,92	1,29	1,07	1,18
South-East Asia[3]	21,1	11,4	25,0	13,0	0,88	0,66	0,95	1,50	1,03	1,17
Other developing countries	48,9	10,9	42,0	12,7	0,86	0,51	0,92	1,64	1,05	1,23
OPEC countries	325,7	11,3	10,6	12,6	0,90	0,56	0,96	1,25	1,03	1,14
China (People's Republic)	4,1	9,6	11,0	15,5	0,62	0,43	0,86	2,88	1,01	1,64
COMECON countries	121,0	10,5	43,6	10,7	0,98	0,78	0,95	1,06	1,00	1,02
Western industrialized countries (excl. EEC)	434,9	12,2	307,9	11,0	1,11	1,14	1,04	0,81	1,00	0,90
Japan	25,2	13,7	32,6	10,3	1,33	1,81	1,03	0,65	1,03	0,77
USA	159,7	11,9	111,1	10,9	1,09	1,13	1,06	0,88	0,97	0,89
Other western industrialized countries	250,0	12,3	164,2	11,3	1,09	1,07	1,02	0,87	1,00	0,92
EEC countries	1 164,1	12,4	759,9	10,5	1,18	1,34	1,03	0,68	1,01	0,86
All countries	2 409,6	11,9	1 303,4	10,9	1,09	1,05	1,01	0,82	1,00	0,92

1) At 1970 prices.- 2) In manufacturing industries only.- 3) Singapore, Taiwan, Philippines, Republic of Korea, Hong Kong, Malaysia.

Table No. 4. Effects on employment and production from trade in industrial products by groups of countries, 1977:

UNITED KINGDOM

Group of countries	Employment generated by exports		Employment forgone due to imports		Ratio of the effects from exports and imports each of US-$ 100 million[1]					
	Total	Per US-$ 100 million[1]	Total	Per US-$ 100 million[1]	Persons engaged	Share of females	Share of unqualified workers[2]	Fixed capital per person engaged[2]	GDP	GDP per person engaged
	in thousand persons									
All developing countries	1 124,9	14,6	362,7	14,6	1,00	0,68	.	1,18	1,04	1,04
European developing countries	161,0	14,4	70,4	14,7	0,98	0,72	.	1,27	1,01	1,03
Spain, Greece, Portugal	112,4	14,3	61,4	14,7	0,98	0,77	.	1,27	1,01	1,04
Yugoslavia, Turkey	48,6	14,6	8,6	14,9	0,98	0,58	.	1,40	1,03	1,04
Non-european developing countries (excl. OPEC)	479,3	14,5	269,7	14,6	0,99	0,65	.	1,18	1,04	1,05
Mediterranean countries	104,2	14,6	19,1	14,4	1,02	0,71	.	1,18	1,01	0,99
Latin America	113,9	14,3	44,4	13,3	1,08	0,70	.	0,93	1,07	0,99
South-East Asia[3]	98,6	14,4	129,0	15,0	0,96	0,63	.	1,44	1,04	1,08
Other developing countries	162,6	14,5	77,1	14,7	0,99	0,68	.	1,08	1,04	1,05
OPEC countries	484,6	14,7	22,6	14,8	1,00	0,91	.	1,08	1,00	1,00
China (People's Republic)	7,3	13,9	9,6	14,6	0,96	0,49	.	1,27	1,05	1,10
COMECON countries	93,8	13,3	112,2	14,3	0,93	0,97	.	1,25	1,01	1,09
Western industrialized countries (excl. EEC)	1 056,2	14,3	1 214,4	14,0	1,03	0,98	.	1,00	1,01	0,99
Japan	47,3	13,8	136,1	14,8	0,93	1,15	.	1,08	0,93	1,05
USA	309,9	14,3	373,7	13,9	1,03	0,91	.	1,08	0,99	0,96
Other western industrialized countries	699,0	14,4	704,5	13,9	1,04	1,00	.	0,93	1,03	0,99
EEC countries	1 194,1	14,3	1 278,1	14,1	1,01	1,00	.	1,00	1,00	0,99
All countries	3 476,3	14,4	2 977,0	14,1	1,02	0,92	.	1,00	1,01	0,99

1) At 1970 prices.- 2) In manufacturing industries only.- 3) Singapore, Taiwan, Philippines, Republic of Korea, Hong Kong, Malaysia.

Table No. 5. Effects on employment and production from trade in industrial products by groups of countries, 1977:

NETHERLANDS

Group of countries	Employment generated by exports		Employment forgone due to imports		Ratio of the effects from exports and imports each of US-$ 100 million[1]					
	Total	Per US-$ 100 million[1]	Total	Per US-$ 100 million[1]	Persons engaged	Share of females	Share of unqualified workers[2]	Fixed capital per person engaged[2]	GDP	GDP per person engaged
	in thousand persons									
All developing countries	124,8	6,2	69,1	7,4	0,84	0,59	0,79	1,22	1,07	1,27
European developing countries	30,0	6,0	17,9	7,1	0,84	0,64	0,81	1,20	1,07	1,28
Spain, Greece, Portugal	19,8	5,8	13,1	6,8	0,85	0,68	0,83	1,19	1,04	1,21
Yugoslavia, Turkey	10,2	6,2	4,8	7,0	0,80	0,55	0,75	1,35	1,16	1,45
Non-european developing countries (excl. OPEC)	52,2	6,1	49,3	7,5	0,82	0,60	0,78	1,28	1,05	1,26
Mediterranean countries	11,1	6,5	6,4	7,3	0,90	0,68	0,80	0,96	0,98	1,10
Latin America	15,8	5,8	6,4	6,5	0,90	0,56	0,78	1,09	1,07	1,20
South-East Asia[3]	6,7	6,0	27,0	7,7	0,78	0,58	0,77	1,53	1,11	1,43
Other developing countries	18,6	6,3	9,5	7,7	0,82	0,61	0,77	1,22	1,04	1,26
OPEC countries	42,6	6,4	1,9	7,6	0,85	0,54	0,79	1,18	1,07	1,26
China (People's Republic)	1,3	5,3	2,0	7,3	0,73	0,51	0,77	1,63	1,13	1,55
COMECON countries	20,4	6,4	20,0	7,5	0,86	1,06	0,92	1,28	0,97	1,13
Western industrialized countries (excl. EEC)	100,7	6,2	168,2	7,1	0,87	1,05	1,01	1,21	0,98	1,12
Japan	5,0	6,1	27,9	6,9	0,88	1,27	0,92	1,40	1,11	1,27
USA	26,9	5,7	63,9	6,9	0,82	0,96	1,00	1,40	1,02	1,23
Other western industrialized countries	68,8	6,4	77,3	7,2	0,88	1,05	1,03	1,11	0,95	1,08
EEC countries	494,7	6,5	649,7	6,7	0,96	1,04	0,97	1,10	1,00	1,04
All countries	741,8	6,4	909,0	6,9	0,93	0,98	0,96	1,15	1,00	1,08

1) At 1970 prices.- 2) In manufacturing industries only.- 3) Singapore, Taiwan, Philippines, Republic of Korea, Hong Kong, Malaysia.

Table No. 6. Effects on employment and production from trade in industrial products by groups of countries, 1977:

BELGIUM

Group of countries	Employment generated by exports		Employment forgone due to imports		Ratio of the effects from exports and imports each of US-$ 100 million[1]					
	Total	Per US-$ 100 million[1]	Total	Per US-$ 100 million[1]	Persons engaged	Share of females	Share of unqualified workers[2]	Fixed capital per person engaged[2]	GDP	GDP per person engaged
	in thousand persons									
All developing countries	121,3	6,0	62,6	6,4	0,94	0,79	0,91	1,00	1,05	1,12
European developing countries	22,6	5,4	13,9	6,8	0,80	0,60	0,90	1,39	1,02	1,27
Spain, Greece, Portugal	16,0	5,4	10,8	6,6	0,82	0,62	0,92	1,37	1,02	1,24
Yugoslavia, Turkey	6,6	5,6	3,2	7,7	0,73	0,54	0,84	1,57	1,02	1,39
Non-european developing countries (excl. OPEC)	58,3	6,3	47,1	6,3	1,00	0,79	0,92	1,00	1,09	1,08
Mediterranean countries	17,1	6,8	8,7	7,9	0,86	0,74	0,93	1,10	0,96	1,11
Latin America	9,5	5,6	6,0	6,1	0,92	0,58	0,84	1,00	1,13	1,23
South-East Asia[3]	11,0	6,5	10,7	7,5	0,86	0,88	0,97	1,50	1,10	1,27
Other developing countries	20,7	6,2	21,6	5,4	1,13	1,05	0,91	0,77	1,15	1,01
OPEC countries	40,4	6,1	1,6	7,6	0,80	0,73	0,90	1,12	0,89	1,11
China (People's Republic)	0,9	4,2	1,2	7,8	0,54	0,37	0,91	2,67	1,02	1,90
COMECON countries	16,6	5,3	14,0	6,5	0,81	1,03	0,95	1,17	0,90	1,11
Western industrialized countries (excl. EEC)	103,1	5,8	115,7	6,0	0,96	0,94	1,06	1,19	0,98	1,02
Japan	4,2	6,4	15,2	5,1	1,26	0,96	1,10	1,47	1,35	1,07
USA	40,1	5,9	44,9	6,0	0,98	0,75	1,10	1,27	1,00	1,02
Other western industrialized countries	58,8	5,7	55,6	6,3	0,90	1,06	1,02	1,00	0,93	1,03
EEC countries	596,1	5,8	613,4	6,0	0,97	1,03	1,03	1,10	0,98	1,02
All countries	838,0	5,8	807,0	6,0	0,96	0,99	1,02	1,10	0,98	1,02

1) At 1970 prices.- 2) In manufacturing industries only.- 3) Singapore, Taiwan, Philippines, Republic of Korea, Hong Kong, Malaysia.

ANNEX III-5

Seminar on International Industrial Restructuring and the European Periphery Countries

Sesimbra, Portugal, 22-24 October 1980

REVEALED COMPARATIVE ADVANTAGE OF GREEK INDUSTRY

by

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INTRODUCTION

This paper summarizes the principal findings on "comparative advantage" as revealed by the relative export performance of different industries in Greece. The main theme of the paper is centred around convergence and divergence governing the major determinants of export performance, e.g., factor intensity, technology intensity, size of the units, economies of scale, etc. It attempts to spell out the functional correlation in the interplay between structural characteristics of industries and the overall export performance. This hypothetical analysis is tested by observations and facts.

I. RELATIVE EXPORT PERFORMANCE OF GREEK INDUSTRIAL SECTORS

Since the general phrase "export performance" fails to highlight the magnitude of specific components of exports, some specific static and dynamic indices have been used in this analysis. The static indices show the relationship between exports, imports, domestic production and market shares in a specific period of time, while the dynamic indices examine the change that has occurred in the functional correlation.

It seems more expedient to start from the explanation of symbols involved in the analysis.

Xi - Exports of industry i
Mi - Imports of industry i
Pi - Domestic production of industry i
Li - OECD imports of product i from Greece
Ti - Total OECD imports of product i
Ei - EEC imports of product i
Ni - Total EEC imports of product i
S - Greek share of total (all products) OECD imports
Superscript f - "final" period
Superscript b - "base" period

Statistic Indices:

1. Export/import ratios [1/] $XMRi = \frac{Xi}{Mi}$
2. Net exports $XNTi = Xi - Mi$
3. Net exports propensity [2/] $XNPi = \frac{Xi - Mi}{Pi}$
4. Export Propensity $XiNi = \frac{Xi}{Pi}$
5. Share of OECD [3/] imports [4/] $XSOi = \frac{Ii}{Ti}$
6. Share of EEC imports $XSE = \frac{Ei}{Ni}$

Dynamic Indices:

7. Exports growth $XGRi = \frac{{}^{f}Xi}{{}_{b}Xi}$
8. Balassa's index [5/] $XGBi = \frac{1}{2} \cdot \frac{{}^{f}_{b}XSOi/{}^{f}_{b}S}{XSOi/S} \cdot \left(\frac{{}^{f}XSOi}{{}^{f}S} + 1\right)$
9. Goodman-Ceyhun index [6/] $XGCi = \frac{{}^{f}Xi}{{}_{b}Xi} \cdot \frac{{}^{f}_{b}Xi/{}^{f}_{b}Pi}{Xi/Pi}$
10. Change in export/import ratio $XMCi = \frac{{}^{f}_{b}Xi/{}^{f}_{b}Mi}{Xi/Mi}$
11. Change in Greece's share of OECD imports $XSGi = \frac{{}^{f}_{b}Ii/{}^{f}_{b}Ti}{Ii/Ti}$

1/ For a review of studies using this index and some of its principal advantages especially with regard to "net exports", see Leamer (1975).

2/ See Bauman (1976).

3/ OECD imports are used as a proxy for world imports.

4/ See e.g., Helleiner (1976), Donges-Riedel (1977).

5/ See e.g., Balassa (1965). For a survey of the various studies that are used in this index, see Parry (1975). An interesting criticism of the method can be found in Donges-Riedel.

6/ See Goodman-Ceyhun (1976).

Table 1 contains the average values as well as the coefficient of variation to display the extent of variation between the sectors in respect of the particular indicator and the median as an alternative indication of central tendency. Table 2 shows the rank assigned to certain sectors with respect to the static indices of export performances, while Table 3 depicts the rank assigned to certain sectors with respect to the dynamic indices of export performance.

Table 1. Indications of Greek Industry's Export Performance

	Indicator	Average[a]	Coefficient of variation[b]	Median
XMR	Export-import ratio	0.46	5.19	0.517
	" " " (excluding extreme values)[c]	(0.41)	(2.07)	...
XNT	Net exports	-71,290.2	2.73	-398.0
XNP	Net exports propensity	-0.235	2.50	-0.076
	" " " (excluding extreme values)[d]	(-0.151)	(3.36)	...
XIN	Exports propensity	0.201	1.21	-0.095
XSO	Share of OECD imports	2.638	3.33	0.917
	" " " (excluding extreme values)[e]	(2.493)	(1.74)	...
XSE	Share of OECD imports	3.784	3.44	1.426
	" " " (excluding extreme values)[e]	(3.545)	(1.58)	...
XGR	Exports growth	3.67	1.11	5.19
XGB	Balassa's index	1.068	2.88	0.963
	" " (excluding extreme values)[f]	(1.044)	(1.10)	...
XGC	Goodman - Ceyhun index	4.7	1.41	9.5
XMC	Change in export-import ratio	1.326	1.45	2.331
XSG	Change in Greek share of OECD imports	1.274	4.18	1.207
	" " " (excluding extreme values)[g]	(1.265)	(0.78)	...

(a) Average value or weighted mean, e.g., XMR = Total Greek Exports/Total Greek Imports

(b) Coefficient of variation: Standard deviation/Arithmetic mean

(c) Excluding industries 7, 11, 13

(d) Excluding industries 28, 29, 33

(e) Excluding industry 13

(f) Excluding industries 13, 18

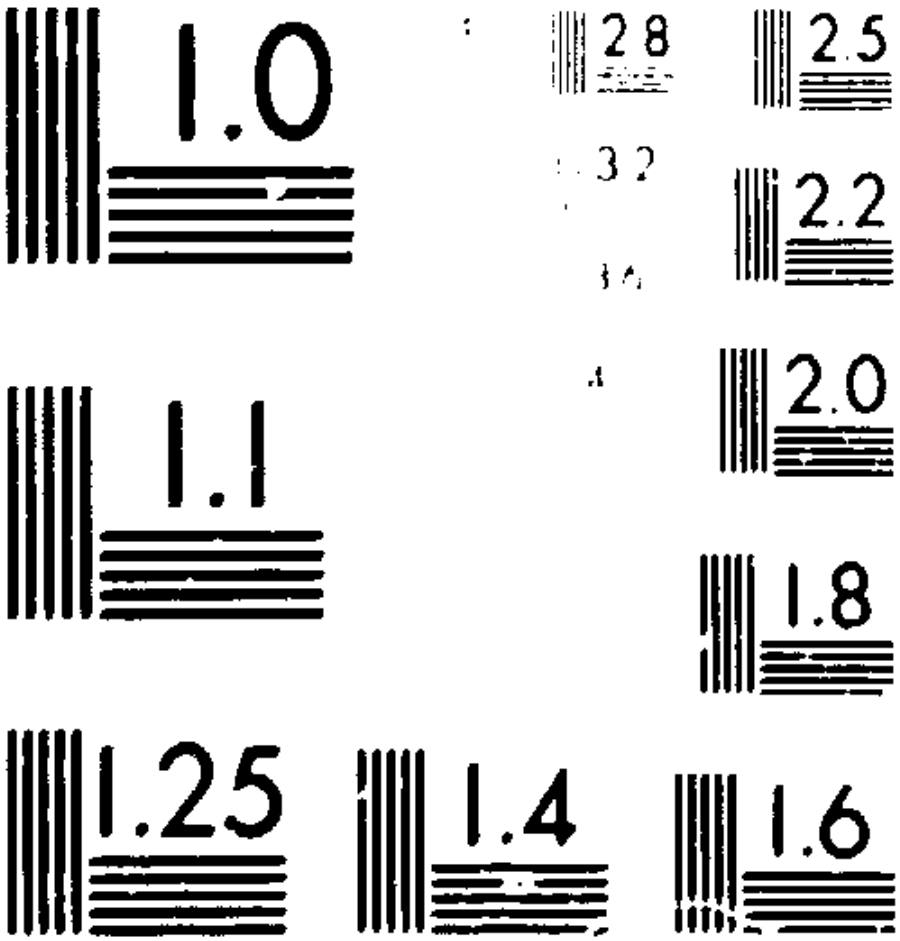
(g) Excluding industry 18.

Table 2. Rank order of certain sectors with respect to the "static" indices of export performance

	Sector	XMR	XNT	XNP	XIN	XSO	XSF
13	Fur clothing	1	11	6	12	1	1
11	Footwear	2	6	4	8	6	9
7	Tobacco	3	1	1	3	2	3
3	Preparations of fruits and vegetables	4	2	3	7	3	2
25	Lime, cement	5	4	7	11	23	24
12	Clothing (except furs)	6	3	8	14	7	6
6	Beverages	7	8	10	20	9	8
4	Oils and fats	8	9	11	17	14	13
24	Stone, sand, pottery	9	5	2	1	5	5
23	Non-ferrous metals	10	7	9	5	11	10

Table 3. Rank order of certain sectors with respect to the "dynamic" indices of export performance

	Sector	XGR	XGB	XGC	XMC	XSG
30	Domestic electrical equipment	1	13	12	1	4
18	Petroleum products	2	1	1	10	1
14	Wood and manufacturers thereof (excluding furniture)	3	3	2	4	3
32	Ship and boats	4	6	3	2	6
27	Manufacturers of metal (excluding machinery)	5	15	4	6	7
28	Machinery (excluding electrical)	6	29	5	8	25
13	Fur clothing	7	2	6	3	13
25	Lime, cement	8	19	7	7	12
12	Clothing (excluding furs)	9	3	9	16	5
29	Electrical power machinery	10	26	12	17	28


1.0
2.8
2.5
3.2
2.2
2.0
1.1
1.8
1.25
1.4
1.6

XMR : Export/import ratio

XNT : Net Exports

XNP : Exports propensity

XSO : Share of OECD imports

XSE : Share of EEC imports

XGR : Exports' growth

XGB : Balassa's index

XGC : Goodman-Ceyhun index

XMC : Change in export/import ratio

XSG : Change in Greek share of OECD imports

Data Sources:

Greek exports, imports: National Statistical Service of Greece. Bulletin of Foreign Trade Statistics, various issues.

OECD, EEC imports: OECD, Trade by Commodities, Series B, various issues.

Greek domestic production: National Statistical Service of Greece, Statistical Survey of Greek Manufacturing Industry, various issues.

Years:

Static indices (XMR, XNT, XIN, XSO, XSE): 1974

Dynamic indices (XGR, XGC, XMC) : 1969 to 1974

(XGB, XSG) : 1971 to 1974

I.1. Main Observations:

a) The average export - import ratio (XME) is less than .5, and in 12 out of the 34 sectors XMR is larger than unity (Greek exports exceed Greek imports).

b) Among these 12 sectors the "net exports propensity" (XNP) varies from 1.7 percent (cotton) to 68.9 percent (tobacco).

c) The average "exports propensity" (XIN) is 20.1 percent, and in four sectors foreign markets capture more than half of the domestic production (XIN $>$ .5) (stone, pottery, etc.: .801 leather and manufacturing thereof: .789, tobacco: .695 and iron and steel: .513).

d) A comparison of the correlation coefficients between the various pairs of the static indices reveals that the most important conclusion, that can be drawn, stems from the very small - or even negative - correlation between XMR on the one side and XIN, XNT, XNP on the other. This non-correlation may be easily explained mathematically, but it, nevertheless, shows that choice of the indicator of export performance is in no way neutral.

e) Turning to the dynamic indicators, it is interesting to note that the average increase in Greek exports was over 367 percent and in 8 out of the 34 sectors Greek exports increased in the five-year period by over 1000 percent (at current prices).

f) The overall positive developments are indicated also by the average values of all dynamic indices and especially by the fact that in 28 out of 34 sectors the export-import ratio increased, and in 20 sectors Greek exports increased their share of total "world" imports.

g) On the methodological side, the almost perfect correlation between the change in the Greek's share of world imports (XSG) and the Balassa transformation (XGB) shows that the

normalization (Balassa) procedure, attempted by dividing over the total share of Greek imports, does not alter the results significantly. On the other hand, the association between exports' growth (XGR) and XGB, XGC, although positive and statistically significant, is far from being perfect; it may be viewed as a preliminary raison d'être of the tranformations that Balassa and Goodman-Ceyhun propose.

h) The most important inference drawn from the preceding analysis is that the correlation between the static indices and the dynamic indices is either very small, or, often, significantly negative. This shows that the sectors, which managed to make commendable performance in the export front, are not the "traditional" sectors where the country used to have (and obviously still has - but at a lesser degree) comparative advantage.

II. Relative Export Performance and the Structural Characteristics of Greek Industry:

This section highlights the association between the various indices of export performance of industrial sectors and the major determinants. It provides deeper insight into the interpretation of results related to the comparative advantage of Greek industry and the degree of penetration in the international markets.

The sixteen "structural" indices are classified into 6 groups. For each group, a very long review of the a priori expectations, concerning the association to the export performance, is followed by a brief description of the indices, and a detailed interpretation of results of correlation between these indices and the export performance indicators.

II.1. Factor Intensity

Neoclassical theory of international trade, as well as the hypothesis that Greece is a capital-scarce and labour-surplus economy (with abundant raw materials), would lead us to the presumption that Greece

would tend to export labour and raw-material intensive goods and import capital-intensive goods.[1/]

The following indices have been used to test this hypothesis:

LU Number of employees per value added

CL Total horsepower of the installed machinery (as an approximation for the capital stock) per employee

RV Vanek's natural resource index [2/]

RD Raw-materials intensity (Dummy variable) [3/]

The most important results that stem from the correlation between these four indices and the export-performance indicators are the following:

- LU is positively associated with all static indices that incorporate imports (directly or indirectly) and this association is statistically significant in the case of "net exports" (XNT);
- On the contrary, the association between LU and the dynamic indices shows that the highest exports growth rates have been observed in the non-labour intensive sectors. This holds especially in the case of XSG (growth of Greece's share in "world" imports), where the correlation coefficient with LU is negative and significant even at the 0.005 level;
- The result for CL, although in the same direction, are, in general, rather poor from the statistical point of view;
- Finally, the statistical significance of the correlations with RD and RV is in general small and hence, there are no serious signs that either comparative advantage or improvement in the competitiveness of the Greek industries is related to those indices.

1/ The immense literature on both the theoretical and the empirical sides of the above proposition are well-known and need not be mentioned here.

2/ Vanek (1963), appendix 7.

3/ See Harkness-Kyle (1957)

II.2. Skill Intensity:

An independent and extremely important question is related to the relation between export performance and technology.[1/] Three indices have been used to measure the degree of relative technological development of each sector:

SW Skill ratio (total number of skilled workers per 1000 workers)[2/]
AW Average wage[3/]
UL Total number of unskilled workers per value added.

The results obtained from the correlation analysis between these indices and export-performance indicators are both significant (from the statistical view point) and interesting (from the economic view point).

- The negative (and significant at the .01 level) correlation between SW and "net exports" (XNT) indicates that the higher the percentage of skilled workers in the sector, the wider the gap between imports and exports, and larger the "comparative disadvantage" of the country in the particular sector.

- On the contrary, the correlation between SW and all dynamic indices of export performance is positive (and statistically significant in the cases of XSG, XGC and XGB), which means that the highest progress has been observed in the technology intensity sectors.

- These results are reinforced by the correlation analysis of the two other indices (AW and UL).

II.3. Size of Units, Scale Economies:

Based on the hypothesis that a small unit size is not the optimum one and therefore, the sector where the average size of the units is

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1/ On the association between Greek industrial development and technology, see E.L.E.M.E.P. (1978).

2/ This index has been used in many studies, e.g., Keesing (1971), Hirsch (1970).

3/ For the theoretical rationale for using this index, see Cheh (1976)

relatively small would be "handicapped" in the international competitive position, we would expect to obtain a positive correlation coefficient between export performance and the "size of units" indices:

SA Average size of units
SL Average employment of big units [1/]
PS Proportion of total value added, accounted by small units.

Isolating the correlation coefficient that are significant at the .05 level, we observe the following:

- The association between SL and the "change in export-import ratio (XMC) is positive, showing that export performance has improved in those sectors where the average unit size is relatively large.
- Similar conclusions stem from the association between SA and exports propensity (X,N).
- On the other hand, a possible explanation of the positive association between PS and two of the export-performance indices (XSC and XMR) is that the optimum size varies by sector and, in the traditional sector, where Greece has the highest penetration in the EEC markets (XSE) and the largest export-import ratios (SMR), the optimum size is relatively small.

Besides the above indices, which aim at measuring the average unit size, the following index developed by Hufbauer [2/] has been used - but with poor statistical results:

SP Scale potential (elasticity of value added with respect to number of employees per establishment).

1/ The "big units" in each sector represent the minimum number of units that cover at least 60 percent of the sector's total employment. If e.g., in sector A there are 27 units operating with respective employment of 1X200 persons, 2X100 persons, 4X50 persons and 20X20 persons, SL represents the average employment of the 7 big units because they cover the 60 percent of the total employment. See Mitsos (1975), appendix C2 and Baumann (1976).

2/ Hufbauer (1970).

Following Bauman [1/] (because of the existence of all sorts of trade distortions), it is expected that a small country like Greece would experience a comparative disadvantage in the sectors where the potential for economies of scale is large. At any rate, this negative association is possibily neutralized by the fact that potential for economies of scale, that creates the need for exports, calls for a major effort in this direction.

II.4. Stage of Production

It has often been argued that developing countries tend to concentrate their efforts in the production of consumer goods.[2/] This hypothesis is confirmed by the Greek case, where the association between most of the export performance indices and FL that represents the ratio of intermediate over total demand is negative. This relation is more obvious in the association to XSO and XSE indicating that Greece has managed to penetrate more successfully in the world market of consumer goods (i.e., goods where a large portion of their total demand comes from the final consumers).

II.5. "Age" of Products and Product Differentiation

Hufbauer [3/] argues that developed countries tend to export new products, while developing countries export the traditional ones. As an index of this products' age he uses AG, the date of their first appearance in international trade statistics.

The use of this index with respect to Greek industry's export performance gives very significant results and confirms some of our previous findings, namely that Greece still has a comparative advantage (relatively large SMR, XIN, XNP) and has managed to penetrate in world market (relatively large XSF, XSO) in the traditional products.

1/ Op.cit.

2/ See e.g., Bauman (1976), Aghevli (1975)

3/ Op.cit.

The correlation to the degree of product differentiation (PD)[1/] has not produced any significant results.

II.6. Tariff Protection

The common view that tariff (and non-tariff) protection tends to discourage exports' growth [2/] has not been confirmed with the Greek case, where PP (nominal tariff protection in the "end" year) and PR (nominal tariff protection in the "base" year) are positively related (and very significantly from the statistical point of view) to almost all indices of export performance. Two possible explanations for this relation are the following: [3/] (a) Both export performance and protection are related to the traditional character of Greek industries; (b) Export performance is a direct function of the various incentives, aids etc., provided by the government, which, in turn, depend on the political and economic power of the sector, exactly as protection does.[4/]

Conclusion

In short, the observations and facts, which have been used to test the hypothesis that labour-surplus and capital-scarce Greek economy exports labour intensive products and raw-materials and to varify the presumption that growth rate for the modern sector has been minimal, seemingly demonstrate that significant progress has been achieved by capital intensive sectors engaged in the production of increasingly sophisticated products. The results are in full conformity with a recent study, [5/] which proves that commendeble progress (in terms of production and not in terms of export) has been achieved by the modern sector. Moreover, the results do not fortify the dubious assumption that Greece is producing only consumer goods and raw-materials.

1/ Hufbauer (1970), Bauman (1976), **op.cit.**

2/ See e.g., Morrison (1976)

3/ In an attempt to provide answers to this same "Paradox", Tovias (1979) cites three more possible explanations ((a) regional differences in the trade pattern, (b) heterogeneity of the tariff groups, (c) redundancy of the tariff duty) and explores a fourth one based on an alleged price discrimination practice of local producers.

4/ See also Mitsos (1975), especially Appendix E.

5/ ELEMEP (1978)

APPENDIX TABLE A

Industry classification and correspondence to other classifications

	Sector	Correspondence to SITC class.	Correspondence To NSSG* class.
1.	Meat and meat preparations	01	201
2.	Dairy products	02	202
3.	Preparations of fruits and vegetables	032,053,055	203
4.	Oils and fats	091,4	204
5.	Other food	042,046,047,048 06, 07, 08,099	205 έως 209
6.	Beverages	11	21
7.	Tobacco	12	22
8.	Cotton and cotton fabrics	263,652	232
9.	Other textile fibres, yarn and fabrics	26(-263),65(652)	23(-232,236)
10.	Leather and manufactures thereof	61,831	291,293
11.	Footwear	85	241,242
12.	Clothing (ex. furs)	841	236,243,244
13.	Fur clothing	842	292
14.	Wood and manufactures thereof (exc. furniture)	243,63	25
15.	Furniture	82	26
16.	Paper and manufactures thereof	25,64	27
17.	Printed matter	892	28
18.	Petroleum products	33,34,52	32
19.	Chemicals	271,5(-52)	31
20.	Articles of plastic materials	893	302
21.	Rubber manufactures	62	301
22.	Iron and steel	671 έως 675	341
23.	Non-ferrous metals	68	342
24.	Stone, sand, pottery, etc.	273 έως 276,662,666	331,333
25.	Lime, cement etc.	661,663	334 έως 339
26.	Glass, glassware	664,665	332
27.	Manufactures of metal (n.e.s.)	677,678,69,81	35
28.	Machinery (exc.electrical)	71(-714)	36
29.	Electric power machinery	722	371
30.	Domestic electrical equipment	725	378
31.	Electrical machinery (n.e.s.)	714,72(-722,725),861, 862,863	37(-371,378) 391,392
32.	Ships and boats	735	381
33.	Transport equipment (n.e.s.)	676,73(-735)	38(-381)
34.	Miscellaneous manufactures (n.e.s.)	285,667,864,89(-892,893)	39(-391,392)

* NSSG: National Statistical Service of Greece, Statistical Survey of Greek Manufacturing Industry.

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ANNEX III-6

Seminar on International Industrial
Restructuring and the European Perhiphery
Countries

Sesimbra, Portugal, 22-24 October 1980

MAIN INTERVENTIONS DURING THE SESIMBRA SEMINAR

by

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CONTENTS

INTRODUCTION

In this study, an attempt is made to highlight the unique features and problems pertaining to the industrial restructuring process in developed and developing ocuntries. A description of "fundamentals" indispensable for long-run development is followed by a discussion as it transpired during the Sesimbra Seminar. The debate and discussion entitled "The Main Interventions" spell out Portugal's dire necessity and the fact that Portugal has no option than to join the Common Market.

I. INTERNATIONAL INDUSTRIAL RESTRUCTURING

1. Changing Dimensions in the Approach to Structural Change:

Industrial restructuring processes can be discussed at different levels and from different angles. However, most current discussions take place as if restructuring could be considered a characteristic problem of firms in industrialized countries, either seen as individuals or as part of a given sector or region, facing stiff competition from LDC manufactures and unable to cope with imports in a liberal foreign trade situation. In this context those firms - or sectors and regions, which were left behind the mainstream of economic life, must be shaped and attuned to a continuous process of innovation and adaptation in a changing socio-economic environment. Somehow, they are exceptions whose weak points have to be dealt with by means of specific policies geared to particular problems affecting a few narrow sections of the industrialized economies.

The key point is that industrial restructuring in this context is seen as a "localized" deviation from the self-sustained adaptive mainstream of industrial trends. Of course, this doesn't mean that restructuring can be entirely delinked from over-all growth oriented policies. It has been stressed that positive adjustment approaches are vastly superior to defensive arrangements. Ultimately, positive adjustment can only be generally adopted if the required structural changes are smoothly accommodated throughout the economy and peacefully accepted by the concerned sections of society. In this sense there must be a

clear link between the state of the economy in general and restructuring programmes. However, this somewhat trivial link impinges upon the orientation and success of restructuring activities but remains outside the realm of restructuring policies pursued in industrialized countries.

In some countries, the restructuring equation has to be embeded in a very different framework. To put it succinctly, it is not a limited number of firms that have to undergo a reconversion process: it is the economy as a whole and almost each of its components that have to be submitted to a purposeful, accelerated shock treatment. In this context, the nature, practical meaning and scope of the problem must be phrased in terms that encompass both the economy and the sectors, regional and firm dimensions, the macro and the micro-levels - each one of them observed from different angles. It is the whole economy that is regarded as lagging behind the required capabilities. In that sense, restructuring is, above all, a systematic problem which implies the need for a clear departure from important values, attitudes and interests which have to be subdued if success, whatever we may mean by that, is to be achieved. This is a restructuring problem in a much deeper and wider sense than the one affecting industrialized countries. And the countries facing it need no less exceptional support - actually they need more - than that accorded to firms, sectors or regions lagging behind in industrialized economies.

2. Focus on Portugal: the Quest for Sustained Growth through Global Interdependence

Portugal is a case in point. As a semi-industrialized country facing integration with some of the most industrialized countries in the world, Portugal will be submitted to new and powerful competitive pressures; those pressures will come not only from the advanced Northern European industries but also from developing countries benefitting from the "acquis communautaire" in the commercial arena. Some observations to be made on some of the dimensions which come under the restructuring problems are rather dependent on the specificity of the Portuguese case. Others are much more general

in nature. However, they all point in the same direction regarding the difficulties of implementing structural change without a set of inter-related macro economic policies. Even from the international comparison point of view, experience has often shown that country-specific aspects may, and usually do, introduce important nuances and qualifications, but specifity almost invariably adds to the difficulties of rapid transition. The fact that they do that in different ways, varying from industrializing country to industrializing country, should not lead us to consider the Portugese example as a biased case loaded with problems too different from those pertaining to the challenges facing other semi-industrialized countries. The heart of the matter is that, on the one hand, restructuring in semi-industrialized economies poses difficulties and concerns tasks which can typically be described as the central features of a project for national survival. On the other hand, in spite of the much heavier constraints surrounding such a project for national survival and the much wider implications of the risks of its failure or dubious success, the commanding powers controlling the international economy are extremely reluctant to extend to these cases the privileges of exception they almost unanimously deem necessary, when considering the much narrower and lighter tasks of restructuring in their own industrialized economies. Systematic adjustment in the periphery is ignored or left for the automatic play of market forces, while "local" restructuring in the advanced core economies is assumed to deserve special attention and benefit from sizeable transfers of resources outside the market rationale.

The previous contradiction is the source of formidable obstacles threatening development efforts in developing countries in general, and semi-industrialized countries, in particular.

It may be argued that late-comers derive certain advantages which accrue to followers, and thus are spared some of the pioneer and path-breaker pains. There is some truth in the argument, but one cannot ignore the adversities the present day inernational economy projects over late-comers prospects which are unparalleled in most early industrialization experiences. Being a late-comer provides some benefits. But these benefits seem to be smaller, when compared with the shadows cast by the fundamental rules of the game prevailing in the contemporary international economy. Such rules structure a cumulative process, re-inforcing in many

different ways the interest and capabilities of advanced core economies. The same token adjustment happens to be more difficult in the periphery.

Economy-wide restructuring requires a combination of State and private initiative and co-ordinated responses, a mix of openness to the international economy and purposeful protection or control of domestic activities and markets; a match of plan and market that does against some sacrosanct principles of international economic wisdom as seen from the advanced countries vantage point. Either deviations and some kind of delinked areas are accepted or restructuring in the periphery will remain, or become, a painful process to the point of social and political unacceptability.

The kind, intensity, and duration of delinking required in each case form the subject matter for debate. However, successful historical experiences point to the need for long-run complete and intense measures rather than short period scattered and loose ones. According to observed historical cases, present day comparative advantages emerged from purposeful investment on human capital under many different long-term schemes. Dynamic comparative advantages were not simply the results of choices according to static comparative advantage wisdom. Indeed, the main driving force behind the most outstanding late-comers' successes has been the conscious effort to overcome the constraints imposed by the previously existing static comparative advantages. The fact that the pattern of early comparative advantage has not been ignored, and that due attention has been paid to how to use it as an instrument to achieve the desired transformations, should not divert our attention from the lesson to be learned. At the root of Portugal's problem is the question of how best to endogenize a self-sustained domestic capability for technological development. There are general social dimensions as well as narrower services or production oriented aspects involved in this problem. Building up human resources, in a broad sense, is the key to the first action area. Regarding the second one, Portugal must be more specific depending on the particular features of development strategy. However, at this stage it may be useful to call the attention to a general conclusion drawn from many case studies.

3. Infant Industry/Technology Argument:

The acquisition of domestic technological capabilities requires a wide range of interventionist, non-market determined programmes in connection with the development of many other market oriented processes in production and trade. Endogenizing a capability from technological development and structural change in applied knowledge involves a long term strategy built upon market and non-market motives, State and private elements, domestic and international factors and protection and competition. The balance between all those components is a delicate one. Unfortunately, what the prevailing international wisdom is only too ready to offer, or to enforce comes very short of the requirements.

Some say that technology can be simply bought as any commodity. The corresponding advice is to go to the market place and buy it from the multinationals or from the many other types of institutions willing to take advantage of their know-how. No doubt that part of the necessary knowledge can be, and should be, acquired in this way. However, in terms of a valid national technological strategy this only is the tip of the iceberg. In modern times, one can argue that technological policy is in some sense the new name for far reaching contemporary actions which have taken place of outmoded infant industry protection. Arguments similar to those associated with infant industry protection can be developed in line with the strategies for purposeful acquisition of long term comparative advantage. However, one key difference should be noted. Infant technology protection differs significantly from infant industry protection; in that we are not concerned with a product or even a firm or sector. In this case,we are concerned with a system encompassing different types of institutions interlocked in the process of generating, adapting, diffusing and applying specific forms of useful knowledge. Thus, infant technology protection covers a much more complicated set of issues and must be extended in various degrees to a complex network of economic and social agents to be identified far beyond the firm or sectoral levels concerned with a certain group of products.

Infant technology protection is only possible if some kind of discretionary policies can be followed. That is to say, if some kind of differentiation, or positive discrimination, is allowed by the rules governing

the system as a whole. To various degrees, and according to the nature of the case, access to a few key resources have to be regulated outside the pure market outcomes. Depending on the case, control of the market, resource transfers and institutional privileges need to be combined to evolve an effective infant-technology policy. The importance of this issue can only be emphasized by the Japanese lesson, the most successful case of infant technology protection. In the contemporary scene, the practice of technology protection probably is only possible at a much lower level. However, the minimum level required seems to be much higher than the one tolerated by the international system.

The advice offered to, or enforced upon, developing countries seems to take the line that if a country gets the prices right and uses "healthy" macro-economic management instruments, it will not fail to move closely to its potential position. For the small economy, getting the prices right would essentially be the end result of opening up the economy to international trade without reservations of any sort and of refraining as much as possible from purposeful interventions following the well known free market tradition. Even if this would be a desirable situation, the fact is that political realism seldom can uphold such recommendations.

4. Indispensable Non-economic Factors:

The political element in restructuring cannot be overlooked. As it has been recently pointed out in the OECD Conference:

> "....economic phenomena are increasingly handed over to political processes for their solution. Selective growth implies that there has to be bargaining about the direction of it. Redistribution essentially means the continuation of some form or other of political argument as to what is an appropriate allocation of resources, opportunities and facilities between those who collaborate in a division of labour." 1/

1/ A.H. Hasley, Some Lessons from the Debates, A Sociologist Viewpoint in The Welfare State in Crisis, OCDE 1981, p.19.

The above quotation is as valid for the restructuring process in the advanced countries as in the developing countries. More to the point, its validity can only be enhanced when we consider the changing conditions determining the international division of labour. Free traders and monetarists of different shades may well claim that, nationally or internationally, these so-called economic phenomena should be considered from the point of view and treated with the tools of economic theory. The sheer fact is that this approach espouses an implicit preference for the acceptance of the kind of political process that presides over the present distribution of resources worldwide. Economic adjustment is supposed to proceed on the assumption that this political process is taken to be eternally valid or, at least, unchallengable for all practical purposes. However, in a world that is going more and more interdependent, this is a big, and sometimes unsustainable, assumption. Countries that like to present themselves as upholders of free trade have seldom hesitated to inject political elements into restructuring problems, whenever they felt their interest were better served.

Misguided or premature openness can be the source of avoidable troubles. Text-book macro stabilization policies do not furnish a body of settled economic conclusions immediately applicable to the process of practical implementation. For instance, adjustment by means of endless exchange rate devaluations and pressures on the real-wage may induce sufficient profitability and protection for traditional interests and act against innovation all along the economic and social fabrics. Latin America and even the Portuguese experience prove that under such policies success may be short-lived, however spectacular, and downward trends are inevitable in the median term.

Restructuring policies are selective and create non-neutral effects with important implications for the different social strata. Therefore, they cannot be viewed from the pure "economic point of view".

5. "Picking the Winner": a Matter of Priority

Industrial policies have to be selective, apart from the need to provide a general favourable climate to socially responsive initiative.

The principles guiding policy selection should be grounded on determination to move the nation as a whole to higher living standards. Growth and equity concerns cannot be dissociated. Therefore, we should look for "winners" that can deliver the goods not only in the business sense but also according to relevant social preferences criteria. In this context, the "winner" is more likely to be a system centered around a set of interrelated technologies and other resources commanded by a number of institutions rather than a single firm or an industry as defined by statistical nomenclatures. Moreover, the "winner" is likely to be promoted much more by a combination of plan and market, by exceptionality and delinking, than by the market alone. Recalling what has been written about infant technology policies, we can argue that "picking the winner" is a process closely associated with the definition of priorities and boundaries for such protective policies.

The restructuring process should be designed in such a way that wider participation in the international division of labour would not take place at the expense of parallel disintegration within the national economy. Unfortunately, internationalization of production, either directly or by means of sourcing, sub-contracting and other indirect approaches, has been moving in the opposite direction. This is the prevailing interaction of the international and national restructuring processes currently observed. If we don't want to succomb to its consequences, we have to "pick winners" - able to point into an entirely different direction.

Whether we are referring to "picking winners" in the context of the open economy or in the closed economy, there is a fact we cannot escape. The selectivity and differentiation that is at the root of any industrial policy worth its salt, and a fortiori" at the root of "picking winners", is solved as much in the political arena as in the market place.

II. MAIN INTERVENTIONS

Accepting the economic factors as the decisive factors, Professor D. Donges said:

> "Portugal has an intermediate position between Spain and Greece. The chances for this country are likely to lie in the field of stronger inter-industry division of labour in the capital goods sector, for instance, the agricultural machinery, textile machinery and machine tools, rather than in an inter-industry division of labour through which the country would increasingly become the supplier of consumption goods in the present EEC, thereby reducing the scope for previous suppliers in the Economic Community. .....
> To what extent an optional locational structure will develop in the enlarged area of the Common Market will largely depend on the economic policy in the countries entering the Common Market and in the present member countries."

At the outset one must realize that the decision to join the Common Market was taken under non-economic terms. It is true that the enlargement will threaten 40 percent of employment in the manufacturing sector [1/] and Trade Agreements with the EEC in 1972 have tended to "negative import substitution". Somehow it is quite proper that Portugal should use the only bargaining tool available. The only weapon available is to show what would be the political consequences of Portugal remaining outside the Community. Portugal has no other option than to join the Common Market. In order to link we have to delink certain factors. Other solutions (simply economic and social), which are incompatible with political aims, are neither feasible nor acceptable. It is better, if not the best, to talk more about the factors that move decision makers and social actors rather than to talk about economic rationality that inhibits possible integration over a period lasting 30 to 40 years. To be successful, an attempt to go into a free market would have to be combined with state intervention to assure that promising ventures will survive.

A problem that is probably underestimated in the Portuguese case is its "dualism": the fragmentation of the economy into a modern sector and traditional sectors. Entry into the Common Market assumes that in five to fifteen years, the economy will be attuned to homogeneous structure. If this assumption is proved to be dubious, it is likely to result in substantial consequences in terms of social and political costs.

1/ This is due to the fact that small firms cannot adapt and cope with in the short-run.

The arguments for entry don't give sufficient emphasis to competition between Portugal, Spain and Greece. Spain is ten years ahead of Portugal in labour skills and benefits from strong economies of scale. The Portuguese market is very easy accessible to Spanish entry. Commercial networks are operating in Portugal from Madrid. Language is not a significant barrier and Spain produces goods which meet our tastes and capital goods suitable to our relative endowments. The threats that we have discovered in the last one year or two, within the framework of the Common Market and in the Spanish domination of Portugal's home market, must call for a very special relationship. It augurs some kind of relationship between countries (on a similar level of development) that engage in internationalization of production through agreements which take in consideration demand similarities (e.g. the Linder hypothesis on specialization patterns).

> In response to Prof. Kennedy's observation about the escalated competition for EEC regional funds, one must admit the fact that we are competing for regional funds, which are too small for present needs. And when Portugal, Spain, Greece and Turkey enter the Community, competition for funds in the name of regional policy will be doubly heightened.

This problem looms very large because we are going to have a new problem in the Common Market due to regional policy and regional problems. The Community will be lurching from "rat-race" to budget dispute, and it will be involved in "esoteric squabbles" about money. Regional problems on a regional basis are different from regional problems on a national basis. In one case it is a national policy that is at stake, and in the other it is a sort of exception within the wider Community.

Larry Westphal's work on Republic of Korea gives explicit expression to the need for opening the Korean economy to the world market. He speaks a lot about the importance of keeping the economy subservient to market forces, but reference is also made to biased government policies which influence big and small firms.

Dr. Kim in his paper entitled "Industrial Restructuring in an Open

Economy: the case of Republic of Korea" writes:

> "Under the proposed legislations, monopolistic practices such as price collusion, market cornering and interlocking directorate will be prohibited ..... clearly in line with the aim of promoting competition throughout the economy."

It speaks of government's strong conviction that the economy must be exposed to market forces and to more competitive behaviour, but at the same time there are indications that the government is pushing mergers.

Commenting on the ever-growing mistrust in the public sector in Spain, said Prof. Lobo:

> "The economic crisis and the implementation of a democratic constitution arouse the feeling that the public budgets, mainly its social components, were a burden too heavy to carry and the fear that a public sector democratically controlled could have a deep influence in Spanish society. These feelings and fears .....
> .....resulted in active discussion dominated by the voice in favour of private sector."

One can easily understand the situation in Spain, where the government has gone to the rescue of every firm, with more than 1,000 employees, that has collapsed, and thus creating a political problem. Industrial restructuring process is something more than manipulating market forces, supplementing them by incentives, guidance of information and temporary assistance. Patching the market is not the only prerequisite for launching a take-off. Restructuring plans should include a proper definition of public sector and the role to be played by market forces. When we look at the price system, keeping ourselves outside the periphery, it is very hard to perceive exactly what this means in structural long-term plans.

Dr. A. Singh argued that devaluation would not work because of resistance to reduction of real wages.

In Portugal devaluation had worked, with the result that real wages (which had been raised considerably in the period following the revolution in 1974) were back to the 1972 level. The result had been a spectacular success in raising exports at the end of the 1970s. This is the reverse case of Dr. A. Singh's British case and has substantial implications for restructuring. This "success" can be judged as "counter-productive", because it did not stem from a need to restructure and modernize in order to adapt to the new free-trade environment in relation to the EEC.

One result is an inducement against innovation, since it induces the entrepreneur to think that he has gone back to the past and not to face the future. Therefore, the composition of exports has shifted and the levels of exports have increased tremendously by 50 percent (volume) in 1978 and 1979. The fact is that this is probably a step backward and not forward. It is a slow forward step in the sense to relieve the bottle-neck constraint of the foreign exchange situation at the moment; it is backward in the sense that it went against the normal trends and induced many entrepreneurs in Portugal, given the specific situation. If they don't think that the situation is safe enough, they will "strike" in terms of investment; they will not invest. This is the worst possible climate for positive restructuring.

Human resource is the most productive input. Investment on human resource development would create an indelible imprint on the economy in future. In the fitness of things, it is better to take the Republic of Korea as an example - the greatest asset of the Republic of Korea is Korean people. Portugal has neglected education and now has a very low base in terms of skills. Knowledge is essentially a "joint product" covering production, technology, marketing and ways of living. Portugal engages in the steel production just because it is a way of learning.

Prof. Portela suggested that we must look at the firm itself; the domestic firm and not the multinationals.

An "infant-technology argument" could be used not in favour of protection of products, but protection of areas of production which need time to become viable. It doesn't sound well, when we speak of supporting a specific industry or firm. From the national point of view, we are concerned with picking the "winner". At this level the "winner" is a complex system composed of physical resources and human resources: people, products and technology. We are looking for winners in the sense that we are looking for complex systems that can deliver the goods in a social context. Under this approach new factors become important in contrast to, let us say, general policies like manipulating the real wage and industrial policy.

Turning to innovation on the organizational side, some observed that public programmes in support of R. and D. often failed.

The time span is important here, and one thing that fails in ten years does not necessarily fail in twenty - twenty-five years. When we speak of technological innovation, we have to admit the possibility of a high rate of failure. It is a matter of risk-taking and risk-bearing according to the stage and particular situation in which a country is placed.

ANNEX III-7

Seminar on International Industrial Restructuring and the European Periphery Countries

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THE NEED FOR A NEW DEVELOPMENT STRATEGY: THE CASE OF PORTUGAL

by

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INTRODUCTION

It is widely believed by policy makers and analysts that changing strategies reflect the conditions of time; as the conditions change, growth strategies and stabilization policies also change. A new strategy, tailored to befit the changed environment, must take into account the past experience as a guiding instrument to investigate the dynamics of growth in the new international context, for issues and solutions are inevitably internationalized. This paper sets forth the unique characteristic features of a new development strategy, advocated for Portugal, in pursuit of long-term realism. Portuguese economy had taken on a significantly changed appearance by 1973 when compared with its position in the 1960s; a profound restructuring of its economy is evidenced by the significant change in the sectoral contribution to GDP. The share of the primary sector in GDP shrank and that of secondary sector increased. Manufacturing, a major component in the industrial sector, emerged as one of the dynamic elements in the economic transformation of the country. These changing conditions necessitate the need for a new development strategy.

A. A COMPARATIVE ANALYSIS: PORTUGAL'S RELATIVE STRENGTH AND WEAKNESS

A country's place in the international trade will result from the identification of its comparative advantages. Often we discard the fact that comparative advantages are, to a certain extent, the result of differences in development. In other words, a country, less developed than the economic areas in which it preferentially operates, is burdened with a number of negative conditioning factors and uncongenial constraints: smallness of domestic market; low technological levels, labour skills and entrepreneurial ability; and external diseconomies. These countries cannot solely depend on market dynamics. A general strategy of directed development becomes the second best and the only panacea for growth and prosperity.

An attempt is made to compare the conditions pertaining to Portugal, Greece, Spain, and EEC countries. This comparative analysis will enable us to have a better understanding of the relative strength and weakness of

Portugal. The empirical literature, furnished in the appended tables I, II, III, IV-A, B, C and D, V-A and B, serves as the nerve centre of our analysis.

A.1. Industrial Share in GDP and Industrial Growth Rate:

	Percentage contribution of industry to GDP	
	Manufacturing	Industry (in the broad sense)
Portugal	33.5	42.7
Greece	19.8	30.2
Spain	27.8	40.0
EEC	31.1	42.5

	Industrial growth rates (%)			
	Portugal	Greece	Spain	EEC
1960-78	5.6	9.6	8.6	4.3
1974-78	1.4	7.8	7.4	1.9

In Portugal, industry's share of GDP is much greater than that of Greece or Spain, and even slightly greater than the EEC average. Industry's lion's share of GDP in Portugal is mainly due to the fact that the secondary sector has been growing more than three times greater than the primary sector, chiefly agriculture. Nevertheless, industrial growth rate declined from 5.6% during 1960-78 to 1.4% during 1974-78, while industrial growth rates, during the same periods, did not drop significantly in Greece and Spain (maintained consistency). During 1974-78 Portugal's industrial growth rate was below the EEC average.

A.2. Pattern of Specialization:

In the sphere of industrial structure, Portugal differs from the developed countries of Europe with a sub-specialization in electrical engineering and in basic metallurgy, and a very strong specialization in textiles, tobacco, wood, cord and furniture. The dynamics of structural transformation, which started at the beginning of the 60s, brought about

a greater differentiation between the three Mediterranean countries, now in the process of joining the EEC. The main differences are in the textile sector - where Spain considerably reduced its specialization in basic metallurgy. Of the three countries, Portugal is the one where the dynamics of specialization seem to have favoured the expansion of the equipment. The appended table I presents indices, showing the changing industrial structure in Portugal, Spain and Greece. As a result of dynamic changes in the structural transformation in the productive process, Spain has a more modern structure than Portugal and Greece, which is a characteristic feature of newly industrialized countries.

A.3. Composition of Foreign Trade:

The composition of foreign trade reveals the structural distortions at the productive structural level. The light industry makes up the main part of Portuguese exports, while a significant part of imports consists of products of capital intensive industries.

Portugal's pattern of specialization is getting out of the dynamics of world trade, leading to loss of the relative position in exports, when compared with those of Greece and Spain. In 1968 Portuguese exports of industrial products represented 163%; 48% of the equivalent exports of those two countries. In 1977 the figures dropped to 73% and 20% respectively.

Textiles and clothing continue to play a leading role in exports. They constituted 40% of industrial exports in 1977, while in Spain's case it was only 9.7%.

An analysis made of thirteen countries shows that only in the case of Greece and some developing countries - some of which being producers of cotton - can one find, in general, such high proportion of textile exports among total industrial exports (see appended table II).

Equipment goods form 20% of Portugals sales (industrial products) abroad, as against 40% for Spain. In this respect, Portugal is in the same relative position as the other developing countries (Republic of Korea, Hong Kong and Greece), but well above countries of the Mediterranean basin-

less developed than Portugal, such as Tunisia, Turkey, Egypt, etc.

The figures in table II, related to textiles exports for the period 1968-77, illustrate the reduction in Portuguese export penetration of world market through ratios which relate the value of Portuguese exports with those of effective or potential competitors.

B. THE CHANGING TREND IN PORTUGUESE INDUSTRIAL STRUCTURE

Now we turn to the other tables to identify the changing trend in Portuguese industrial structure. An analysis of the involvement indices by branches of the GEBEI, 1971-77, given in table III, makes it clear that the main part of present Portuguese specialization (indices greater than one) is to be found in labour-intensive sectors. In the sectors of the electrical engineering industry and of the chemical industry, the involvement indices are generally less than one. In almost all cases, the trend is negative (both in the "traditional" and in the "modern" sectors), which means a general reduction in Portuguese industry's penetration of foreign markets, rather than a trend towards industrial redeployment in the period under consideration; there was no involvement index rise in modern sectors (except in electrical equipment and shipbuilding) to compensate the natural fall of involvement indices in more traditional sectors.

Tables IV - A, B, C and D enable us to determine the RCA [1/] (REVEALED COMPARATIVE ADVANTAGES), which facilitate our efforts to carry out an ex-post analysis of Portuguese industry's comparative advantages.

Although the indicator is of a static nature, the sequential analysis - taking the trend over a period of several years - certainly gives a useful indication about the trend lines of a country's comparative advantages.

1/ The Study and Planning Office calculated the RCA in trade with the OECD for 600 products and for all years in the period 1971-77.

Figures obtained for the period 1968-77 enable one to conclude that human capital intensive activities are in the weakest position, although the trend has been positive with no concomitant signs of losing position. Spain seems to have lost advantage in labour-intensive industries, while in Greece the trend for this type of activity is positive.

An analysis at product level shows that Portugal lost advantage in the chemical industry in general. On the contrary, in the electrical engineering industry, it seems to have reduced its disadvantages in numerous products. In labour intensive industries (textiles, metal-working, clothing, and other non-specified manufactured products), Portugal's position weakened (although the figures for 1977 do not confirm that trend), with glimmerings of high positive values. In raw-material intensive industries, the trend varied according to the type of product: deterioration in the rubber and basic metallurgy (iron and steel) sectors; [1/] stability in the paper industry and in non-ferrous metal manufacturing; and improvement in non-metallic mineral manufacturing.

C. OMNIFARIOUS FACTS: EVIDENCE AND EXPECTATION

The preceding facts bring forth the following omnifarious facts:

- The industrial structure was built-up to suit external conditions, without an overall consideration of internal requirements. This brought about the excessive dependence on external sources for goods which satisfy the basic needs of population, and intermediate goods and equipment needed for industrial development.

- Portuguese low unit labour cost was mainly responsible for bringing about specialization in labour-intensive technology.

1/ This does not signify, in this case, loss of competitiveness but rather investment discontinuity.

- Entry into EEC will contribute towards reducing differences in wage levels, which exist between Portugal and Community countries. As a result, the competitiveness of products, based on that comparative advantage, will be jeopardized.

- Third World countries produce products which compete with Portuguese products. Data concerning the textile industry clearly announce the new and more difficult competitive conditions which Portuguese industry will have to face in the future.

- The preprential agreements which the EEC has negotiated with Portugal's principal trading partners, and to which Portugal will have to subscribe, will make Portugal more vulnerable to competition, unless the pressures propagate the need for negotiating the existing agreements.

- Growth was mainly based on a strategy centred around the exploitation of hypothetical comparative advantages in labour intensive industries, using elementary technology. This strategy has outlived its utility as the stock of determining factors got exhausted. Fresh thinking is to be injected into a new development strategy which envisages the average EEC living standard as the primary target.

D. TOWARD A NEW DEVELOPMENT STRATEGY

In order to define a new development strategy, consideration must first be given to the new forms of competition to which Portuguese products will be exposed in the international context arising from EEC accession. They are of two types:

- those exercised by Community member countries on products of high income elasticity and (or) on highly sophisticated products;

- those exercised by Third World countries, with highly labour intensive products (highly competitive - on account of low wages paid).

D.1. Positive Factors:

- Reasonable mineral resources, insufficiently exploited or utilized in terms of the national economy: iron ore, tungsten pyrites (copper, lead, Zinc), salt-petre, silicon, ornamental stones, mineral waters, etc.:
- a relatively elastic supply of skilled or semi-skilled labour, at wage levels still below the EEC average, and which only in the long term will reach the same level, as a result of growth process itself;
- huge net international monetary reserves;
- the geographical self-sufficiency in some areas of production, particularly in the electrical engineering industry;
- climatic and geological conditions, leading to advantages in certain agro-industrial activities, that have been insufficiently utilized;
- extension of wealth (in fish and other resources) in Portuguese coast and territorial waters in the Exclusive Economic Zone: and
- forestry resources

D.2. Restrictions and Difficulties:

- a large number of inefficient and badly structured small productive units, with considerable problems in adjusting the productive system;
- A small domestic market (which will continue to be a handicap, even after full accession to EEC);
- great technological backwardness, in European terms and standard;
- lack of entrepreneurial talents and managerial capacity in specific fields;
- shortage of known energy resources; and
- marked regional imbalances.

Bearing in mind these factors and conditional features, the new development strategy should have the following goals:

(1) to enhance national resources;

(2) to restructure traditional industries;

(3) to raise national industry's technological level; and

(4) to strengthen the industrial base.

The criteria governing the practical implementation of the strategy should encompass:

(a) conditioning factors within the context of EEC accession;

(b) the dynamics of world demand;

(c) industrial redeployment trends on an inernational level (the dynamics of international division of labour); and

(d) energy intensity.

ILLUSTRATION OF THE ROLE OF KEY SECTORAL AREAS IN THE EXECUTION OF THE NEW DEVELOPMENT STRATEGY:

For analytical convenience, an emaciated sketch is given, with symbols conveying the significance of different branches of the industrial sector, and the extent to which they are to be attuned to the four main goals of the new development strategy.

GOALS	AGENTS				MACRO-ECONOMIC IMPACT			
	Public Sec.	Domestic Private Investment	Foreign Investment		Trade Balance		EMPLOYMENT	
			Joint-Venture	Transnatin.	Import/Sub.	Exports	Direct	Indirect
Enhancement of national resources	E_2	A E_1	E_2		.-	A E_1 E_2	A E_1	E_2
Restructuring of traditional industries		B C				B C		
Raising of national industry's technological level	D_3 F_1	D_1 D_2 D_3 F_1	D_1 D_2 D_3 D_4 F_1	D_4	D_1 D_2 F_1	D_1 D_2 D_3 F_1	D_1 D_2 F_1	D_2
Strengthening of industrial base	E_2 F_2 F_3 G		E_2 F_2 F_3		E_2 F_2	E_2 F_2		E_2 F_2 F_3 G

A - Activities enhancing national primary resources (e.g. agro-industry, forestry products, fish manufactures).

B - Light industry tradtional exports (e.g. textiles, clothing, footwear).

C - Other light industry activities using elementary technology, with export potential, demanding in design (e.g. furniture, toys, travel articles, metal products).

D - Electrical Engineering Industry:

D_1 - Intermediate technology activities, skilled labour-intensive, where economies of scale are not relevant (e.g. machine tools, textile machinery, woodworking machinery, machinery for the food industry);

D_2 - Activities with a close network of upstream and downstream links with other sectors of economy, likely to produce induced modernizing effects (e.g. cars, shipbuilding, railway equipment);

D_3 - Activities related to aiding investment efforts and/or to the construction of a modern national infra-structure network (e.g. heavy electrical engineering); and

D_4 - Activities fundamental to raising the technological level of national industry, both directly and through the diffusion effects (e.g. electronics, optics).

E - Activities enhancing national mineral resources:

E_1 - Non-metal mineral resources (e.g. mineral water , ornamental stones); and

E_2 - Metallury.

F - Chemicals:

F_1 - Fine chemicals and light chemicals in general, intermediate technology, using skilled or semi-skilled labour, where economies of scale are not very important (e.g. resin derivatives, active principles for pesticides, insecticides, etc. - phamaceuticals, agar-agar, odouriferrous mixtures, colouring for the food industry);

F_2 - Petrochemical industry; and

F_3 - Other basic chemicals industries.

G - Other basic industries.

CONCLUSION

The main inference deduced from the preceding analysis is that the new development strategy appears to have coherent vision of its own to capitalize everything to accomplish self-reliant growth palatable to global interdependence. The practical implementation of the strategy is not capitulating to the accession process into EEC.

APPENDIX TABLE I

INDICES SHOWING THE CHANGING INDUSTRIAL STRUCTURE IN THREE COUNTRIES OF SOUTHERN EUROPE

Sectors	Portugal	Spain	Greece
I - Convergent evolution			
a) Positive			
Pulp, paper and cardboard	130,6	139,3	100,0
Chemical materials	121,3	100,0	118,2
Basic metal industries	121,4	162,7	224,4
Manufactures of metal	108,5	110,7	167,5
Electric machinery	169,7	112,0	106,8
Other manufactured articles	128,0	125,8	154,2
b) Negative			
Food	75,7	100,0	94,0
Tobacco	44,1	68,4	31,3
Manufacture of textiles	94,4	55,0	90,4
Non-metallic mineral manufactures	88,2	97,5	79,5
Transport equipment	96,0	98,8	89,7
II - Divergent evolution			
Beverages	152,4	63,9	111,7
Clothing, footwear, leather	102,4	103,4	93,6
Wood, cork, furniture	97,1	91,1	116,7
Printing	102,6	90,3	60,0
Rubber	63,2	115,0	66,7
Machinery, other than electric	164,7	88,9	85,7

APPENDIX TABLE II

EXPORT GROWTH IN SEVERAL COUNTRIES: TOTAL AND TEXTILES

Countries	Total Exports	Textile Exports	Index (Portugal = 100) Total Exports	Textile Exports
PORTUGAL				
1968	761,2	208,8	100,0	100,0
1973	1 861,7	528,9	100,0	100,0
1977	2 013,4	535,6	100,0	100,0
GREECE				
1968	467,8	57,0	61,4	27,3
1973	1 454,1	268,7	78,1	50,8
1977	2 757,3	539,32	136,9	100,7
SPAIN				
1968	1 589,2	107,1	208,8	51,3
1973	5 161,5	336,5	277,2	63,6
1977	10 217,7	629,4	507,5	117,5
SOUTH KOREA				
1968	455,4	193,5	59,8	92,7
1973	3 214,9	1 277,9	172,7	241,6
1977	7 693,0	2 837,2	382,1	529,7
HONG KONG				
1968	1 390,7	656,7	182,7	314,5
1973	3 783,7	1 848,3	203,2	349,5
1977	7 514,1	3 494,8	373,2	652,5
PAKISTAN				
1968	692,9	545,7	91,0	261,3
1973	941,2	538,8	50,6	101,9
1977	1 152,8	556,0	57,2	103,9
TUNISIA				
1968	157,8	3,62	20,7	1,7
197_	385,5	15,6	20,7	2,9
1977	788,8	98,0	39,2	18,3
TURKEY				
1968	496,4	156,5	65,2	74,9
1973	1 317,1	469,9	70,7	88,8
1977	1 753,0	544,7	87,1	101,7

Table II, Continued:

Countries	Total Exports	Textile Exports	Index (Portugal = 100) Total Exports	Textile Exports
EGYPT				
1968	621,7	400,0	81,6	191,5
1973	1 116,7	695,4	60,0	131,5
1977	1 708,3	804,8	84,8	150,3
INDIA				
1968	1 749,0	518	229,8	248,5
1973	2 036,7	509,6	109,4	115,3
1977	5 322,7	1 158,8	264,4	216,4
MOROCCO				
1970	487,9	23,4	64,1	11,2
1973	876,6	69,9	47,1	13,2
1976	1 262,1	135,9	62,7	25,4
POLAND				
1968	2 857,8	116,6	375,4	55,8
1973	6 428,4	463,5	345,2	82,6
1975	10 282,4	711,5	510,7	132,8

APPENDIX TABLE III

INVOLVEMENT INDICES

Branches		71	72	73	74	75	76	77	b**
Viandes et produits a base de viande	7	1.004	1.003	0.995	0.991	1.001	1.003	0.992	-0.00
Produits laittiers	8	1.029	0.968	1.009	0.983	0.958	0.954	0.974	-0.00
Fuits	9	16.332	5.742	11.955	2.504	1.470	2.544	1.861	-2.15
Huiles comestibles	10	0.918	0.695	0.647	0.683	0.882	0.906	0.796	0.01
Aliments pour betail	11	0.958	0.977	0.983	0.983	0.986	0.997	0.998	0.00
Autres produits alimentaires	12	0.930	0.915	0.908	0.815	0.797	0.849	0.899	-0.01
Boissons	13	0.990	0.969	0.976	0.971	0.997	0.977	1.014	0.00
Tabac	14	0.994	0.995	0.994	0.991	0.996	1.001	1.001	0.00
Textiles, laines	15	10.986	1.020	1.004	0.967	0.993	0.983	0.955	-0.00
Textiles	16	1.339	1.502	1.431	1.270	1.286	1.213	1.344	-0.03
Textiles ameublement	17	1.976	1.624	1.550	3.334	1.467	1.280	1.337	-0.01
Vetements	18	1.798	1.859	1.915	1.838	1.765	1.545	1.503	-0.06
Chaussures	19	1.425	1.351	1.316	1.282	1.286	1.359	1.730	0.03
Fourrures	20	1.002	1.013	0.983	0.993	1.023	0.994	0.976	-0.00
Bois	21	1.436	1.313	1.309	1.335	1.203	1.407	1.337	-0.00
Liege	22	9.178	3.269	3.269	3.202	3.754	6.440	4.913	3.39
Meubles	23	0.994	0.984	0.973	0.960	0.985	0.988	0.998	0.00
Articles en bois	24	2.048	3.406	2.932	2.361	2.139	4.040	1.845	-0.00
Papiers	25	0.864	0.876	0.862	0.928	1.054	1.070	0.981	0.03
Imprimerie	26	0.956	0.960	0.959	0.955	0.957	0.967	0.981	0.00
Caouthouc	27	0.989	0.969	0.964	0.919	0.893	0.825	0.785	-0.03
Articles en matiere plastique	28	0.877	0.888	0.900	0.867	0.894	0.891	0.867	-0.00
Produits chimiques de base	29	0.596	0.582	0.518	0.569	0.690	0.967	0.495	0.02
Resines	30	13.222	23.324	5.610	6.506	1.850	3.033	2.012	-2.79
Huiles	31	0.612	0.677	0.728	0.892	0.843	0.959	0.975	0.06
Peintures	32	0.977	0.952	0.943	0.927	0.966	0.957	0.980	0.00
Essence	33	0.859	0.872	0.890	0.870	0.869	0.816	0.818	-0.00

Table III Continued:

Branches		71	72	73	74	75	76	77	b**
Verre	34	0.858	0.864	0.805	0.888	0.865	0.834	0.834	0.002
Ciment	35	1.158	0.980	0.964	0.927	0.977	0.977	0.969	-0.02
Materiaux de construction	36	0.986	1.018	1.010	1.014	1.031	0.995	0.973	-0.003
Acier	37	1.047	1.063	1.083	1.066	1.062	1.047	1.036	-0.02
Autres metaux	38	0.546	0.622	0.591	0.405	0.502	0.533	0.514	-0.02
Autres produits chimiques	39	0.285	0.280	0.275	0.196	0.280	0.206	0.162	-0.01
Ouvrages en metaux	40	0.921	0.908	0.944	0.884	0.963	0.932	0.950	0.03
Machines	41	0.135	0.198	0.244	0.261	0.322	0.292	0.285	-0.09
Machines electriques	42	0.734	0.829	0.913	0.905	0.789	0.751	0.765	0.07
Construction navale	43	0.708	0.819	0.659	0.927	1.038	0.941	1.182	0.07
Materiel de transport	44	0.553	0.586	0.571	0.544	0.576	0.563	0.520	-0.005
Divers	45	0.243	0.267	0.310	0.301	0.331	0.257	0.270	0.003

(*) Ces indices sont calculés de la façon suivante: $\frac{\text{production} -}{\text{consommation apparente}}$

(**) Coefficient tendanciel de l'équation de régression.

APPENDIX TABLE IV - A

REVEALED COMPARATIVE ADVANTAGES: SPECIFIC INDUSTRIES IN PORTUGAL, GREECE AND SPAIN (1968-1977)

	PORTUGAL				GREECE				SPAIN			
	1968	1970	1973	1977	1968	1970	1973	1977	1968	1970	1973	1977
Human capital intensive industries	-1,2	-0,91	-0,8[illegible]	-[illegible],83	-0,96	-1,29	-1,36	-0,37	-0,54	-0,4	-0,55	-0,46
Raw material intensive industries	0,17	0,009	0,22	0,06	1,15	0,99	0,74	0,66	0,14	0,22	0,4	0,44
Labour intensive industries	1,43	1,37	1,25	1,55	0,81	1,05	1,44	2,76	1,38	0,39	1,15	0,91

Dource: U N.O., Annuaire Statistique du Commerce International. All the figures up to 1973 were obtained from "Industrial development-topics of prospective analysis" by Joao Rendeiro, from the G.E.P./M.I.E.

APPENDIX TABLE IV - B

REVEALED COMPARATIVE ADVANTAGES IN PORTUGAL' GREECE AND SPAIN: (Labour Intensive Industries)

	PORTUGAL				GREECE				SPAIN			
	1968	1970	1973	1977	1968	1970	1973	1977	1968	1970	1973	1977
Textiles	0,71070	0,69488	0,66083	1,58120	0,39440	0,58417	0,73245	2,72625	0,44556	0,41399	0,19642	0,51332
Metal Products	0,13884	0,15002	0,07773	0,31695	-0,13763	-0,25916	-0,16393	1,86199	0,26060	0,45413	0,33236	0,86331
Wearing Apparel	1,33653	1,20924	1,01455	3,54071	-	-	-	4,79608	0,80999	0,82388	0,77316	1,10079
Other Manufactured Products not Elswhere Classified	-0,10331	-0,12321	-0,23284	-0,09747	0,21088	0,13542	0,28187	1,53299	0,54877	0,53614	0,32795	0,40801

Source: Idem.

APPENDIX TABLE IV - C

REVEALED COMPARATIVE ADVANTAGES IN PORTUGAL, GREECE AND SPAIN: (Raw Material Intensive Industries)

	PORTUGAL				GREECE				SPAIN			
	1968	1970	1973	1977	1968	1970	1973	1977	1968	1970	1973	1977
Rubber Products not Elsewhere Classified	0,18904	0,24630	0,05292	-1,51743	-0,64975	0,03060	0,30737	-0,06803	0,67117	0,81714	0,88670	1,70811
Paper	-0,12872	-0,07371	-0,13924	0,61138	-0,28441	-0,30803	0,71625	-0,19748	-0,32121	-0,22717	-0,12738	-0,07802
Non-Metallic Products	0,16897	0,12064	0,35896	0,81787	0,29389	0,17377	0,21982	2,99884	-0,05438	0,14977	0,13059	0,69682
Steel	-0,49526	-0,63789	-0,75031	-1,23790	-0,10309	0,62967	0,30404	1,42896	-0,00528	-0,54561	0,15576	0,34031
Non-Ferrous Metals	-0,92738	-1,90309	-1,02228	-2,91200	1,16628	0,88260	0,60377	2,52381	0,14934	-0,17418	-0,41218	-0,56603

Source: Idem.

APPENDIX TABLE IV

REVEALED COMPARATIVE ADVANTES IN PORTUGAL, GREECE AND SPAIN: (Hu

MANUFACTURED PRODUCTS	PORTUGAL				
	1968	1970	1973	1977	1968
CHEMICAL PRODUCTS	-0,18515	-0,12125	-0,28617	-0,99006	0,30378
Mixed Chemical Products	-0,55972	-0,60432	-0,82711	-2,40954	0,30016
Other Chemical Products	-0,65797	-0,48559	-0,96377	-1,68345	-
Drugs	-0,29714	-0,18422	-0,27084	-0,75543	-0,90136
Perfumes	0,25360	0,28863	0,01153	-0,44290	-
Fertilizers	0,46690	0,38566	0,35938	1,47528	0,66817
Plastics Products	-0,87517	-0,72262	-0,84285	-2,66407	0,08411
Chemical Products not Elsewhere Classified	0,37477	0,54044	0,46941	0,22040	0,90408
MACHINERY AND TRANSPORT EQUIPMENT	-0,70027	-0,52768	-0,40506	-0,76194	-2,31426
Machinery except Electrical	-0,83654	-0,71444	-0,54136	-1,23741	-1,55596
Electrical Machinery	-0,27352	-0,12292	-0,00677	-0,07972	-0,79480
Transport Equipment	-1,16813	-0,93817	-0,71220	-1,05849	-1,53165
OTHERS					
Instruments and Watches	-1,00000	-0,83268	-0,40805	-0,93506	-

Source: Idem.

- D

man Capital Intensive Industries)

GREECE			SPAIN			
1970	1973	1977	1968	1970	1973	1977
0,20645	-0,02581	0,90026	-0,20810	-0,29090	-0,42389	-0,83208
0,34364	-0,12448	1,05283	-0,15040	-0,27622	-0,46509	-1,04500
-	-	-0,42777	-	-0,35813	-0,46017	-0,71852
0,10880	-0,38913	0,29997	-0,41612	-0,41623	-0,53955	-0,85289
-	-	1,41879	0,10377	0,15235	0,05092	-0,05398
0,64178	1,09627	2,83317	0,23699	0,10588	0,25469	1,66361
-0,20782	-0,42551	-0,45660	-0,64878	-0,55596	-0,72079	-1,05192
0,78917	0,40582	1,52515	-0,56083	-0,44940	0,32057	-1,14574
-1,24489	-1,02919	-0,93803	-0,21961	-0,41873	-0,15342	-0,22743
-1,62343	-1,42366	-1,63188	-0,32790	-0,37233	-0,47769	-0,76607
-0,58071	-0,48466	0,57487	-0,42125	-0,12108	-0,21070	-0,76370
-1,50864	-1,24489	-1,30786	-0,12467	0,33798	0,30129	1,03794
-	-	-1,35824	-0,72630	0,69379	-0,83033	-2,19241

APPENDIX TABLE V - A

RELATIVE LABOUR UNIT COSTS IN SEVERAL COUNTRIES AS COMPARED TO PURTUGAL: (Textile Industry)

EEC and CANDIDATES	1966	1967	1968	1969	1970*	1971	1972	1973	1974	1975**	1976**
ITALY	..	69,3	70,4	71,7	74,1	54,2	40,9	43,3	45,3	-20,9	-28,8
DENMARK	66,4	59,4	56,4	56,7	50,1	25,0	25,9	42,1	26,6	-26,4	-25,3
GERMANY, F.R.	-39.4	33,6	34,9	40,1	42,1	12,8	14,3	25,5	10,0	-77,7	-72,1
LUXEMBURG	47.0	38.1	50,1	65,7	37.3	13.2	16,7	37,9	3,0	-29,0	- 8,1
GREECE	- 4 [illegible]	- 8,6	- 8,2	..	- 9,0	-38,6	-43,6	-42,0	..	-83,7	..
IRELAND	40,5	31,6	39,5	48,3	40,0	11,9	12,2	8,2	..	..	..
NETHERLANDS	43,6	43,7	40,5	44,6	46,8	..	15,4	24,5	..	-0,9	..
UNITED KINGDOM	..	..	32,5	..	35,5	8,9	5,8	9,4	- 3,7	-41,6	-42,2
SPAIN	10,3	17,1	17,7	17,1	10,9	-20,5	-27,5	-22,7	-32,1	-42,6	-25,4
BELGIUM	..	..	..	..	..	..	..	..	..	-31,6	-35,1
EFTA											
NORWAY	62,7	59,5	68,2	68,0	61,6	40,1	35,0	43,7	31,8	- 9,2	- 5,5
AUSTRIA	..	..	..	49,4	43,8	15,6	16,3	29,7	16,2	- 6,2	..
FINLAND	70,9	64,1	62,7	43,0	38,7	15,8	16,4	33,4	12,?	-26,0	-19,1
SWEDEN	71,0	59,6	62,5	65,6	60,9	33,3	29,9	30,3	8,4	-49,2	-47,9
OTHER O.E.C.D. COUNTRIES											
UNITED STATES	42,3	41,0	46,6	51,9	47,8	18,2	3,3	11,2	..	-39,3	-36,0
JAPAN	- 5,8	-16,7	-11,6	- 2,8	- 6,8	-30,2	-29,0	-27,8	-37,4	-64,0	-64,7

Source: Yearbook of Industrial Statistics. Conversion into dollars by using exchange rates appearing in IMF Statistics.

APPENDIX TABLE V - B

RELATIVE LABOUR UNIT COSTS IN SEVERAL COUNTRIES AS COMPARED TO PORTUGAL

MEDITERRANEAN AND MIDDLE EAST	1966	1967	1968	1969	1970	1971
IRAN	8,7	-11,7	-23,2	-13,6	-18,2	-37,7
EGYPT	..	32,2	25,8	16,7	27,8	- 5,8
YUGOSLAVIA	..	..	..	..	51,1	19,9
TURKEY	2,0	- 1,4	- 1,8	27,8	-24,4	..
SOUTH AFRICA SAHARA						
NIGER	-14,5	-26,5	-35,8	-44,2	-64,7	-63,7
LATIN AMERICA						
CHILE	- 0,1	5,0	6,9	9,7	5,9	- 2,3
BRAZIL	- 6,6	- 6,5	-41,1	-35,5	-22,4	-56,7
MEXICO	115,1	97,7	6,4	12,9	24,9	- 8,5
VENEZUELA	..	..	..	..	24,3	- 5,9
ASIA						
PAKISTAN	- 0,8	12,9	- 8,2	..	-13,2	-45,1
INDIA	19,6	..	13,0	9,8	3,3	..
SINGAPORE	41,9	- 5,9	-27,3	0,6	6,8	-28,6
SOUTH KOREA	-31,2	-26,5	-18,3	- 5,5	-11,6	-51,3
PHILIPPINES	..	..	- 0,2	12,5	-29,1	-66,0

, 1971-1976: (Textile Industry)

1972	1973	1974	1975	1976
-39,1	-25,9	..	-50,9	-43,7
6,8	..	..	..	..
19,6	24,7	-13,8	-46,4	-27,3
-47,4	-36,9	-53,6	-64,0	-75,8
-39,2	-35,2	-52,6	-92,7	..
32,8	-15,2	..	..	..
-82,5	-91,8	..	..	..
- 3,9	- 3,5	-17,7	-53,1	..
-10,3	..	-17,7	-105,4	..
..	..	..	..	..
..	15,9	..	-26,0	-25,4
-25,0	-30,0	-26,4	-36,9	-52,7
-60,3	-57,8	-65,1	..	..
-67,2	-60,9	-81,7	..	..

ANNEX III-8

Seminar on International Industrial
Restructuring and the European Periphery
Countries

Sesimbra, Portugal, 22-24 October 1980

CRISIS AND INDUSTRIAL RESTRUCTURING: SOME BROAD ISSUES ABOUT SPAIN

by

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CONTENTS

I. INTRODUCTION

This paper attempts to provide glimpses of various issues related to Spanish economy in a highly condensed form: economic crisis in Spain; questions related to the validity and reliability of research findings; confrontation between free-market and public intervention; shift in economic policy decisions from a national to an international level; the expected costs and benefits of entering the Common Market; structural roots of unemployment; and the befogged state of affairs in the financial sector.

To translate economic theories into policies, economists and technical experts need quantifications. They can either be represented by a numerical series, or at least be ranked ordinally, so that policy makers know when they have moved in the right direction. W. Leontief said:

> "Without a constant inflow of new data the existing stock of the factual information becomes a futile exercise."

The validity and reliability of quantification process are often questioned in Spain. This is mainly due to lack of indispensable primary data.

II. THE MAGNITUDE OF ECONOMIC CRISIS IN SPAIN

During the second half of the 1970s the Spanish economy was bogged down; like a stuck automobile with engine racing and wheels spinning. Since 1974 the economic system started showing signs of breaking down under the strain. Drastic oil price increases shocked the system and the energy dependant Spanish economy was sent reeling.

Between 1961-1974 the Spanish economy was placed on the road to prosperity: income per head in real terms grew at an annual rate of 7 percent; manufacturing sector generated around 10 percent in 1960 to 42 percent in 1974. These positive trends suddenly turned out to be a nightmare during the second half of the 1970s: the rate of increase in GDP averaged 2 to 3 percent; investment faced negative rate (aaproximately -3.5%); its

relative weight in GDP decreased from one quarter to less than one fifth; and the magnitude of unemployment was to the tune of 12.6 percent.

III. OPINIONS DIFFER ON VITAL ISSUES

The public debate is mainly confined to two basic issues:

- the confrontation between free-market and public intervention; and
- the expected costs and benefits arising from entry into the EEC.

Historically industrial development in Spain was attuned to an ideological preconception of economic growth. A nationalistic way of industrial development gave topmost priority to the public sector, state intervention, and to highly protectionist policies. It is not clear whether Spain would have reached its present industrial potential, if an active policy of state intervention and participation, mainly in basic industries, had not been followed. In 1959 an extremely successful programme was launched, exposing Spain to a closer integration with Western economies. Conspicuous controls and administrative interventions were reduced. By 1964 the impulse towards liberalization had lost momentum. The economic crisis and the implementation of a democratic constitution created a feeling that the social components of Public Budget were a burden too heavy to carry. These feelings resulted in an active discussion dominated by the voice in favour of private enterprise.

The second discussion is centred around Spain as a potential entrant into the EEC. Membership in the EEC means political guarantee to the feeble Spanish democracy. It implies that negotiations are undertaken from a position of relative weakness. Membership in the EEC is an element of global security.

IV. STRUCTURAL ROOTS OF UNEMPLOYMENT

An important programme of research on structural changes affecting

Spanish industry, carried out by the Fundacion del Instituto Nacional de Industria under the direction of Professor Julio Segura, highlights the following findings:

(1) The input-output tables pertaining to 1962, 1970 and 1975 reveal the labour absorbing capacity of different components of Spanish industry. Labour requirements per unit of final demand are consistently lower in sectors with high growth potential, like energy production, metal mechanics, chemicals and machinery. Agriculture, leather, shoe-making and commerce, with high employment potential, generated relatively low growth rate. The products of industries with low labour requirements could command a major share of demand.

(2) The transition from the final demand structure, existed in 1962, to the structure of 1970 has implied (for the same level of aggregate expenditure) a reduction of 17% in the overall level of labour requirements. This gives explicit expression to the shift of demand from products with a high labour content to products with less labour content, e.g. from textiles and leather to chemicals. Labour intensive production declined by 6.3 percent a year between 1962 and 1970. The gains in overall productivity have been estimated not lower than 4 percent a year. These factors led to the emergence of a conflict between two important goals-growth and full employment. The direct outcome of the combined operation of technical change and demand shift could be coined as the "structural roots of unemployment".

(3) According to research findings, capital requirements increased at an annual rate of 2.7 percent for a given level of final demand between 1962 and 1970. This rate of growth, though unevenly distributed among different industries, shows the capital intensive character of the Spanish industrialization process. A significant rise in the capital/labour coefficient is obtained by combining the reduction in the employment/output ratio, and the rise in the capital/output ratio. The results reveal that the direction of structural change is not attuned to the requirements of a labour surplus and capital scarce economy and certainly not akin to the existing factor endowment of the Spanish economy. It depicts the inability of the productive system to generate employment.

(4) According to input-output tables, the relative weight of intermediate inputs in output has been growing steadily. This suggests an intensive specialization process in Spanish industry.

(5) Another trend well documented has been the dependence of Spanish economy on the world industry. The need for imported intermediates surpassed the production level. The 1970 industrial structure required 26.8 percent more than the requirements of the 1962 industrial structure. The change in the structure of exports (between 1962 and 1970) has increased intermediate import requirements by 11.3 percent, with a given technology. The period 1970-1975 witnessed the reinforcement of the same trend. The logical conclusion is: the more technologically advanced a sector is, the more it depends on imported intermediates.

V. BEFOGGED STATE OF AFFAIRS IN THE FINANCIAL SECTOR

The negative rate of aggregate investment stands as an index of the present state in Spanish industry and indeed of the economy as a whole. The befogged state of affairs has been caused by the energy crisis and other socio-economic problems. The negative trend in investment cannot be adequately explained, if no reference is made to the structure of financial markets. Increasing trend in the user cost of capital stock, uncertainties related to the energy crisis, inflation and structural conditions defining the operations of financial markets (private and public components) led to a steep rise in interest rates.

Recent research (Torrero 1979) reveals that increased legal flexibility, introduced in 1974, facilitated the financial institutions' policy to open new branches and agencies. This resulted in unhealthy competition to attract deposits and escalated the costs of banking operations. The high cost of external funds to firms created the dire necessity to depend on internally generated funds. The problems of the public sector and rigid tax system magnified the crisis in the domain of strained financial resources.

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ANNEX III-9

Seminar on International Industrial
Restructuring and the European Periphery
Countries

Sesimbra, Portugal, 22-24 October 1980

IRELAND'S RESTRUCTURING PROCESS IN THE LIGHT OF EEC ENLARGEMENT

by

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INTRODUCTION

This paper furnishes a few random thoughts: (a) on the problems of fiscal management and allocation of Community funds, resulting from the proliferation of members in the Community; and (b) on Ireland's restructuring process in the light of EEC enlargement. The tables (1-11), appended to this paper, provide empirical evidence to our analysis.

I. NEW ENTRY AND PROBLEMS OF FISCAL MANAGEMENT

Ireland has welcomed the admission of Greece, Spain and Portugal to the EEC, and has not set conditions to be fulfilled by the aspirants. Ireland takes the view that enlargement be taken as an opportunity to deal more effectively with the present regional imbalances in the Community.

While accepting new entry, the existing members cannot but speak out the possible strain on the Community Funds. One must admit the fact that we are competing for regional funds which are too small for present needs; and when Greece, Spain and Portugal enter the Community, competition for funds will be doubly heightened. Like Ireland, these countries are likely to be eventual net beneficiaries under the Agricultural, Regional and Social funds. Under the existing limits on finance for these funds, the entry of these countries would cut down the amount available for existing members.

This implies, in Ireland's view, that the limits on finance be relaxed enough to cover the extra demands on the burden of enlargement. Otherwise, an undue share of the burden of enlargement would have to be borne by the weaker regions in the Community.

II. IRELAND'S RESTRUCTURING PROCESS IN THE LIGHT OF EEC ENLARGEMENT

Ireland does not have a major restructuring challenge, but it arises from factors other than the imminent enlargement of the EEC.

Ireland retains many of the features of a developing economy: rapid growth of population is coupled with a significant share of labour force engaged in agriculture (see appendix table 2): and the industrial sector projects the need for huge investment on infrastructural facilities in pursuit of creating a strong industrial base. The industrial strategy aims at: (a) attracting new industry, much of it from abroad, though there is also a successful small industrial programme consisting largely of domestic enterprise; and (b) restructuring and raising productivity in the older manufacturing enterprise - many of which date from the protectionist phase of the 1930's. In recent years, job losses in older industries have substantially offset job gains in new industries.

Primary emphasis was placed on export-oriented enterprises in manufacturing. Substantial incentives have been offered, including export tax relief and capital grants averaging about one-third of fixed investment. Exports of manufactures have grown rapidly, now amounting to half of total export (see appendix table 8), and the economy has moved steadily from complete net importer to the state of balance in trade in manufactures (see appendix table 11). Dependence on the UK market has been greatly reduced (see appendix table 9).

The upheavals in the world economy since 1973 have seriously retarded progress in the economy. As may be seen from appendix table 1, the slower output growth, rapid growth of population and the adverse terms of trade have resulted in virtually no change in real GNP per capita between 1973 and 1980. The external pressures on development have shown little sign of easing. The declining trend in manufacturing output and employment is evidenced by the figures given in appendix table 3. In addition, agriculture, which enjoyed a boom period during the transition phase due to higher EEC prices, is now experiencing a substantial fall in real income. This is the direct outcome of the combined operation of stagnant prices for agricultural output, soaring prices of inputs and a high rate of inflation (18 percent in 1980). The threat of the EEC super-levy-proposed; but not implemented - brings forth obvious signs of damage to investment confidence in agriculture The prosperity of the Irish economy is very much linked to that of its larger

trading partners.

The entry of Spain, Portugal and Greece may involve enhanced competition. It does not necessarily mean that it calls for further restructuring measures in Ireland in addition to the existing restructuring process. Direct trade between Ireland and Spain, Portugal and Greece combined, though growing rapidly, still amounts to a meagre fraction (1.5 percent) of total Irish exports and a little over 1 percent in the case of imports (see appendix table 6). There may, of course, be some displacement of Irish exports in other EEC markets. The amount is unlikely to be great. The three entrants might expand the scope for increased exports of Irish beef and dairy produce. Chemical and electronic industries would be the major beneficiaries, mainly due to the large Spanish market (see appendix table 7). Enlargement is likely to add to the existing pressure on the Irish clothing, footwear and textile industries.

CONCLUSION

To sum up, the impact of the EEC enlargement, arising from the admission of Greece, Spain and Portugal, is likely to have far more effect through its impact on the Community's Special Funds than through market competition.

APPENDICES (Tables)

Table 1. Average Annual Rates of Growth of Volume of GNP, etc. in Ireland, 1960-73 and 1973-80.

	1960-73	1973-80
	%	%
GNP	4.3	3.0
Population	0.6	1.5
Employment	0.0	0.3
GNP per Capita	3.7	1.5
GNP per Worker	4.3	2.7
Other measures of Real GNP:		
GNP (including net external transfers)	4.4	3.3
do. per Capita	3.8	1.8
GNP (including net external transfers and terms of trade effect)	4.9	1.8
do. per Capita	4.3	0.3

Table 2. Sectoral Employment Shares in Ireland: 1960, 1974 and 1980

	1960	1974	1980
Agriculture: No. (000)	390	254	215
% of total	37.0	23.8	
Industry: No. (000)	248	333	343
% of total	23.5	31.1	31.8
Services: No. (000)	417	482	520
% of total	39.5	45.1	48.2
TOTAL: No. (000)	1,055	1,069	1,078
Growth Rates:	1960-74	1974-8)	
	%	%	
Agriculture	-3.0	-2.8	
Industry	2.1	0.5	
Services	1.0	1.3	
TOTAL	0.1	0.1	

Table 3. Average Growth Rates in Irish Manufacturing

	1953-63	1963-73	1973-79
	%	%	%
Volume of Output	4.2	6.3	4.6
Employment	1.6	1.9	0.9
Output per Worker	2.5	4.3	3.7

Table 4. Growth Rates of Volume of Output in Branches of Irish Manufacturing

	1953-63	1963-73	1973-79
Food	1.1	5.0	4.5
Drink and Tobacco	0.8	4.3	3.9
Textiles	6.6	8.1	5.6
Clothing and Footwear	3.0	3.0	- 3.1
Wood and Furniture	2.8	3.5	- 1.4
Paper and Printing	5.6	3.9	0.8
Chemicals	7.5	12.1	14.9
Minerals	6.2	10.8	3.8
Metals and Engineering	8.1	6.3	3.9
Other Manufacturing	9.8	10.2	3.9
TOTAL	4.2	6.4	4.6

Table 5. Employment Shares by Branch in Irish Manufacturing

	1953	1963	1973	1978
	%	%	%	%
Food	24.9	23.2	21.1	20.9
Drink and Tobacco	7.4	6.0	4.8	5.1
Textiles	12.3	13.0	11.3	9.9
Clothing and Footwear	15.2	13.3	10.5	7.9
Wood and Furniture	6.1	4.6	4.2	3.6
Paper and Printing	8.9	8.9	8.1	7.8
Chemicals	2.9	3.5	4.3	5.2
Minerals	3.7	4.1	5.8	6.3
Metals and Engineering	14.1	18.0	22.4	23.2
Other Manufacturing	4.6	5.5	7.6	10.1
TOTAL	100.0	100.0	100.0	100.1
Total Absolute Nos. (000)	142.9	168.2	203.2	201.1

Table 6. Trend of Ireland's Trade with Spain, Portugal and Greece

	1961		1973		1979	
	£M.	(%)	£M.	(%)	£M.	(%)
Spain:						
Exports	0.3	(0.18)	7.9	(0.91)	34.8	(1.00)
Imports	1.5	(0.56)	8.1	(0.71)	33.7	(0.70)
Portugal:						
Exports	0.1	(0.08)	2.0	(0.23)	5.1	(0.15)
Imports	0.5	(0.21)	4.7	(0.42)	14.8	(0.31)
Greece:						
Exports	0.1	(0.05)	2.4	(0.27)	11.4	(0.32)
Imports	0.3	(0.11)	1.0	(0.09)	6.0	(0.12)

Percentages relate to proportion of total exports and imports, respectively.

Table 7. Ireland's Trade with Spain, Portugal and Greece, 1979 by SITC Section

SITC SECTION	SPAIN		PORTUGAL		GREECE	
	£M.		£M.		£M.	
	X	M	X	M	X	M
0.	3.6	3.4	0.6	0.4	3.6	1.8
1.	0.1	2.3	0.0	1.1	0.0	0.0
2-4.	5.3	1.4	0.0	1.1	2.2	0.9
5.	16.5	5.2	1.8	0.9	2.8	0.0
6.	2.3	10.5	1.3	7.2	0.3	2.1
7.	2.9	6.7	0.6	0.5	1.3	0.0
8.	3.6	3.7	0.5	2.8	0.1	0.8
9.	0.5	0.6	0.3	0.8	1.1	0.3
TOTAL	34.8	33.7	5.1	14.8	11.4	6.0

Table 8. Composition of Ireland's Exports by SITC Section: Various Years.

Section	1961*	1973	1979
	%	%	%
0	61.0	40.5	35.1
1	4.3	2.7	1.9
2	6.2	5 8	4.9
3	2.1	0.8	0.5
4	0.3	0.4	0.3
5	0.5	6.8	12.9
6	9.1	16.9	13.2
7	2.6	9.9	16.0
8	5.6	10.2	10.9
9	8.3	6.2	4.4
TOTAL	100.0	100.0	100.0
ABSOLUTE TOTAL £M.	175.2	869.2	3,498.5

* Domestic exports only; re-exports (total value £5.26M) are not classified according to SITC.

Table 9. Destination of Ireland's Exports by SITC Section: Various Years

SECTION	1963*			1973			1979		
	UK	EEC**	Rest of World	UK	Other EEC+	Rest of World	UK	Other EEC+	Rest of World
	%	%	%	%	%	%	%	%	%
0	76.6	6.4	17.1	58.5	23.9	17.7	52.9	28.4	18.7
1	92.0	2.7	5.3	70.0	8.0	22.0	43.7	19.1	37.2
2	61.2	21.4	17.5	41.0	43.2	15.7	34.3	50.1	15.6
3	87.5	3.1	9.4	81.8	6.1	12.1	85.7	2.4	11.9
4	83.3	16.7	-	87.9	9.1	3.0	92.7	1.8	5.5
5	50.0	25.0	25.0	35.8	25.7	38.5	27.5	39.6	32.9
6	79.9	8.5	11.6	66.9	10.5	22.6	59.5	23.2	17.3
7	53.3	17.8	28.9	43.3	25.2	31.5	41.3	37.2	21.5
8	74.6	4.1	21.3	64.3	16.7	19.0	50.8	29.7	19.4
9	25.9	2.6	71.6	20.3	18.6	61.1	25.8	20.4	53.8
TOTAL	72.4	7.5	20.1	54.7	21.3	24.0	46.4	31.1	22.5

* Domestic exports only

** EEC = Germany, France, Italy, Netherlands and Belgium

\+ Other EEC = the above, together with Denmark and Luxembourg

Table 10. Total Imports and Exports as % of Irish GNP

	Imports/GNP	Exports/GNP
	%	%
1963	37.9	24.2
1973	42.1	32.2
1978	59.5	47.4

Table 11. Irish Trade Ratio* for Manufactured Goods

	%
1953	- 84.5
1963	- 59.9
1968	- 48.5
1973	- 37.4
1977	- 25.4

$$\text{* Trade Ratio} = \frac{\text{Exports - Imports}}{\text{Exports + Imports}} \times 100$$

Data relate to SITC Sections 5-8 and are based on constant 1968 prices.

ANNEX III-10

Seminar on International Industrial
Restructuring and the European Periphery
Countries

Sesimbra, Portugal, 22-24 October 1980

STRUCTURAL VULNERABILITY OF FOUR NORDIC COUNTRIES TO THE PROSPECTIVE SOUTHWARD EEC ENLARGEMENT

by

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CONTENTS

LIST OF TABLES

I. INTRODUCTION

The phrase "structural vulnerability", for our purposes, is defined to mean an industrial structure or a pattern of specialization that is, in an international comparison, less complementary to that of Southern European countries in particular, and developing countries in general.

This paper depicts the magnitude of specialization pattern that looms as the most difficult challenge facing the potential entrants into the EEC, with a focus on a comparative elucidation of structural vulnerability in Sweden, Denmark, Finland and Norway, and its indelible imprint on the balance of payments position.

II. THE CHANGING PATTERN OF SPECIALIZATION IN SWEDEN

The manufacturing industry encompasses three different sectors with distinct inherent characteristics:

- trade sheltered sector with little foreign trade exposure since 1960;
- raw material based sector that rely heavily on domestic and foreign raw materials; and
- footloose industries - classified into four groups on the basis of technical personnel intensity.

Table 1 reveals Swedish net exports of selected manufacturing industries in the years 1970, 1975 and 1977. Throughout the period 1970-77 Sweden was placed on a path designed to lead the raw-material based industry toward steady long-term growth in the export front. However, it was at the same time a large net importer of both refined petroleum products and foodstuffs especially from EEC countries. During the same period, Sweden was passing through the process of transformation in Footloose industries, which moulded the country from a net importer of footloose products to that of a net exporter.

A quick glance at the table reveals that sophisticated manufacturing industries were attuned to the requirements of export-drive during the second half of the 1970s. Thus, its industrial strength appears to be in line with a factor proportion argument that a highly advanced economy, with one of the world's most even wage and salary structures, should specialize in skill-intensive production.

Table 1. Swedish net exports of selected manufacturing industries (Mill. Sw. Crowns)

Sector 1/	1970	1975	1977
Trade sheltered Industries	-180	-30	-250
Raw Material Based Industries	1720	3390	2880
of which: Forest based	5950	12550	14080
Petroleum refined	-2000	-6290	-6990
Footloose Industries	-2780	-1180	1300
of which: Sophisticated Pers. Industries	810	4870	5320
(minus shipyard)	90	3280	2480
Tech. Pers. Industries	-480	-1480	2070
(minus Met. Ind.)	-1130	-1250	-930
Tech. Pers. Ext.	-1810	-2040	-2670
Sophisticated Pers. Ext.	-1290	-2510	-3420
Commodity Trade, Total	-1100	-380	-4540
Current Account	-1370	-3370	-12420

1/ Manufacturing industries except certain repairing industries, etc. account for roughly one percent of the manufacturing sector. Discussions (in English) regarding the principles governing the sectoral classification can be found in, for instance, L. Ohlsson: Components of Urban Industrial Employment Change in Small Open Economy: Sweden, Working Paper from IIASA, WP-79-32, Laxenburg, Austria.

A few disturbing factors cannot be shunned, for these factors are to be taken into consideration for a later analysis. One of the factors is related to the difficulties in increasing the export earnings of forest based industries. Due to the soaring production cost experienced by Sweden during the period immediately after the first oil crisis, economic prospects ceased to remain positive. Moreover, the EEC pursues a policy of restricted tariff-free imports of paper products which inhibits the crucial development of forward integration of the Swedish pulp producers, when optimum utilization of the forest resources is made possible. Such forward integration is even more essential for the labour markets of Northern Sweden than for balance of payments point of view.

Another disturbing circumstance is revealed by the export oriented development in the sophisticated personnel intensive industries except the shipbuilding industry. In fact, the improvement of the whole sector is attributable to the enhanced ship exports to cope with orders taken in the previous years. Around the mid-1970s Sweden gave apparent reality to its "about-face" policy from largely non-protectionist policy as against the much protected shipbuilding industry abroad. Sweden was the last country to do so among the major exporters. 1/ At about this time, the market for newly built ships had disappeared and the freight rates for tankers were below the marginal costs of newly-built tankers.

Such a market sitution is, of course, a disaster for a country which has both the nighest wage level in the world and simultaneously the highest degree of specialization in shipbuilding, leaving Japan as the only exception. Since the late 1960s, Sweden had been the second largest exporter in the world. In this situation, the government was obliged to enter into an era of granting unprecedented level of subsidies in an effort to restructure the shipbuilding industry with cut-downs in production and employment. When

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1/ An account of the Swedish shipbuilding industry and its subsidies is given in C. Hamilton: "Shipbuilding : A Study of adjustment - the case of Sweden and Japan", Institute for International Economic Studies, Stockholm, October 1980. See also L. Ohlssen: "Sweden's specialization, adjustment and policies in actual or potential LDC industries", Economic Research Institute of Stockholm School of Economics, Nov. 1980.

loans had also been turned into subsidies, the level of subsidies surpassed the value added to the industry. Despite this, the shipyards had severe difficulties in getting new orders even from Swedish buyers apparently due to the fact that the international price level was far below its long-run equilibrium price (without protection).

The Swedish experience shows that, in the shipyard case, a small open economy has little chance in matching foreign protectionism in a gloomy market situation unless its wages are lower and more flexible (or its productivity is substantially higher) than those of its main competitors. The lack of a large domestic market means that protectionism must shield exports rather than imports.

The impact of shipyard crisis on two of the three large steel plants coincided with the international crisis in the steel industry and rising protectionism in Sweden's most important foreign markets; the EEC and the U.S.A. As a result, the Swedish Government also entered the protectionist track. The two private and the one nationalized steel plants were merged on a 50-50 ownership basis between private and state ownership. At a reduced level of capacity a heavy restructuring process was launched meaning that the metalurgy was concentrated in the northernmost plant located close to the most abundant domestic ore deposits. One of the southern plants is being substantially altered in its product mix in an effort to integrate with the already spread out parts of the domestic engineering sector.

Table 1 reveals that net exports of metal altered from a surplus in 1970 to a deficit in 1975 following outstretched declining trend in net exports. In 1977, however, a huge surplus was obtained primarily through a drastic reduction of imports. The restructuring programme and the domestic protectionism were institutionalized only in that year, and hardly effected impact on the net exports in 1977. Instead, the change was primarily brought about by the inventory and programme that began in the fall of 1975 in order to keep up the industrial employment, when the international business cycle turned down. Instead of devaluing the Swedish crown in mid-1976 (before the election), the stockpiling aid

was continued until 1977 by both the labour government and the new three-party coalition that gained power in the September election. The need to devalue the crown was induced by a two-year wage settlement which entranced the industrial wage level by roughly double the percentage increase of other European countries. The devaluations came instead late: in 1976 and in 1977 (three devaluations).

Unfortunately, the devaluation mechanism became effective only in 1978-79 after a period of tremendous government intervention to implement follow-up measures in shipyards, steel, textile and clothing industries. As a consequence, the burden of adjustment came to lie on the expansive sectors via the exchange rate consequences of the "stop the contraction" policies. These sectors had to carry the burden of a much higher exchange rate in practice than the stagnating and contracting sectors. The impact on Sweden's foreign trade and market performance is easily seen in Table 1 as it shows the break in a long-run trend of improved trade balances in various technical personnel intensive sectors. Only the sophisticated personnel intensive investment goods industries were able to slightly increase their net exports.

To sum up, three important inferences can be drawn. First, Sweden stands little chance of success in protecting against losses in comparative advantages and foreign protectionism. Second, its industrial structure has turned out to be very sensitive to the EEC and U.S.A. protectionist policy that has been associated with rapid Japanese export growth. Apart from the shipbuilding and steel industries, Sweden has earlier taken a substantial adjustment to rapid Japanese exports, for instance, in the calculator and ballbearing industries. The present unstable situation in the automobile industry has already urged political reactions in both U.S.A and the EEC. The third inference, for a small economy with full-employment objective, is that the main instrument of adjustment policies has to be the nerve centre of macro-economic policy instruments completed with realistic long-run oriented regional policy instruments and operated for regions rather than plants or local labour markets.

Hence, the poor Swedish trade performance in the past five years is

attributable to an unlucky combination of sectorially concentrated foreign protectionism and poor domestic adjustment policies. The severe consequences of the recent oil price hike augurs bleak prospects for Swedish economic growth in the forthcoming five years.

What then could the EEC enlargement possibly mean for Swedish industrial development in the future? Table 2 provides an empirical background to this question. Southern Europe (including non-EEC entrants and Israel) makes little difference to Swedish trade pattern and composition of trade (not shown here). Portuguese exports of textiles account for a large part of 4.5 percent import share of Southern Europe. It is largely explained by the tariff-free exports to Sweden under the EFTA Agreement,[1/] which also induced several Swedish companies to move production to Portugal and to the more nearby low-wage country Finland.

Table 2. Average (Unweighted) Shares of Swedish Domestic (Apparent) Consumption for Southern Europe in Actual or Potential Industries for Low-Wage Countries
(in per cent)

	Southern Europe		Nordic Countries		Socialist Countries	
	1977	1970-77	1977	1970-77	1977	1970-77
14 Trad. DC Ind.	4.5	1.3	12.6	3.9	2.8	1.4
5 Ind. for DCs Abundant in Cap., Raw Mat., Energy, Pop.	2.7	2.0	12.6	-0.5	3.2	0.6
4 Cons. Prod. Ind. for nearby low wage Countries	1.8	0.7	9.4	-0.9	6.3	3.0
8 Ind. with Mixed Comp. Adv.	1.5	0.4	10.5	2.2	2.6	0.4
3 Heterog., Techn. Pers. Int. Ind.	0.8	0.0	2.5	0.7	1.1	0.3
5 Heterog., Very Techn. Pers. Int.	0.4	-0.1	6.8	0.6	2.4	-0.3

1/ Note, however, that even Portugal is affected by so-called Voluntary Export Restraints.

Table 2 also makes evident that the more nearby producers in the Nordic countries and the Socialist countries have generally higher shares of the Swedish market. The latter two country groups managed to increase their import shares more in the typical developing country industries. In fact, all of ten different groups of countries enhanced their import shares at the cost of domestic producers in practically each individual industry. So the trade performance of Southern Europe is not all that impressive; on the contrary, it lost shares of the total Swedish imports to other foreign countries in the 1970s.

Against this background, it appears rather safe to conclude that the EEC enlargement cannot make much difference to Swedish imports, exports and production unless it stimulates the present EEC countries to a different growth experience or to a more protective policy against non-member countries. Obviously, a more protectionist policy in traditionally developing countries does not matter much for Swedish industrial development in future. In contrast, an increasing protectionism in the steel, shipbuilding and paper industries can have a sizeable impact; an impact that is devastating to the sensitive regional balance between northern and southern Sweden.

III. INDUSTRIAL STRUCTURE IN FOUR NORDIC COUNTRIES: DENMARK, FINLAND, NORWAY AND SWEDEN

The same **classifactory** apparatus, used for Sweden, will be used to highlight the industrial structure of three other Nordic countries. This will be done by comparing the employment composition of the manufacturing sector in order to find out in which sense a given country might be more or less vulnerable to the EEC enlargement than the other three Nordic countries. This simplistic approach can be utilized because of the combination of high foreign trade ratios of the economies, and that large sectoral differences in the net export ratio of domestic consumption are likely to be the main source behind differences in employment shares.

First, however, some inherent characteristics of the four countries should be emphasized. Denmark is the only country which has chosen to be

a member of the EEC, while the other three have (partial) free trade agreements under the Rest-EFTA provisions that followed the entry of Great Britain, Denmark and the Republic of Ireland. Denmark is also the only Nordic country on the European continent, the only dense economy and, finally, highly dependent on imported sources of energy.

Finland is the low-wage economy among the four and it has begun its industrialization in the post war period (second world war). It is a rather successful adjuster, when other industrial countries have suffered from slow economic growth in recent years. Much of its energy imports stem from the Soviet Union and in return Finland exports highly sophisticated engineering products, consulting skill, etc. Finland has a substantially larger share of both its exports and its imports with Socialist countries than other industrial countries. Others, with relatively high shares, are Austria and Sweden.

Finally, Norway is one of very few industrial countries with huge supplies of energy. Only in the past few months new deposits of gas have been revealed and expectations are high for areas north of the 62^{o} latitude. Moreover, Norway has still exploited merely a low proportion of its economically profitable waterfalls in contrast to Sweden, whose last large source of energy lies in vast, albeit yet unprofitable, uranium deposits. Finland, Norway and Sweden are all substantial net indirect exporters of energy to the European continent through their commodity trade.

Table 3 presents some basic facts about the role of the Nordic countries in the European division of labour. Each one delivers raw materials and raw material based products to a substantial degree to resource scarce European countries. Denmark's specialization in this respect is its exports of not only agricultural products, but also manufactures of such products. With respect to the EEC enlargement, therefore, this specialization is probably its weakest point. Much of its vulnerability is associated with the question of whether the entrants as possible large exporters of agricultural products, will add to the surplus producing policies or induce changes thereof.

Table 3. Employment in Trade-Sheltered Sectors and Trade-Exposed, Raw Material Based Sectors in Percent of Manufacturing Employment in Four Nordic Countries

Sector	Denmark	Finland	Norway	Sweden
Manufacturing Industry Total of Which:	100	100	100	100
Trade-Shelt. Food Ind.	11	9	7	5
Trade-Exp. Food Ind.	10	4	8	3
Trade-Shelt. Forest Based	4	8	13	8
Trade-Exp. Forest Based	1	15	7	9
Trade-Shelt. Building Material	6	5	5	5
Misc. Trade-Shelt. Ind.	2	1	2	1

The other three countries in the northern European periphery have all a forest-based pattern of specialization. Unlike Denmark, their forward integration (with paper industries) is restricted by quotas constructed to protect EEC producers. Sweden appears to be less specialized than Finland and Norway in forest-based industries.

It seems as if the EEC enlargement can make a difference to these three countries if the new entrants bring about a stronger competition for pulp exports, accepting the level of EEC protectionism on paper.

Table 4. Percent Employment in Typical Industries for Low-Wage Countries in Four Nordic Countries

Sector	Denmark	Finland	Norway	Sweden
Traditional developing country industries	11	15	8	7
Ind. for developing countries with Semi-skilled labour	4	1	4	4
Ind. for nearby low-wage countries	5	3	4	2
Sum of above:	20	19	16	13

Table 4 reveals the percentage contribution of typical industries for low-wage countries in four Nordic countries. Apparently, Sweden has withdrawn the most from these industries, while Finland has still a high level of specialization in traditionally developing country industries. In fact, the latter country delivers more clothing products to the Swedish market than do Swedish producers. However, with a wage level lower than most industrial countries and a specialization in higher quality products, Finland may well be in a rather strong competitive position.

If the employment shares are summarized over the three industry groups, Denmark and Finland have the highest proportion and Sweden the lowest. Assuming that only Denmark will be exposed to tariff-free imports from the three developing countries in Southern Europe and that its wage level is far above the Finnish one, our conclusion is that Denmark appears to have the most vulnerable industrial composition in this respect.

Table 5. Percent Employment in Industries Possibly Suitable for Specific Developing Countries in Four Nordic Countries

Sector	Denmark	Finland	Norway	Sweden
Homogen. Ind. for Energy - raw material - and capit abundant developing countries	1	2	7	7
Homogen. Ind. for capital and Pop. Abundant, coastal, developing countries	6	4	9	7
Heterog., skill intensive ind. for Semi-ind., developing countries	8	5	5	8
Sum of the above:	15	11	21	22
Sum of above and Table 4 industries	35	30	37	35

Table 5 shows the employment shares in groups of industries that can be suitable for certain categories of developing countries in the 1980s.

The first group consists of metal industries, the second of the ship-building and automobile industries, and the third of technologically advanced (personnel intensive) heterogenous industries in the chemical and electro-technical industries. Table 5 makes it clear that Sweden is the most vulnerable together with Norway in these three sectors. However, apart from the shipyards, it is rather unlikely that any severe adjustment pressure, owing to exports from developing countries, can appear before the late 1980s. Therefore, the above inferences about country-wise vulnerability differences hold.

CONCLUSION

Adjustment pressures do not come only through increased penetration of domestic markets from a certain group of countries. Therefore, the above vulnerability conclusions are not directly interpretable as glimmerings of adjustment pressures in the Nordic countries. Especially the radically different economic situation can play a decisive role in this respect. Norway is likely to experience much more deep-rooted structural adjustment because of accentuated exports of oil and gas in the near future than could be derived from the vulnerability of its industrial composition.

In contrast, both Denmark and Sweden have a balance-of-payment situation that may well lead to a downward pressure on their wage level in international currencies. If it is realized, it will, of course, ease their adjustment pressures.

In conclusion, the EEC enlargement does not seem to make much difference to the Nordic countries in the short-run, with the only possible exception being Denmark. If, however, the Southern European entries reinforce more antarctic trade policies in the EEC countries, for instance, in paper, steel, and traditionally developing country industries, the conclusion can be altered in two respects. First, the impact can be substantially larger, and second, a larger proportion of the impact is bound to occur in the northernmost parts of the three northern Nordic countries.

ANNEX III-11

Seminar on International Industrial
Restructuring and the European Periphery
Countries

Sesimbra, Portugal, 22-24 October 1980

INDUSTRIAL RESTRUCTURING IN AN OPEN ECONOMY: THE CASE OF THE REPUBLIC OF KOREA

by

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CONTENTS

APPENDICES

(Tables)

I. INTRODUCTION

For almost two decades, the economy of the Republic of Korea expanded at a remarkable rate. Between 1962 and 1978 the real GNP grew at 9.9% per annum, resulting in a 3.2-fold increase in per capita GNP at 1975 constant prices. This growth in GNP also increased employment opportunities. The 3.2% unemployment level in 1978 was almost one third of that in 1962. During this 17-year period of high growth the country did not experience any serious deterioration in income distribution. On the whole, income distribution improved.

During the past year and a half, however, the nation has suffered serious setbacks to this remarkable progress. In 1979 the growth of real GNP fell to 6.4%, and during the first half of this year the nation experienced a negative growth of 4%, while unemployment reached approximately 5% or 750,000 persons.

In noting this change, several questions immediately come to mind: (1) What policy adjustments accounted for the remarkable success until very recently? (2) What factors underlie the current setback? (3) Is it likely that the Korean economy will overcome the current difficulties? (4) What useful lessons, if any, can one draw from Korean economic development during the past 20 years?

The primary purpose of this paper is to suggest possible answers to these questions. The focus of the paper will be on the structural adjustments the government has made over the 19-year period since 1962. For analytical convenience the entire period will be divided into three sub-periods: 1962-1971; 1972-1978; and the period since January 1979.

II. CHANGING STRATEGY AND BREAK-THROUGH IN ECONOMIC TRANSITION: GROWTH THROUGH EXPORT ORIENTED POLICY (1962-1971)

In 1961, the year before the First Five-Year Plan was launched, economic conditions in the Republic of Korea were similar to those of

any resource-poor, low-income developing country today. The Republic of Korea, already overpopulated, was experiencing an annual population growth of nearly 3%, and there was widespread unemployment and underemployment. Per capita GNP at current prices was meagre ($82), permitting a negligible rate of domestic savings. The nation had no significant exports and had run into chronic balance of payments deficits since liberation in 1945. In 1961 the country's total exports amounted to $43 million or less than one quarter of its imports. In addition, the country had not yet met the critical requirement for development. Throughout the 1950s, the nation's political leadership failed to provide social stability and economic policy direction.

The challenge faced by the new political leadership that came into power in 1961 was how to promote high growth while solving the problems of extensive unemployment and a poor balance of payments position.

The growth strategy, the nation has followed since 1961, has been outward-looking. For a nation with a long inward-looking tradition, the adoption of such a strategy was by no means easy. The credit goes to the leadership of the time for having pulled the nation out of the clutches of traditional policies and put it on the road to prosperity via export oriented growth.

The purpose of outward-looking policy, followed by the Republic of Korea in the early 1960s, was to expand labour-intensive manufactured exports, in which the Republic of Korea enjoyed a comparative advantage. To implement this strategy, the nation mobilized both internal and external resources. For mobilizing internal resources, the government revamped tax administration and raised the interest rates of commercial banks from 12% to as high as 30%. The results were an elimination of fiscal deficits and a dramatic rise in domestic savings. For three years in a row from 1965, the year when interest rates were raised, savings deposits in the nation's banking system nearly doubled each year.[1/] This provided a source of funds the government channeled into export-related industries. In 1966, the government enacted a comprehensive

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1/ For a discussion of the salutary effect of interest rate reform of this period, see Ronald I. McKinnon, Money and Capital, Brooking Institution, Washington, D.C., 1973, Chapter 8, particularly pp. 105-111.

Foreign Capital Promotion Act to encourage the inflow of foreign capital. The provisions of the act enabled the government to underwrite the risk borne by foreign investors.

To promote exports the government readjusted the exchange rate. In 1964 the government adopted a uniform exchange rate system and devalued the currency by nearly 100%, thus eliminating the bias against the trade sector stemming from the over-valued currency. In addition, the government provided easy credit terms for exports and allowed tax rebates on materials imported for the production of exports. A number of free trade zones were also established and customs procedures simplified. These measures enabled Korean exporters to conduct their business as if they were operating under a free trade regime.[2/]

The international environment during the 1960s was highly favourable to the growth of manufactured exports from the Republic of Korea. The original GATT rules were still binding on major industrial nations, and widespread resource nationalism was still unknown. As a result, world trade was expanding at an unprecedented rate. During this period the Republic of Korea made excellent use of expanding markets abroad, particularly the U.S. and Japan which took about two-thirds of Korea's total exports between 1962 and 1971.

The results of this development strategy surpassed all expectations. Exports at current prices rose at an annual rate of almost 40% from $55 million in 1962 to $1,132 million in 1971. The share of agricultural and other primary products in total exports fell from 45% in 1962 to 10.5% in 1971, while the share of manufactured goods rose from 27% to 86%.

III. SIMULTANEOUS DEVELOPMENT OF HEAVY INDUSTRIES AND AGRICULTURE (1972-78)

From 1972 to 1978 the external environment facing the Republic of Korea went through a series of drastic changes. Even before the nation launched the Third Five-Year Economic Plan in 1972, there were a number

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[2/] Cf. Charles R. Frank, Jr., Kwang Suk Kim and Larry E. Westphal, Foreign Trade Regimes and Economic Development: South Korea, New York, 1975, pp. 197-200, and Parvez Hasan, Korea, Problems and Issues in a Rapidly Growing Economy, Baltimore, 1976, pp. 56-78, 93-94.

of disturbing developments. In 1971 the Nixon Administration reduced the U.S. troop level in the Republic of Korea by one-third. The decision was seen as the first of several moves toward the eventual withdrawal of all U.S. troops from the Republic of Korea.[3/] This encouraged the Republic of Korea to develop her own defense industry. Mr. Carter's 1976 presidential campaign promise to carry out total U.S. troop withdrawal only reinforced Korea's resolve in this area.

1971 was highly significant for yet another reason. In that year the Bretton Woods system began to fall apart. The breakdown of the fixed exchange rate system had a two-fold significance for the Republic of Korea. Because the won currency was rigidly pegged to the U.S. dollar, any change in the dollar-yen rate or the value of the dollar against other major currencies meant an automatic change in the terms of trade with the rest of the world. The steady decline in the value of the dollar also meant an automatic devaluation of the won which stimulated exports. In short, these currency changes acted as a powerful stimulus for the Republic of Korea to find new markets and also to expand total exports.

At the time when the Bretton Woods system was in effect, it was widely believed that the system itself was the cause of rising trends in protectionism by discouraging the balance of payments adjustment via exchange rate modifications. If the belief had been valid, a period of free trade should have begun after the system broke down. But what actually occurred was the opposite.

With the rise in protectionism the Republic of Korea was forced to do two things: diversify trading partners; and restructure the commodity composition of her exports in favour of more sophisticated, high value-added industrial goods. The latter requirement along with the desire to develop defense industries, led to efforts to accelerate the growth of heavy and chemical industries including iron and steel, non-ferrous metals, shipbuilding, machinery, electronics and petrochemicals to a degree unjustified by Korea's factor endowment.

3/ For the Korean government reaction to this move, see Park Chung Hee, Toward Peaceful Unification: Selected Speeches and Interview, Seoul 1976, p. 7.

The worldwide commodity boom of 1972-73 and the quadrupling of oil prices in 1973-74 also affected the Republic of Korea greatly. Higher prices for imported grains meant further pressure on the balance of payments position which in turn lent support to the argument that the Republic of Korea should develop her own agriculture and achieve self-sufficiency in major food grains. The quadrupling of oil prices in 1973-74 forced the Republic of Korea to respond to an alarming deterioration in her balance of payments in an unprecedented fashion, and not always with sufficient forethought.

The major policy adjustments to all these changes fell into three categories: (a) efforts to accelerate the development of heavy and chemical industries; (b) efforts to diversify trade; and (c) efforts to achieve self-sufficiency in the supply of major food grains.

The development of heavy and chemical industries was already an important priority in the Third Five-Year Plan. And because of the new political and economic environment, noted above, the government gave added emphasis to such development. The Heavy and Chemical Industry Development Plan, announced in 1973, called for an accelerated schedule to develop technologically sophisticated industries to meet defense needs and also to upgrade the composition of exports. Unfortunately, the plan was drawn up on the assumption that world trade would continue to expand at the rate it did in the 1960s.

To finance the accelerated development of heavy and chemical industries, the government established a National Investment Fund which mobilized public employee pension funds and a substantial portion of private savings at regular banking institutions. These funds were then channeled into heavy industry projects favoured by the government. When these funds proved insufficient to finance all such projects, banks were urged to make additional loans available on a preferential basis.

On the grounds that the heavy and chemical industry projects had long gestation periods, the loans were granted at very low nominal interest rates which often turned out to be negative in real terms.

Together with the over-optimistic assumption regarding world trade prospects, this led to unwise and excessive investment, particularly in power generators and construction equipment. Furthermore, the low interest rates caused a chronic excess demand for loans, which stimulated the expansion of the domestic money supply. The availability of low interest loans also led many project sponsors to underestimate other requirements such as technical expertise and managerial experience which are critical for the successful development of heavy and sophisticated industries.

To diversify trade and to circumvent quotas and other non-tariff barriers, the Republic of Korea developed new exports and diversified export markets geographically. New product success was most noticeable in electronics, steel and ships. However, efforts to improve the quality of light manufactured exports such as textiles, footwear and leather goods were inadequate due to insufficient financing of light industry.

The efforts to achieve geographic diversification of exports were directed initially to all regions, but Latin American and African markets proved to be most difficult to penetrate. The easiest to penetrate were in the Middle East and Europe. The share of commodity exports to the Middle East rose from 1.8% in 1973 to 11.7% in 1976, and the share of Europe from 11.8% to 17.5%.

In the Middle East, the Republic of Korea sold goods as well as construction services. Gross earnings from construction in the Middle East rose from zero in 1973 to about $2.1 billion in 1978, and the total value of construction contracts won in the region by the end of 1978 was almost $15 billion.

Despite the invaluable experience gained by Korean workers and firms in participating in large development projects, the immediate consequences of Middle East ventures were, however, a mixed blessing. The departure of a large number of skilled workers to the region pushed up domestic wages. This, together with the growing demand for skilled workers in heavy industries, widened the wage differential between

skilled and unskilled workers, adversely affecting income distribution. In addition, the rather sudden improvement in the balance of payments due to earnings from the Middle East expanded the domestic money supply which aggravated inflation.

When the Third Five-Year Plan was being formulated, the growing gap between rural and urban incomes became a major social concern. This social concern, combined with a deteriorating balance of payments prospect due to the international commodity boom, led to the adoption of a policy on agriculture which aimed at self-sufficiency in major food grains, particularly rice and barley.

In order to achieve the twin objectives of improving rural income and insuring self-sufficiency in food grains, the government adopted a high grain price support programme. In the initial few years the programme was highly successful, particularly in terms of reducing urban-rural income disparity. The programme, however, has failed to serve the long-term interests of the nation. The gap in the level of income between the average urban and rural household had virtually been closed by 1977, but since then it has reappeared.

In addition, the high grain price support programme created many problems. The operation of the programme meant a substantial budgetary deficit adding to inflationary pressures. It also encouraged the production of grains at a time when consumer demand had shifted substantially to non-grain products, leading to an imbalance in supply and demand. Furthermore, by benefitting large farmers more than small farmers the programme tended to aggravate unequal income distribution within rural areas.

IV. RESTRUCTURING FOR SUSTAINED GROWTH WITH STABILITY (January 1979 - Present)

The three major policy thrusts just examined contributed to the high annual average growth of 10.4% between 1972 and 1978. Growth was particularly pronounced during the 1976-78 period. During this 3-year period the average annual growth rate reached 12.3%. These policy thrusts

also contributed to the upgrading of the export structure. The share of heavy and chemical industrial products in total exports rose from 16.3% in 1972 to 25% in 1978. The remarkable high growth and structural change were achieved, however, at the cost of introducing some fundamental imbalances into the economy.

The most obvious imbalances were: (a) an excessive growth in money supply; (b) shortage of basic commodities for domestic consumption; (c) extensive price distortions and lack of competition due to government controls; (d) over-investment in heavy industries; and (e) a rise in wages which exceeded productivity improvement.

In 1979 it became clear to most government policymakers that these imbalances were the structural causes for the high inflation the country was then suffering. It was also clear to policymakers that quite apart from the equity consideration the nation had to deal with inflation in a fundamental way. The high inflation was decreasing the competitiveness of Korean exports and jeopardizing the prospects for high growth.

The stabilization programme, launched by the government in April 1979, thus had a far-reaching goal. Its ultimate objective was nothing less than restructuring the whole economy so that it would be possible for the nation to make use of its rich potential for continued high growth for at least another decade. Given this far-reaching goal, it was more than a usual short-run stabilization programme with emphasis on demand management. The programme was far-reaching in still another sense. The principal approach the government took to achieve the goal was one of relying very heavily on the competitive market mechanism for efficiency in resource allocation and equity in income distribution.

The 1979 stabilization programme had five major components:

(1) To control excessive liquidity, the government set new growth rate targets in money rates, in money supply and also proposed a fundamental reform of the banking sector.

(2) To deal with shortages of basic commodities, the government realigned credit priorities in favour of light industries.

(3) To eliminate price distortions and promote competition, the government decontrolled prices on many items and stepped up import liberalization efforts.

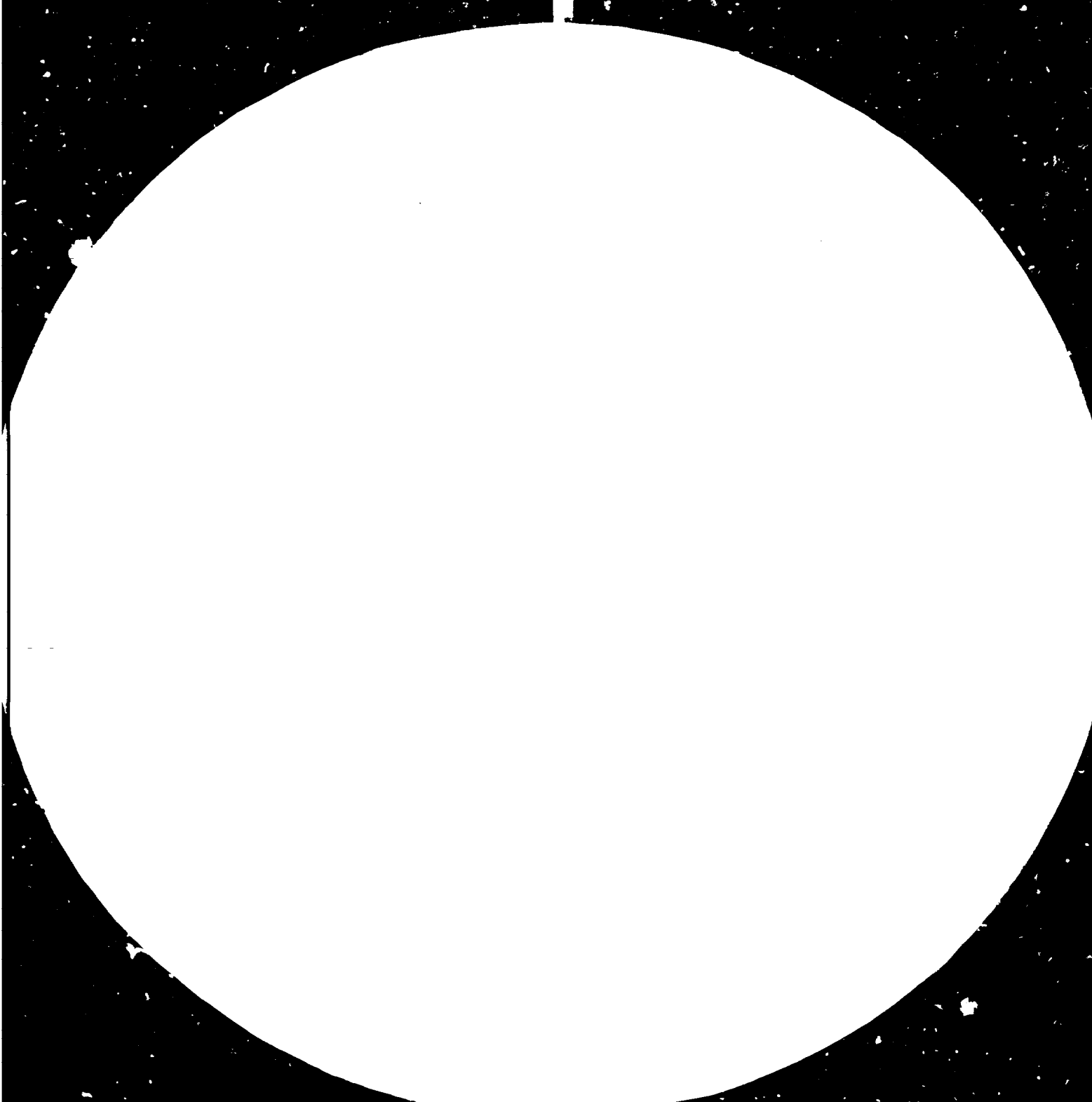
(4) As the first step toward dealing with the problem of over-investment in heavy industries, the government stopped all new projects in the field.

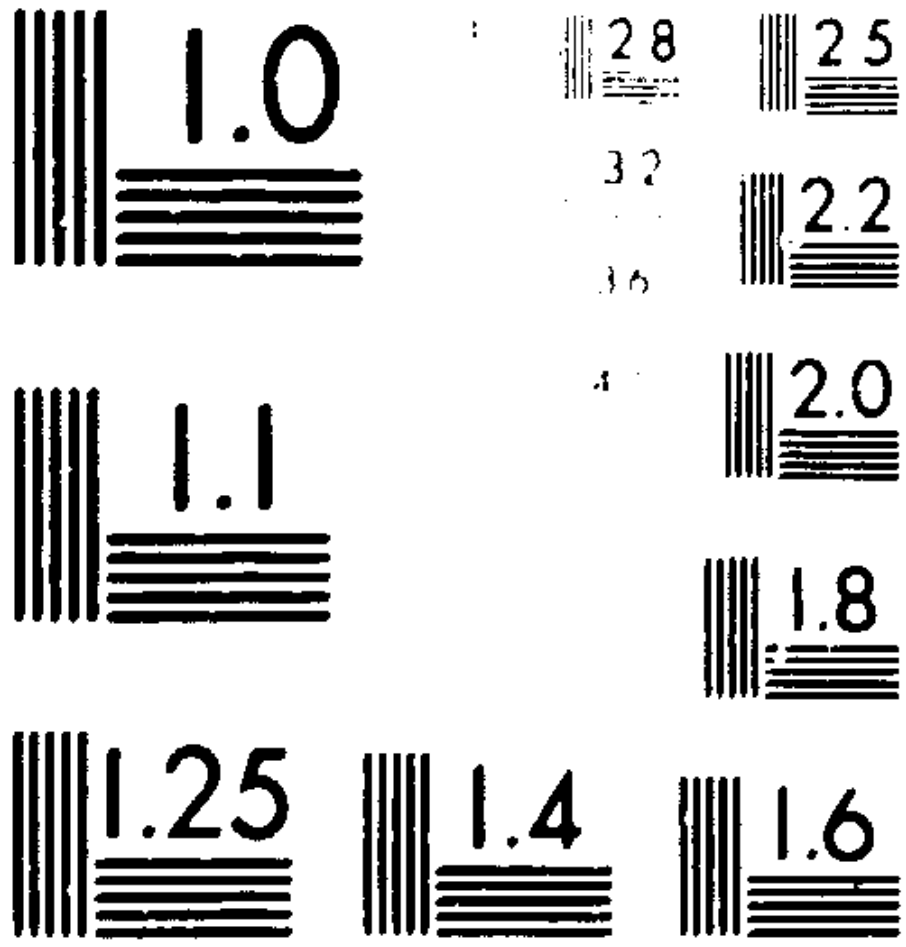
(5) To restrain further wage increases, the government at this time relied on its own overall tight monetary and fiscal policies.

Although the fundamental direction and approach of the 1979 stabilization policies were correct, the success of the policies was quite limited until recently. There were two main reasons for this. First, within 3 months after the programme was launched, OPEC began to raise oil prices which in the course of the succeeding 12 months nearly doubled Korea's oil import bill. This naturally meant an additional new burden on Korea's balance of payments, and made it virtually impossible to continue with the stabilization programme's effort to liberalize imports.

Second, after the assassination of President Park on October 26, the nation experienced considerable internal political difficulties. Although these difficulties did not become apparent immediately, by late spring of this year the nation experienced much social and political unrest. One direct result of the unrest was that it became extremely difficult for employers to resist high wage increases demanded by workers thus undermining the stabilization policy goal of holding wage increases at 15% or less.

In spite of difficulties such as those just noted, it would be a mistake to minimize the positive achievements of the 1979 stabilization programme. For example, thanks to the policy of decontrolling prices on a large number of commodities the price structure was by and large normalized by the end of 1979, and there was no longer any evidence of artificial shortages of basic commodities and so-called "dual pricing".





Since the inauguration of President Chun Doo Hwan on September 1, the government has undertaken a series of bold economic initiatives. The basic motivation behind all the measures that have been announced in recent weeks is the desire to accelerate the process of restructuring the economy as envisaged in the 1979 stabilization programme.

The major policy measures that have been announced in recent weeks include: (a) the policy of providing selective stimulus to the economy announced on September 17; (b) the anti-monopoly legislative proposal announced on September 19; (c) the new policy on foreign investment announced on September 21; and (d) the new policy on corporate landholding and divesture announced on September 27. In addition, there has been the government initiated move to carry out several mergers in heavy industries.

The policy of providing selective stimulus to the economy had three essential components: (a) stimulating residential construction; (b) increasing the amount of export loan per dollar received in letters of credit; and (c) adjusting interest rates downward.

The stimulation of residential construction is to be achieved by a reduction of the current tax rate on capital gains in the transfer of housing units and an increase in the amount of loan funds available for home buyers. The stimulation of residential construction represents not only a sensible anticyclical measure but also good social and economic policy; the availability of a greater number of housing units will contribute to lower rents and thus lower living costs. Lower living costs in turn will mean less pressure for wage increases, and a quicker restoration of the competitiveness of Korean exports, particularly of labor intensive light industrial products.

The increase in the amount of export loans per dollar in L/Cs was desirable particularly because the value of the won currency had fallen by at least 8% since February, when the government adopted a managed float system for the won.

The average interest rate reduction of 2 percentage points was

justified in view of the remarkable deceleration in the price rise observed in recent months. If prices for the coming few months do not improve as expected, it will, of course, become necessary to review this part of the policy programme.

The justification for the anti-monopoly legislation requires little explanation. The original 1979 stabilization policies included a call for just such legislation. Under the proposed legislation such monopolistic practices as price collusion, market cornering and interlocking directorate will be prohibited, a move clearly in line with the aim of promoting competition throughout the economy.

The purpose of the new policy on direct foreign investment also needs little explanation. In the past, the Republic of Korea had been deeply conservative regarding joint participation requirements. As a result of the past policy, which in principle allowed a maximum 50% equity share for foreign investors, direct foreign investment still accounts for less than 10% of total long-term foreign capital commitments outstanding in the Republic of Korea. The new policy now allows foreign ownership of equity up to 100% in virtually all industrial fields, and this is expected to increase significantly the inflow of direct foreign investment into the Republic of Korea.

The rationale for the new policy on corporate landholdings and corporate divesture is perhaps less clear, especially for anyone unfamiliar with the recent corporate history of the Republic of Korea. The new government policy on corporate holdings has four parts. The first part relates to landholdings. The measures required some 1,200 top corporations to report their landholdings through their primary lending banks by October 15. After the reporting period individual corporations are required to sell off that portion of their landholdings which in their judgment is not being used for their normal business. In the case where individual corporations have difficulties in finding suitable buyers, the government-owned Land Development Corporation or other autonomous local government bodies are encouraged to make purchases of these holdings. The corporations will use the proceeds of their sales either to pay off

their bank debts or otherwise to improve their overall liquidity positions. The Land Development Corporation or other autonomous local government bodies will eventually make use of the lands so acquired for public housing construction or development into home sites for private home builders.

The second part of the new policy concerns large business groups' subsidiary corporate holdings with a view to determining the extent of their holdings which are not directly related to their primary area of specialty or which cannot be financially supported. The business groups are requested to divest themselves of such holdings. For the purpose of coordinating the divesture process, the government has established an inter-ministerial consultative organization. The organization will not only advise individual corporations on immediate divesture but also formulate criteria applicable for further corporate acquisitions.

The third part of the new policy on corporate holdings relates to "relief financing" or corporate bailout. It is now the declared policy of the government to minimize the dependence on "relief financing" by individual corporations. In order to minimize the occurrence of such crises, individual corporations with an equity-debt ratio that falls below a certain minimum will not be allowed to acquire other businesses or to treat interest payments as a cost of operations for tax purposes. In addition, the primary lending banks will be discouraged from using corporate landholdings as collateral for future business loans.

The fourth part of the policy requires that corporations, with more than 500 million won paid-in capital or total assets exceeding 3 billion won, institute professional auditing by external bodies -- a move which was long overdue.

Finally, the new policy on corporate holdings provides greater incentives for individual corporations to rely more on equity financing as well as internal retained earnings for business expansion. To this end, several ministries of the government are now studying the possibility

of reducing tax on retained earnings and accrued capital gains. The ministries are also studying the possibility of reducing overall corporate income tax rates.

The case for the new policy on corporate holdings, just outlined, is most easily understood if one remembers that the pattern of corporate behavior that prevailed in the Republic of Korea during the past several years was not unlike that observed in the United States during the boom years of the 1920s. In short, many large corporations acquired their subsidiaries by leveraging heavily on their own capital. The typical corporate structure that emerged through this acquisition process was pyramidal with no solid financial foundation. The balance sheets of individual companies in the Republic of Korea typically show an equity-debt ratio of about 25% but the equity-debt ratios of whole business groups including subsidiaries are typically far less than these individual equity-debt ratios. Needless to say, large business groups with such weak financial foundations can hardly be expected to withstand even the mildest economic storm.

It is against this corporate background that one must judge the intention of the measures announced on September 27. Furthermore, if one bears this point in mind, one can readily see that the real objective, the government wishes to achieve with its latest move bearing on corporate holdings, is to save individual business groups rather than ruin them.

Regarding the government initiated mergers in the power generating equipment, automobile, diesel engine, electronic switching systems, electric power transformers, and copper refining industries, it must be noted that the primary objective of the government is to avoid duplication of investment and to encourage relevant firms to specialize. The need for mergers has arisen from one undeniable fact. In virtually all of the industries where mergers are being carried out, the actual or anticipated size of the domestic market has been inadequate to support the operation of one firm, let alone several firms. In the case of the power generating equipment industry it is not certain that there will be

sufficient international demand for output, not to mention domestic demand. In theory, one could, of course, make the point that given these economic facts, mergers would have come about automatically through the iniatives of private entrepreneurs. Certainly, one must concede this point, but such developments would have been extremely costly in terms of both time and financial resources, and given its current geopolitical situation, time is a resource - the Republic of Korea does not have in abundance.

V. TOWARD LONG-TERM REALISM

In assessing the prospects for the Korean economy, two questions arise: (a) Besides the areas of the economy currently being restructured, are there any more areas that need to be restructured? (b) Assuming all the tasks of restructuring the economy are carried out in due course, what long-term economic prospects does the Republic of Korea face?

It should be recalled that in formulating the 1979 stabilization programme, economic policymakers in the Republic of Korea identified the need to control the growth of the money supply more adequately. Furthermore, in order to control monetary growth effectively, the need for a structural reform in the financial sector was anticipated, the heart of the reform being the establishment of an interest rate level which can properly equilibrate both the supply and demand for bank loans. Admittedly, no concrete step has yet been taken in the area of financial reform. It is hoped that the government will do so soon.

Another area where the need for reform was recognized by the framers of the 1979 stabilization programme was agriculture. Here again the government has not yet announced any new policy. But it is expected that the government will shortly announce a policy change which will gradually phase out the current high grain price support programme.

As regards Korea's medium, and long-term economic outlook, it should suffice to note here that the government expected the real economic

growth rate for 1981 to be about 5-6%, and the average annual growth rate for the entire 1980s to be about 8-9%.

The rather optimistic growth rate is based on the following considerations: First, the political and social uncertainty, which plagued the country, has now been overcome with the establishment of the new government. Second, with the restoration of social and political certainty there is little likelihood for another round of high wage increases which would militate against the nation's efforts to restore the competitiveness of its exports vis-a-vis its principal competitors such as Taiwan, Hong Kong and Singapore. In addition, economic propsects in Korea's major trading partners, namely the United States and Japan, are expected to be better. Finally, there is less probability of another round of high oil price hikes.

There are several reasons why the Koreans have always felt quite comfortable about their long-term growth prospects for the entire 1980s. Looking at the supply side of the economy first, Korea's labor force is expected to grow at about 3% per annum. These two differential growth rates will result in a high labor force to population ratio, which simply means that the average worker will have fewer dependents to support and hence be able to save more. Under such a condition, the economy will enjoy unparalleled opportunity to finance large investment with minimum inflation, and given such a rapid growth of the labor force, the returns on capital and other forms of investment in the Republic of Korea will continue to be high.

The gap between the level of technology used in the Republic of Korea and that used in industrially advanced countries is still substantial. Korea's dynamic entrepreneurs can surely be counted on to exploit this gap by continuing to import advanced technology from abroad. The result will be an enormous improvement in overall productivity.

In addition, the Republic of Korea will be able to increase her overall output by allocating labor out of (low productivity) agriculture

to (high productivity) industry. During the past 10 years annual productivity improvement in manufacturing has been 11-12%, while that in agriculture has been 3-4%, and agriculture still accounts for some 34% of total employment in the Republic of Korea.

The only significant bottleneck on the supply side concerns energy and other raw materials. Korea's optimism in this respect is based, in part, on her new energy programme. For the short run, the Korean government is reducing the consumption of oil and other sources of energy to the possible level by passing all international oil price increases directly to domestic users without delay. Furthermore, it has established strict industrial standards for energy use. For the long run, the government is accelerating its nuclear power programme and encouraging oil users to switch to coal. Under the present long-term energy plan, by 1991 more than 18% of Korea's total energy requirements will be met by nuclear power. The government is also accelerating investment programmes needed to make greater use of LPG and LNG. In addition, the government is stepping up R and D efforts for such alternative forms of energy as solar energy and tidal power.

On the demand side, too, there is ground for optimism. True, the current wave of protectionism and the prospect of slow growth in OECD countries do not spell a rapid growth of exports. But Korea's share of world trade is still only 1%, and hence there is room for continued expansion. The Republic of Korea has already done much to minimize protectionist pressures against her exports through product and market diversification. It is important to note that during the past year and a half the growth rate of Korea's heavy and chemical exports has been about twice the growth rate of her total exports.

There is one more fact to consider here. Without question, the Pacific Basin is economically the most dynamic region in the world today. It contains not only the most rapidly growing economies in the world but also the technologically most advanced nations. The prospects of closer economic cooperation among the countries in the Basin has been significantly improved with the recent opening of China to the West. The

Republic of Korea definitely considers her location, the very centre of these developments, to be an advantage. With the invaluable experience gained in recent years by her businessmen, engineers and workers in large development projects overseas, particularly in the Middle East, the Republic of Korea is in an excellent position to take advantage of the current developments not only in the Pacific Basin but also in other emerging regions of the world.

VI. LESSONS LEARNED

The first lesson one might draw from Korean experience with the structural adjustments over the past 20 years seems to be the need to reaffirm the role of the market. In the 1960s the Republic of Korea transformed her economy for rapid growth rather successfully by following the basic principles of the market, more specifically the idea that scarce resources be allocated by correct market price signals and on the initiatives of dynamic entrepreneurs operating in a competitive system.

In the 1970s the most successful adjustments to new changes in the international economic environment came when the incentive structure was based on market principles and the initiatives of individual entrepreneurs. Korea's highly successful participation in Middle East construction activities is a case in point. The least successful adaptations occurred when market principles and the law of comparative advantage were ignored. The problems associated with the development of heavy industries were basically related to ignoring the principles of the market in the supply of and demand for investible funds.

A related lesson here concerns the method of encouraging certain industries that are vital for the overall restructuring process. Support given in the form of liberal bank credit at low or negative interest rates invited misinvestment and chronic inflation. Setting the interest rate on preferential loans below the equilibrium level made the excessive demands for funds chronic, which in turn became a persistent force behind the expansion of money supply.

In addition, setting the interest rate below the equilibrium level prevents the normal growth of a capital market whose efficient operation is so essential for the long-term growth of the economy.[4/] Apart from these adverse effects, the practice of liberal credit extension at lower interest rates is an undesirable form of support for an industry because, like tariff, the costs involved are not readily identifiable. If certain industries are to be subsidized, the best form would be to make explicit budgetary grants, with the duration of support clearly specified in advance.

The third lesson has to do with the inflow of foreign capital. Korea's experience in this regard seems to indicate that at least in the early phase of development when foreign confidence in the economy is weak, the biggest barrier to the international movement of capital is the uncertainty borne by investors or lenders. The government can reduce this uncertainty significantly by providing guarantees for repayment or repatriation of profits. One further institutional innovation that can be attempted in this area would be an international guarantee whereby all national governments would be barred from any actions that could trap foreign capital.[5/]

In a later stage of development, when foreign confidence in the economy has grown, a country should be more liberal as regards direct investment and joint venture requirements. After all, direct investment is an effective vehicle for transfer of technology. The technology transferred under technical licensing agreements is often dated, and a nation has difficulties in updating technologies if it relies too heavily on licensing agreements. Direct investment is also helpful in avoiding serious mistakes in investment decisions because foreign investors are often well aware of marketing conditions abroad. In the case of the Republic of Korea, some of the costly mistakes in heavy industries in recent years could have been avoided if the parties involved had made greater use of direct investment as a vehicle for the inflow of both foreign capital and technology.

4/ For an excellent discussion on the consequences as well as the cause of this type of interest rate policy, see McKinnon, op.cit., Chapters 3 and 7.

5/ For a discussion of the proposal suggested here, see Herbert Giersch, The New International Economic Order: Prospects and Problems, Seminar Series No. 8, Korea International Economic Institute, Seoul, 1977, pp 28-29.

The fourth lesson relates to the capacity to absorb new technology and manpower training. Korea's ability to absorb new technology from abroad was remarkable for the 20 years under review precisely because of the high level of education in the country. Indeed the country was lucky in that in the early 1960s, when the economy was taking off; the country had an enormous reserve of well-trained manpower. In the opinion of at least one foreign observer,[6/] however, by now the Republic of Korea has exhausted this reserve. Debatable as this judgment is, many policy makers in the Republic of Korea readily concede that in the future the government should devote more resources to education and manpower. Indeed, the crux of the "welfare state" being actively discussed among leaders in the new government is the expansion of educational activities with public support. For a nation that depends almost exclusively on educated and trained manpower for continued progress, the emphasis on education and training is not only good economics but also a good social policy, because government investment in education and technical manpower training coupled with the policy providing for continued expansion of employment opportunities serves as the most effective structural basis for equitable distribution of income.

The fifth lesson relates to the treatment of light industry vis-a-vis heavy industry. It is often all too easy for a nation to be enamored with what is known as advanced or heavy industry and neglect the healthy growth of light industry. For the Republic of Korea, which expects her labour force to grow at 3% per annum for the next 10 years, the importance of light industry with its outstanding capacity to absorb employment can hardly be overemphasized.

For the healthy growth of light industry as well as heavy industry, the inflow of foreign technology is crucial. But unfortunately in the case of light industry, international transfer of technology is not easily achieved. Entrepreneurs in small and medium industries are typically not well-equipped in dealing with international business, and hence their efforts to acquire foreign technology should deserve special policy attention.

6/ Hans W. Singer and Nancy O. Baster, Young Human Resources in Korea's Social Development: Issues and Strategies, Korea Development Institute, Seoul, 1980, pp. 23-33.

The sixth lesson relates to the ways in which the rise in protectionism and resource nationalism might be dealt with in the future. Too many developing countries, including the Republic of Korea, tend to view their exports as being of marginal importance in terms of impact on the importing countries. Clearly the fallacy of composition is involved here, and the developing countries would do well to keep in mind the adjustment burden to be borne by the advanced countries. The adjustment burden tends to be greater, when exports are increased too rapidly and also when the trade in question is based on inter-industry rather than intra-industry specialization.

The advanced countries for their part should take a more positive attitude toward their industrial adjustment policies. In this regard, they too should become aware of the costs of adjustment they impose on the developing countries by sudden protectionist moves or the time-honoured practice of tariff escalation against exports from the developing countries.

By raising the effective rate of protection given to domestic manufactures in the advanced countries, tariff escalation seriously impedes the efforts of the developing countries to expand manufactured exports. Tariff excalation also encourages the attempt to establish the backward linkage effects in the industrially advanced countries beyond the optimal levels. This attempt on the part of the advanced countries has served as an important impetus to resource nationalism in the developing world, and unfortunately, in her efforts to develop heavy industries in the late 1970s, the Republic of Korea, too, repeated this mistake.

Sudden protectionist moves often result in the shortening of the life of investment capital in the developing countries and force these countries to "leap frog" the stages of industrial development beyond their capacity. All these lead to the high cost of industrialization in the developing world. What is required here seems to be a guarantee that in the future individual advanced countries would not undertake sudden protectionist moves or continue the practice of tariff escalation without

compensating their developing trade partners for the damage done to them by such moves.[7/]

The seventh lesson is in a sense an extension of the sixth lesson. The rise in worldwide protectionism and resource nationalism in recent years has stemmed in large part from the highly unstable international monetary relations prevailing since the breakdown of the Bretton Woods system. The sudden shifts in the exchange rates of the developing countries due to forces beyond their control forced them to bear heavy burdens of adjustment. The Republic of Korea could have eased this burden of adjustment by adopting an exchange rate not pegged to a single major currency. The managed float system, the country has adopted since late February this year, represents an improvement over the fixed exchange rate but the new system still must be improved. It should be improved in such a way that any ordinary businessman can form reasonable expectations regarding the future movement of the exchange rate. Otherwise, its usefulness as an instrument for the development of the forward exchange rate market in the Republic of Korea will be limited. Looking beyond the Republic of Korea, the world is clearly in need of a stable international monetary order to replace the current monetary disorder. In this regard, the examples shown by the EMS are highly useful,[8/] and it is hoped that the EEC, the United States, and other major industrial countries soon join forces to come up with an alternative to the present world monetary condition.

The final lesson is that the critical precondition for economic progress is social and political stability. The initiation of rapid growth in the Republic of Korea in the early 1960s would not have been possible without the social stability achieved by the new political leadership. The lack of progress with overall economic management in the first several months of this year was also due critically to growing

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7/ The source of inspiration for this suggestion is Jagdish N. Bhagwati: "Market Disruption, Export Market Disruption, Compensation, and GATT Reform," in Jagdish N. Bhagwati, ed., The New International Economic Order: The North - South Debate, MIT Press, Cambridge, 1977, pp. 159-191.

8/ For a discussion of the future possibilities of the EMS, see Robert Triffin, "The European Monetary System", a paper presented to the Second Conference on Integration and Unequal Development: The Implications of the Second Enlargement of the E.E.C., Madrid, October 15-19, 1979.

uncertainty in the nation's social and political environment. In view of these recent painful experiences this need for political stability cannot be overemphasized. At the same time, it cannot be overlooked that for a country such as the Republic of Korea, attaining social and political stability is not a task that can be achieved by the efforts of its own people alone. It is hoped that the super-powers of the world will keep this point in mind in their own efforts to enhance the welfare of their own people and others.

APPENDICES

Tables

Table 1. Average Annual Growth Rate of Real GNP (In 1975 Prices)

(Unit: %)

	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
1961	2.2	5.6	6.9	6.6	7.8	7.6	8.1	8.8	8.7	8.8	8.5	9.0	8.9	8.8	9.2	9.3	9.4	9.2
1962		9.1	9.3	8.2	9.3	8.7	9.2	9.8	9.5	9.5	9.1	9.7	9.5	9.3	9.7	9.8	9.9	9.7
1963			9.6	7.7	9.3	8.7	9.2	9.9	9.6	9.6	9.1	9.7	9.6	9.3	9.6	9.8	9.9	9.7
1964				5.8	9.2	8.3	9.1	10.0	9.6	9.6	9.1	9.7	9.6	9.3	9.8	9.8	10.0	9.7
1965					12.7	9.6	10.2	11.1	10.4	10.2	9.6	10.2	10.0	9.7	10.2	10.2	10.3	10.0
1966						6.6	8.9	10.5	9.8	9.7	9.1	9.9	9.6	9.4	9.9	10.0	10.1	9.8
1967							11.3	12.5	10.9	10.5	9.5	10.4	10.1	9.7	10.3	10.3	10.4	10.1
1968								13.8	10.7	10.2	9.1	10.3	9.9	9.5	10.2	10.2	10.3	10.0
1969									7.6	8.5	7.6	9.4	9.1	8.8	9.7	9.7	9.9	9.6
1970										9.4	7.6	10.0	9.5	9.0	10.0	10.0	10.2	9.8
1971											5.8	10.3	9.5	8.9	10.1	10.1	10.4	9.8
1972												14.9	11.4	10.0	11.2	11.0	11.1	0.4
1973													8.0	7.6	10.0	10.1	10.4	9.4
1974														7.1	11.1	10.8	11.0	10.1
1975															15.1	12.7	12.3	10.8
1976																10.3	10.9	9.4
1977																	11.6	9.0
1978																		6.4

Source: Bank of Korea, National Income in Korea (various issues).

Table 2. Average Annual Growth Rate of Money (M_1)

In Percent

	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
1961	10.1	8.2	11.0	16.3	18.9	22.8	25.7	27.6	27.0	25 9	27.5	28.6	28.6	28.4	28.5	29.3	29.0	28.5
62		6.3	11.4	18.5	21.2	25.6	28.6	30.3	29.3	27 8	29 4	30.4	30.3	29.9	30.0	30.6	30.3	29.7
63			16.7	25.1	26.6	30.9	33.5	34.9	32.9	30.8	32.3	33.1	32.8	32.1	32.0	32.6	32.1	31.3
64				34.2	31.9	36.0	38.1	38.8	35.9	32.9	34.4	35.0	34.5	33.6	33.3	33.9	33.2	32.3
65					29.7	36.9	39.5	40.0	36.2	32.7	34.4	35.2	34.5	33.5	33.3	33.9	33.2	32.2
66						44.5	44.6	43.6	37.9	33.3	35.2	35.9	35.1	34.0	33.6	34.2	33.4	32.4
67							44.6	43 1	35.7	30.6	33.4	34.6	33.8	32.7	32.5	33.3	32.5	31.5
68								41.7	31.5	26.3	30.7	32.6	32.1	31.1	31.0	32.1	31.3	30.3
69									22.1	19.2	27.3	30.5	30.3	29.4	29.6	30.9	30.2	29.2
70										16.4	29 9	33.4	32.4	30.9	30.9	32.2	31.3	30.1
71											45.1	42.8	38.2	34.8	34.0	35.1	33.6	31.9
72												40.6	34.9	31.5	31.3	33.1	31.7	30.1
73													29.5	27.2	28.3	31.3	30.0	28.4
74														25.0	27.8	31.9	30.2	28.2
75															30.7	35.6	31.9	29.0
76																40.7	32.6	28.5
77																	24.9	22.8
78																		20.7

Source: Economic Planning Board.

Table 3. Average Annual Growth Rate of Price (WPI)

In Percent

	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
1961	9.5	15.2	21.6	18.3	16.4	14.7	13.7	12.8	12.4	12.0	12.2	11.7	13.8	14.7	14.5	14.2	14.0	14.3
62		21.1	28.1	21.4	18.2	15.7	14.5	13.3	12.7	12.3	12.4	11.9	14.2	15.1	14.9	14.5	14.3	14.6
63			35.4	21.5	17.2	14.4	13.2	12.0	11.6	11.2	11.5	11.0	13.6	14.6	14.4	14.0	13.9	14.2
64				9.1	9.1	8.2	8.2	7.8	8.0	8.2	8.8	8.6	11.6	12.9	12.8	12.5	12.5	12.9
65					9.0	7.7	7.9	7.5	7.8	8.0	8.8	8.6	11.9	13.3	13.2	12.8	12.7	13.1
66						6.4	7.4	7.0	7.5	7.8	8.8	8.5	12.2	13.7	13.6	13.1	13.0	13.5
67							8.4	7.4	7.9	8.2	9.3	8.9	13.1	14.7	14.4	13.8	13.7	14.1
68								6.4	7.7	8.1	9.5	9.0	13.9	15.6	15.2	14.5	14.2	14.6
69									9.1	9.0	10.5	9.6	15.5	17.2	16.5	15.5	15.1	15.6
70										8.8	11.3	9.8	17.1	18.9	17.8	16.5	15.9	16.2
71											13.8	10.3	20.0	21.6	19.7	17.8	16.5	17.1
72												6.9	23.3	24.4	21.2	18.6	17.5	17.6
73													42.1	34.1	26.3	21.8	19.7	19.5
74														26.5	19.1	15.7	14.7	15.5
75															12.1	10.5	10.9	12.8
76																9.0	10.3	13.1
77																	11.7	15.2
78																		18.8

Source: Economic Planning Board.

Table 4. Investment and Savings
(In Current Prices)

In Billion Won

	Gross Investment			Domestic Savings			Foreign Savings	Statistical Discrepancy	Investment Finance Ratio		
	Total	Gov't	Private	Total	Gov't	Private			Total	Domestic Finance 1/	Finance from Abroad
1961	38.7	13.0	25.7	8.4	-5.4	13.7	25.3	5.0	100.0	34.6	65.4
1961	45.5	19.2	26.3	11.6	-5.5	17.1	38.0	-4.0	100.0	16.5	83.5
1963	91.1	17.6	73.6	43.7	-1.8	45.6	52.4	-4.9	100.0	42.5	57.5
1964	100.6	24.1	76.5	62.6	3.3	59.3	49.1	-11.2	100.0	51.2	48.8
1965	120.9	31.3	89.6	59.4	13.8	45.6	51.5	10.0	100.0	57.4	42.6
1966	223.9	49.3	174.6	122.8	28.6	94.3	87.6	13.5	100.0	60.9	39.1
1967	280.7	62.2	218.5	145.8	52.6	93.2	112.9	22.1	100.0	58.9	40.2
1968	427.7	106.4	321.3	24-.3	100.9	148.5	184.3	-6.0	100.0	56.9	43.1
1969	621.3	168.3	453.0	405.9	127.5	278.5	229.0	-13.6	100.0	63.1	36.9
1970	719.1	170.3	548.8	465.2	175.1	290.2	249.6	4.3	100.0	65.3	34.7
1971	831.4	194.0	637.4	506.2	178.3	327.9	353.2	-28.0	100.0	57.5	42.5
1972	873.8	219.6	654.2	633.1	143.7	489.5	211.5	29.2	100.0	75.8	24.2
1973	1,341.0	269.7	1,071.3	1,233.5	218.8	1,014.7	198.9	-91.4	100.0	85.2	14.8
1974	2,274.3	292.2	1,982.1	1,501.8	165.8	1,336.0	910.8	-138.3	100.0	60.0	40.0
1975	2,881.8	631.4	2,250.4	1,823.4	392.4	1,430.9	1,023.0	35.5	100.0	64.5	35.5
1976	3,378.2	657.2	2,721.0	3,062.2	817.9	2,244.4	320.5	-4.6	100.0	90.5	9.5
1977	4,645.0	1,044.3	3,600.7	4,278.3	954.5	3,323.8	101.9	264.7	100.0	97.8	2.2
1978	7,137.7	1,261.2	5,876.5	6,044.4	1,481.2	4,563.1	753.5	339.8	100.0	89.4	10.6
1979	10,293.5	1,823.9	8,649.6	7,728.4	2,104.7	5,623.7	2,221.7	343.4	100.0	77.7	22.3

Note: 1/ Including Statistical Discrepancy.

Source: Bank of Korea, National Income in Korea (various issues).

Table 5. Investment and Saving Ratios

	Investment	Domestic Savings		
		Total	Government	Private
1961	13.2	2.9	-1.8	4.7
1962	12.8	3.2	-1.6	4.8
1963	18.1	8.7	-0.4	9.1
1964	14.0	8.7	0.4	8.3
1965	15.0	7.4	1.7	5.7
1966	21.6	11.8	2.7	9.1
1967	21.9	11.4	4.1	7.3
1968	25.9	15.1	6.1	9.0
1969	28.8	18.8	5.9	12.9
1970	26.8	17.3	6.5	10.8
1971	25.2	15.4	5.4	10.0
1972	21.7	15.7	3.6	12.1
1973	25.6	23.5	4.1	19.4
1974	31.0	20.0	2.3	18.2
1975	29.4	18.6	4.0	14.6
1976	25.5	23.1	6.2	16.9
1977	27.3	25.1	5.6	19.5
1978	31.1	26.4	6.5	19.9
1979	35.4	26.6	7.2	19.4

Note: All ratios are calculated at current prices.

Source: Bank of Korea, National Income in Korea (various issues).

(Unit: %)

Foreign Savings	Marginal Propensity to save
8.6	12.9
10.7	5.3
10.4	21.8
6.9	8.9
6.4	3.6
8.5	27.4
8.8	9.4
11.2	27.9
10.6	31.2
9.3	11.2
10.7	6.7
5.2	17.3
3.8	49.6
12.4	12.8
10.4	13.1
2.4	35.6
0.6	32.4
3.3	30.0
7.6	27.4

Table 6. Exports by Major Commodities

(Unit: Million U.S. Dollars)

SITC No.		1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
7	Machinery	61.5	87.4	171.6	395.9	672.3	702.1	1,200.4	1,741.2	2,587.1	3,101.5
72	Electrical Machinery	43.9	68.5	125.2	312.5	474.2	441.6	805.9	925.2	1,245.7	1,684.5
73	Ships & Transport Equipment	9.2	6.9	14.3	24.0	121.1	183.7	342.3	674.3	1,124.0	1,097.6
7-(72+73)	Others	8.4	12.0	32.1	59 4	77.0	76.8	132.2	141.7	217.4	319.4
67	Iron & Steel	13.4	24.4	92.8	188.9	450.3	331.5	368.8	392.2	576.8	1,101.6
	SUB-TOTAL	74.9	111.8	264.4	584.8	1,122.6	1,033.6	1,649.2	2,133.4	3,163.9	4,203.1
65 & 84	Textile & Clothing	298.5	442.1	610.8	1,185.1	1,449.6	1,833 1	2,799 9	3,143.4	4,108.0	4,663.9
85	Footwear	17.3	37.4	55.4	106.4	179.5	191.2	398.5	487.6	686.2	728.9
03	Fishery Products	40.8	42.2	70.4	143.5	168.4	359.5	317.1	693.4	638.6	795.1
	Others	403.7	434.1	615.1	1,235.2	1,540.3	1,763.6	2,550.4	3,588.7	4,113.9	4,664.5
	TOTAL	835.2	1,067.6	1,624.1	3,255.0	4,460.4	5,081.0	7,715.1	10,046.5	12,710.6	15,055.5

Source: Bank of Korea, Economic Statistics Yearbook (various issues).

Table 7. Share of Selected Commodities in Total Exports

(Unit: %)

SITC No.		1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
7	Machinery	7.4	8.2	10.6	12.2	15.1	13.8	16.6	17.3	20.4	20.6
72	Electrical Machinery	5.3	6.4	7.7	9.6	10.6	8.7	10.4	9.2	9.8	11.2
73	Ships & Transport Equipment	1.1	0.6	0.9	0.7	2.7	3.6	4.4	6.7	8.8	7.3
7-(72+73)	Other Machinery	1.0	1.2	2.0	1.8	1.7	1.5	1.7	1.4	1.7	2.1
67	Iron and Steel	1.6	2.3	5.7	5.8	10.1	4.6	4.8	3.9	4.5	7.3
	SUB-TOTAL	9.0	10.5	16.3	18.0	25.2	18.4	21.4	21.2	24.9	27.9
65 & 84	Textiles and Clothing	35.7	41.4	38.1	36.4	32.5	36.1	36.3	31.3	32.3	31.0
85	Footwear	2.1	3.5	3.4	3.3	4.0	3.8	5.2	4.9	5.4	4.8
03	Fishery Products	4.9	4.0	4.3	4.4	3.8	7.1	4.1	6.9	5.0	5.3
	Others	48.3	40.6	37.9	37.9	34.5	34.7	33.1	35.7	32.0	31.0
	TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Bank of Korea, Economic Statistics Yearbook (various issues).

Table 8. Exports by Commodity Group
January - August 1980

Unit: U.S. $1 Million

Commodity Group	Amount	% Increase Over the Same Period in 1979
Heavy and Chemical Industrial Products	4,692	33.9
Electric and Electronic Products	1,463	13.6
Iron and Steel Products	1,239	72.9
Machinery	746	8.3
Cement	147	196.4
Metal Products	464	27.3
Fertilizers	242	85.0
Others	391	47.5
Light Industrial Products	5,404	9.9
Textiles and Clothing	3,181	7.2
Footwear	586	18.8
Resin Products	369	26.7
Plywood and Other Wood Products	241	-25.3
Tires	308	76.3
Toys and Handicrafts	178	11.5
Others	541	6.5
Primary Industrial Products and Others	874	-10.1
TOTAL	10,971	16.8

Source: Ministry of Commerce and Industry.

Table 9. Real GNP Growth Estimates
for First Halves of 1979 and 1980

(All growth estimates given below are % increases over the corresponding period of the previous year.)

	1979			1980		
	1/4	2/4	First Half	1/4	2/4	First Half
Growth in GNP	13.6	9.2	11.2	-1.8	-5.9	-4.0
(GDP Growth Rate)	(14.8)	(9.0)	(11.6)	(0.7)	(-1.9)	(-0.7)
Agriculture & Fisheries	9.4	14.6	12.8	-0.4	-19.4	-13.0
Mining and Manufacturing	19.5	11.7	15.3	-1.4	-2.9	-2.2
(Manufacturing)	(20.0)	(12.9)	(16.2)	(-1.5)	(-3.2)	(-2.4)
Social Overhead Capital	21.5	4.7	11.6	6.3	4.9	5.5
Other Services	5.2	7.6	6.5	-6.2	-10.7	-8.6
Growth in Domestic Fixed Capital Formation	24.0	27.4	26.1	- 8	-19.8	-13.3
Private Construction	11.5	-11.9	-4.2	18.5	11.6	14.3
Buildings	4.4	-29.4	-19.1	17.9	19.0	18.6
Residential	18.3	-26.2	-14.5	-17.3	-0.7	-6.8
Non-Residential	-7.6	-33.7	-24.4	56.6	48.2	51.8
Others	31.5	75.4	56.3	19.9	-3.2	5.2
(Electricity)	(65.5)	(180.7)	(123.3)	(29.6)	(-4.5)	(8.1)
Government Construction	49.8	20.5	29.2	-20	-0.1	-7.0
Machinery & Equipment	27.9	70.9	50.9	-11.0	-41.0	-29.2
Growth in Consumption	12.4	6.6	9.3	0.0	-2.1	-1.1
Private	12.8	8.8	10.7	1.3	-2.3	-0.5
Government	10.1	-6.0	1.5	-7.9	-0.9	-4.4
Growth in Exports	-3.7	-4.1	-3.9	5.3	3.7	4.5
(Goods)	(-5.1)	(-2.7)	(-3.8)	(14.9)	(10.7)	(12.7)
Growth in Imports	24.0	17.6	20.5	-3.7	-5.7	-4.8
(Goods)	(23.5)	(26.5)	(25.1)	(-6.2)	(-11.0)	(8.8)

Source: Bank of Korea.

Table 10. Macroeconomic Projections in the Draft of the Fifth Five-Year Plan (1982-86)

	Unit	1979	1980	1981	1982	1983	1984	1985	1986	1982-86 Average
Economic Growth	%	6.4	1.0	5.5	7.5	8.1	8.1	8.2	8.2	8.0
GNP	1975 Prices, 100 Million Won	14,767.4	14,907.8	15,721.9	16,901.0	18,270.0	19,749.9	21,369.4	23,121.7	-
Population	1,000 Persons	37,605	38,197	38,807	39,437	40,084	40,747	41,418	42,088	1.64
Rate of Increase in Wholesale Price Index	%	18.8	35 ~ 39	15.0	10.0	9.5	9.0	8.8	8.7	9.0
Rate of Increase in GNP Deflator	%	20.4	25.0	15.0	11.0	11.0	11.0	11.0	11.0	11.0
Commodity Exports	One Billion Dollars (Current Prices)	14.7	17.0	20.5	24.9	30.3	36.9	44.8	54.6	21.6
Commodity Imports	" " "	19.3	22.5	26.0	30.3	35.6	41.7	48.9	57.4	17.2
Trade Balance	" " "	-4.4	-5.5	-5.5	-5.4	-5.2	-4.8	-4.1	-2.9	-
Current Account Balance	" " "	-4.2	-5.5	-5.2	-5.1	-5.0	-4.7	-3.7	-2.1	-
Investment/GNP Ratio*	%	35.8	34.8	33.4	32.6	31.9	31.3	30.6	29.9	31.3
Domestic Savings/ GNP Ratio*	"	27.8	25.1	25.3	25.8	26.3	26.9	27.5	28.2	26.9
Foreign Savings/ GNP Ratio*	"	7.7	9.7	8.1	6.9	5.6	4.5	3.1	1.7	4.4

* In current prices.

Source: Economic Planning Board.

Table 11. Energy Consumption (1970-79)

(Unit: 1,000 Petroleum Equivalent M/T)

Items	1970	1972	1974	1976	1977	1978	1979	Average Rate of Increase (%) (1971-79)
Coal	5,995	6,106	7,774	8,866	9,637	9,943	11,620	7.6
Anthracite	5,943	6,084	7,222	7,820	8,252	8,448	8,903	4.6
Bituminous	52	22	552	1,046	1,385	1,495	2,717	55.2
Petroleum	9,186	11,616	13,735	17,317	19,954	22,143	24,719	11.6
Hydroelectricity	305	342	476	447	348	452	582	7.4
Nuclear Power	-	-	-	-	18	581	782	-
Firewood	4,251	3,990	3,525	3,175	3,117	3,038	2,892	-4.2
Total	19,737	22,054	25,510	29,805	33,074	36,157	40,595	8.3
Rate of Increase (%)	-	3.7	0.9	10.1	11.0	9.3	12.3	

Source: Ministry of Energy and Resources.

Table 12. Projected Energy Consumption

Unit: 1,000 Petroleum Equivalent M/T

Items	1979	1980	1981	1986	1991	Average Annual Growth Rate 1980-91 (%)
Total	37,885 (100.0)	39,568 (100.0)	42,467 (100.0)	59,873 (100.0)	82,780 (100.0)	6.9
Petroleum	24,383 (64.4)	24,833 (62.8)	26,565 (62.6)	29,777 (49.7)	34,349 (41.5)	3.0
Coal	8,903 (23.5)	10,020 (25.3)	11,219 (26.4)	15,783 (26.3)	20,648 (24.9)	7.0
Anthracite	8,903 (23.5)	9,822 (24.8)	10,321 (24.3)	10,185 (17.0)	9,462 (11.4)	-0.3
Bituminous	7 (0)	198 (0.5)	898 (2.1)	5,598 (9.3)	11,186 (13.5)	44.3
LPG & LNG	336 (0.9)	377 (1.0)	456 (1.1)	3,720 (6.2)	8,744 (10.6)	33.1
Solar Energy	-	-	5 (0)	241 (0.4)	1,116 (1.3)	-
Hydroelectricity	582 (1.5)	523 (1.3)	535 (1.3)	726 (1.2)	1,374 (1.7)	9.2
Nuclear	782 (2.1)	1,050 (2.6)	1,050 (2.5)	7,390 (12.3)	14,581 (17.6)	27.0
Firewood	2,892 (7.6)	2,765 (7.0)	2,637 (6.1)	2,236 (3.9)	1,968 (2.4)	-3.0

Note: 1) Revised in May, 1980.
2) Figures in parentheses are percentage shares.

Source: Ministry of Energy and Resources