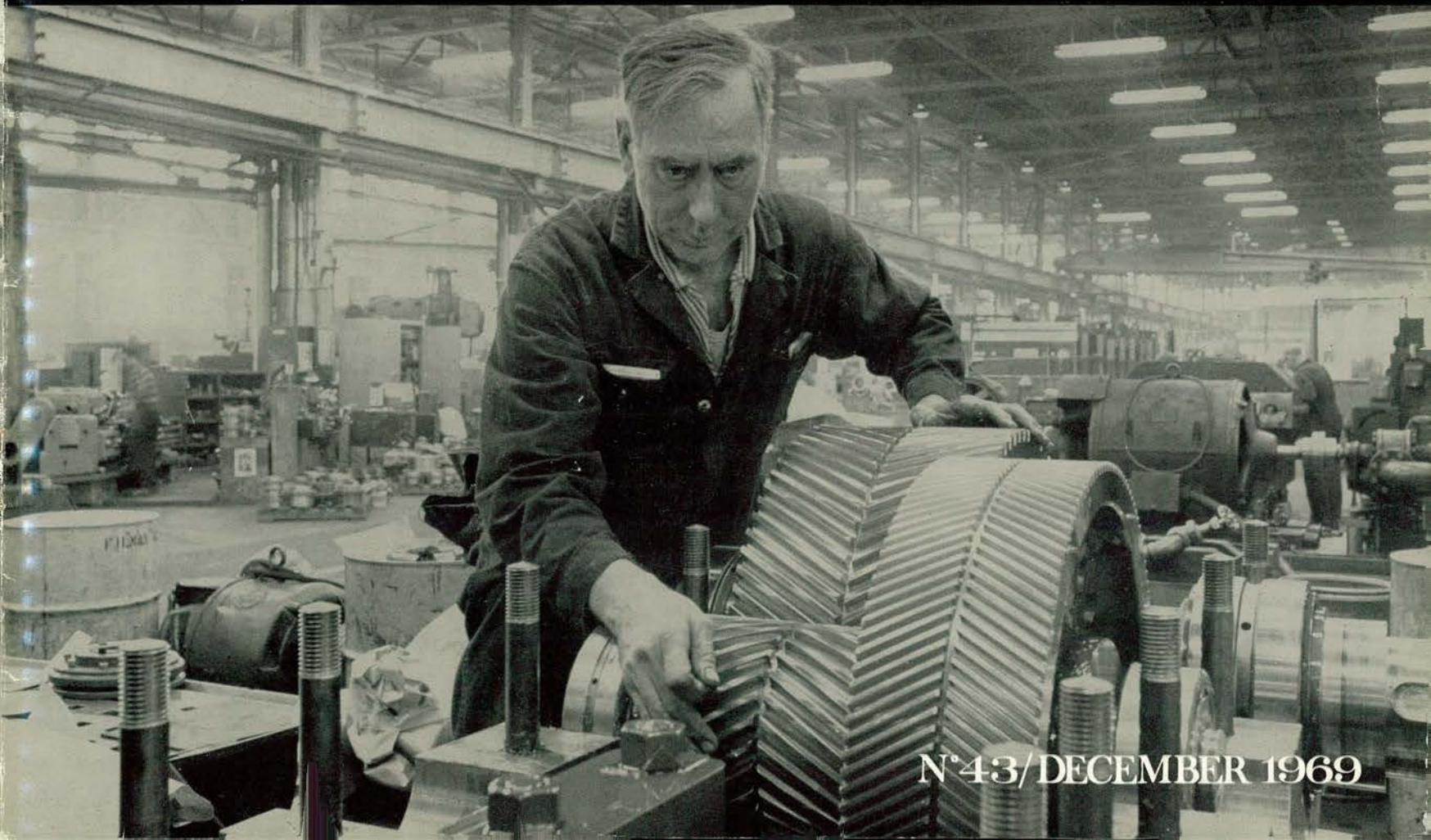


# the **OECD** **OBSERVER**

THE ECONOMIC OUTLOOK – DECEMBER 1969  
**DEVELOPMENT AID – THE RECENT RECORD**  
CONTROL OF MARKET POWER **USE OF ADULT**  
**TRAINING IN EMPLOYMENT STABILISATION**  
INNOVATION IN THE NEW U.K. UNIVERSITIES  
**TECHNOLOGICAL GAPS IN PHARMACEUTICALS**



N°43/DECEMBER 1969



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*Overall view of the annual high level meeting of OECD's Development Assistance Committee*

# HIGH LEVEL MEETING OF THE OECD DEVELOPMENT ASSISTANCE COMMITTEE

**T**HE Eighth Annual High-Level Meeting of the Development Assistance Committee of the OECD took place on 27th and 28th November at the headquarters of the OECD in Paris (1).

This annual meeting took note of the latest developments in the aid programmes of Member countries and the progress and problems of less developed countries themselves, as described by the Chairman, Mr. E. McCammon Martin, in his annual report shortly to be published. The Committee noted particularly that total flows of financial resources to less developed countries rose in 1968 by 15 per cent to

almost \$13 billion, which was the result mainly of sharp increases in private flows.

This year's review of recent developments and of the work programme were strongly marked by the preparations for the Second United Nations Development Decade. In its discussion of the future orien-

(1) The Members of the Committee are: Australia, Austria, Belgium, Canada, Denmark, France, Germany, Italy, Japan, the Netherlands, Norway, Portugal, Sweden, Switzerland, the United Kingdom, the United States and the Commission of the European Communities. The IBRD and the IMF participate as observers.



tation of the Committee's work, the meeting agreed that the main tasks should include, in addition to the regular activity of the Annual Aid Review, the Second Development Decade and the financial terms of assistance.

The recent publication of the Report of the Commission on International Development chaired by the Right Honourable Lester B. Pearson, former Prime Minister of Canada, entitled "Partners in Development", is particularly timely, because, in addition to stimulating public discussion by providing a penetrating analysis of the problems of development, it focuses attention, through its specific proposals, on a number of key issues for the Second Decade, many of which have for some time been the subject of detailed consideration in the DAC and other international fora.

It was recognised that the proposals of the Pearson Commission were directed to many different institutions as well as to individual governments and included five proposals specifically addressed to the DAC. The Committee welcomed the fact that many of the Pearson proposals were already receiving attention. The meeting agreed that the relevant proposals should be carefully studied by the DAC in its work on these subjects in the coming year.

The Heads of Delegations agreed that the time schedule of DAC work on these subjects should take into account the need to give full support to the preparations now being made in the UN Preparatory Committee and in the UNCTAD for decisions for the Strategy for the Decade.

The Committee noted with satisfaction the statement by the Secretary-General of the OECD that he was consulting with the Council of the Organisation in order to intensify and expand the efforts of the OECD as a whole in the development field. The Secretary-General indicated that this approach should include, in addition to development assistance policies dealt with by the DAC and development problems already treated by, inter alia, the Trade Committee, relevant aspects of policies in various other fields of activity of the Organisation.

Several delegates referred to the need for public support for sustaining and improving aid programmes. Some of them were encouraged by the rising support for development assistance in their countries. Some other delegates, however, mentioned the difficulties they were facing in this respect. In this regard several countries noted the usefulness of the recent meeting of DAC Parliamentarians in mobilising influential support for development assistance.

A number of the Ministers and Heads of Aid Agencies present at the meeting stressed the importance of a separate target for the level of official development assistance. Some countries have either already achieved a high level of official assistance in relation to GNP or have established definite internal plans for targets which represent substantial increases. Others announced that they were giving serious attention to establishing official development assistance targets or were planning increases in official assistance, while at the same time encouraging other forms of financial flows.

It was agreed that a careful study should be made by the OECD Secretariat, drawing on the experience of aid agencies and using the facilities of the Development Centre of the OECD, with a view to identifying and making co-ordinated efforts to reduce the main procedural obstacles to greater efficiency in handling aid programmes and projects. This would represent a preliminary exploration of the suggestion by the Pearson Commission that the DAC should sponsor a meeting of major aid donors and recipients in 1970 to define the major procedural obstacles to effective aid implementation, to explore measures to reduce them, to introduce greater uniformity in the aid regulations of donors, and to improve procedures in aid-receiving countries.

Many Delegates stressed the need for better co-ordination between all forms of assistance, both bilateral and multilateral. Hopes were expressed that the study of the organisation of the UN development activities, about to be published by Sir Robert Jackson, would contribute to this result.

Progressive untying of bilateral and multilateral aid is a subject with which the DAC has long been concerned and it was noted that the work programme considered by the 1968 High-Level Meeting had included most of the suggestions made in this respect by the Pearson Commission. The Committee also noted with satisfaction that first steps to reduce the incidence of aid tying had been taken by several countries in 1969, including moves to permit purchasing in other less developed countries. Several countries reiterated their willingness to join in the work aimed at a general agreement on the untying of aid. A few Delegations pointed out that unilateral action could also be envisaged in this field. The view was also expressed that action in the field of untying should not distract attention from the need to increase the volume of aid.

It was recalled that the recommendation on supplementary DAC terms targets whose approval in February 1969 was welcomed by the Meeting included an agreement to undertake further work on the problems that export credits pose for many countries with heavy debt servicing burdens in relation to their payment capacity and that work has already been done on the problem by the relevant DAC working party. It was agreed that the working party should continue its work on the whole of the extremely important problem of debt, including the possibility of establishing the criteria which could be taken into account in determining appropriate financial terms of assistance.

In this broader context the meeting heard reports from the IMF, IBRD and the OECD Secretariat on the progress being made in securing full and prompt information on debt burdens, public and private, of each developing country. The meeting expressed the desire that joint activities along present lines should be continued and, as necessary, intensified.

The next annual High-Level Meeting of the Development Assistance Committee will take place on 14th-15th September, 1970. At the invitation of the Japanese Government, the meeting will be held in Tokyo.



# **DEVELOPMENT AID**

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## **SUCCESSSES AND FAILURES**

***"We must consider that the development effort is still in a state of crisis" notes Mr. Edwin M. Martin, Chairman of OECD's Development Assistance Committee in his annual report presented at the 1969 High-Level Meeting of the DAC. Some of the highlights of his report are given in the following article.***

**T**otal net flows from DAC countries in 1968 increased by a rather spectacular 15 per cent to \$12.9 billion. But the increase was all due to the 41 per cent rise in private net flows, as they reached a record \$6 billion with all categories increasing substantially. Official development assistance, concessional funds with a strong development orientation and filling needs that no other funds can meet, declined from \$6.7 billion to \$6.4 billion. The latter result stemmed from decline or virtual stagnation in the flows of three big donors, the United States, France and the United Kingdom, which together account for over 70 per cent of such flows.

Apart from the volume shortfall in official development assistance, there are a number of areas in which donor performance ranged generally from good to very good. It is from a belief that nothing less than excellent is good enough that the following critical comments are made. For example, official assistance commitments contained a smaller percentage of grant money (58 per cent) but loans were provided on slightly softer terms in 1968 than in 1967. It is hoped that the adoption in 1969 of the new DAC terms target (1) will lead to improvements. There was no reduction in the proportion of aid that was tied (2).

Worse, perhaps, was the failure of bilateral and multilateral donors to make noticeable further progress in adapting terms of aid to country capacity to pay, taking account not only of existing debt burdens and export growth rates but also of the degree of poverty, for the reduction of which larger future borrowings will be required.

Even more worrisome for the already serious debt problem was the jump in net outstanding guaranteed private export credits, a notorious cause of financial crises. Some went to countries like the oil producers who should be financing investment this way. But large increases were registered for Argentina, Brazil and Chile, all with recent refinancings on their record because

of excessive build-ups of just this sort of short-term debt. Substantial volumes also went to South Korea, India and Pakistan, all poor countries which already face disturbingly heavy loads of debt.

Though improvements are still required in the geographic distributions of aid, there was not much change in 1968. Some still goes where it will promote political or cultural objectives or short-term economic interests rather than where it is most needed or will best produce more development. The most conspicuous case is the half a billion dollars, mostly scarce grant money, which the United States has been disbursing annually for several years in Southeast Asia. It may well be necessary and it undoubtedly has some development effect, but to include it all in "official development assistance" (a new concept recently introduced by the DAC which excludes official export credits and certain other official flows at market terms) can only lead to embarrassing questions about why such aid has not produced bigger dividends. This is not, of course, to say that it was "wasted" in the customary sense of that word.

Nor did donors succeed in achieving any radical improvements in the coordination at the country level, especially with respect to technical assistance, of the increasing number of bilateral and multilateral programmes operating in many countries.

Finally I fear that, while steady improvement is being made, too much by far of technical assistance is still engaged in transferring knowledge and skills that may or may not be currently pertinent in developed countries but are clearly irrelevant to the problems, situations and resources of developing countries.

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(1) See *OECD Observer* No. 40, June 1969 "OECD's Development Assistance Committee Recommends New, Softer Terms of Aid."

(2) However the United States, Germany and Canada did in 1969 announce significant, though not major, relaxations in their tying rules.



Trade is not DAC's business but it is vital to development. There remains a general reluctance to open up markets wider to exports of agricultural and industrial products which developing countries can demonstrably produce in larger quantities and at lower prices. To move steadily in this direction would be not charity but common sense, helping producers in developing countries and consumers in developed countries.

Progress was minimal on the UNCTAD II commitment to extend non-reciprocal preferences on manufactures and semi-manufactures. Nor was there any falling off but rather an increase in the funds spent to subsidise production, and in some cases export, of agricultural crops that compete with cheaper output in developing countries. It is worth noting that there was nevertheless a major increase in export earnings with the help of the prosperity of the DAC countries.

From this brief summary of 1968 highlights, it should be clear why, despite the 15 per cent increase in total net flows and modest progress in many other areas, I feel we must consider the development effort of the members of DAC to be still in a stage of crisis.

In the United States in particular, but also in several other key donors, there continues to be a small but vociferous opposition to the effort for development, accompanied by widespread apathy. Some legislatures are reluctant to expand aid appropriations in the face of competing claims for the allocation of always scarce public funds, the demands for cuts in budget deficits to halt inflation, and the public aversion to more taxation, no matter how high the incomes that are left. And no aid programme, adequate for current needs, can be funded except out of taxpayers' pockets. That is why the stagnation in net official flows in 1968 is so disturbing.

One wonders whether the time has not come to consider whether the huge sums being spent for military purposes may not in large part reflect an instinctive, traditional search for peace and security, rather than a rational modern pathway to the same ends. Might not an application of cool, forward-looking analysis, of the sort which has characterised and made so successful the material sectors of our societies, give us a better understanding of the world of the future and its perils, and suggest possible new means for dealing with them, or at least some change in priorities?

## ***The Record of Development***

Flows of financial resources and the technical help that they make possible are instruments to achieve an objective—the more rapid development of nations seeking to improve the quality of their peoples' lives. Hence no report on donor programmes is complete without a description, however cursory and tentative, of what has happened in the developing countries as

a result of their own efforts, dominant in the result, and those of external collaborators, often capable of providing—if wisely handled—the critical margin of resources needed to break crucial bottlenecks.

It is first of all essential to emphasise the great defects in the figures which look so definite and reliable, the wide range of situations which make the necessary generalisations always more or less inapplicable to any one country, the inability to measure or even describe clearly the vital changes in institutions, structures and attitudes which, large and small, represent the essence of modernisation and the key to creating better lives.

What of 1968? Like 1967 it was a comparatively good year, though there were, as in all years, failures as well as successes. Economic growth in real terms again averaged between 5 and 6 per cent. For the decade of the '60s economic growth has thus equalled if not surpassed the 5 per cent per year, mentioned, with some ambiguity as to time frame, as the growth goal of the First Development Decade.

But it was again as in 1967 largely due to the exceptionally good progress of about a dozen countries who bettered 7 per cent (1) out of some 45 for which we now have data. Most had average records of 4-6 per cent. Only four of these 45 countries fell below 3 per cent (2) though many of the least developed countries probably had poor growth as well as statistics.

One year is a short and arbitrary time frame for appraising progress. A longer look must be superficial, done with a broad brush, but it is essential to planning for the '70s to get some impression of what is going on and why. Thus an attempt to give a personal capsule view is necessary.

Considering the difficulties, progress over the Sixties has been remarkably good, although some countries have done better than others and some few people in most countries have benefitted more than the masses of the population. There are no grounds for despair, but for reasoned optimism.

In the political sphere it is still difficult if not impossible to appreciate the full historical significance of the decade of the 1960s. But surely it will be remembered for more than the walk on the moon. Sixty-six nations that were colonies in 1959 are today independent. The magnitude of this change in international relationships and the accompanying need for the creation of the whole apparatus of a nation-state, an independent sovereign society, is as yet almost beyond our imagination.

The over 5 per cent GNP growth at constant prices is a higher figure than we developed countries reached over any extended period at similar stages of our modernisation.

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(1) *Including Burma, China (Taiwan), Costa Rica, Iran, Israel, Korea (South), Malaysia, Mexico, Morocco, Thailand and Tunisia.*

(2) *Jamaica, Peru, Uganda and Uruguay.*



## 1. SELECTED PERFORMANCE INDICATORS FOR DAC MEMBERS, 1968

	I		II		III		IV	
	Estimated GNP per head		Total net flow of official and private resources to less-developed countries and multilateral agencies		Total official flows		Official development assistance	
	\$	Relative position	% of GNP	Relative position	% of GNP	Relative position	% of GNP	Relative position
United States .....	4,360	1	0.65	12-13	0.41	8	0.38	8
Sweden .....	3,230	2	0.50	15	0.28	11	0.28	9-10-11
Canada .....	3,000	3	0.49	16	0.34	10	0.28	9-10-11
Switzerland .....	2,760	4	1.42	1-2	0.11	16	0.11	16
Denmark .....	2,750	5	0.55	14	0.21	14-15	0.21	14
France .....	2,500	6	1.17	3	0.68	1-2	0.68	1-2
Australia .....	2,330	7-8	0.67	10	0.56	3	0.57	3
Norway .....	2,330	7-8	0.65	12-13	0.26	12	0.28	9-10-11
Belgium .....	2,190	9	1.15	4	0.44	6	0.41	7
Germany .....	2,180	10	1.26	1-2	0.45	5	0.42	5-6
Netherlands .....	1,970	11	1.10	5	0.54	4	0.53	4
United Kingdom .....	1,840	12	0.75	8	0.42	7	0.42	5-6
Austria .....	1,530	13	0.66	11	0.25	13	0.20	15
Japan .....	1,410	14	0.74	9	0.36	9	0.25	12
Italy .....	1,360	15	0.76	7	0.21	14-15	0.23	13
Portugal .....	540	16	0.94	6	0.68	1-2	0.68	1-2
TOTAL DAC .....	2,700		0.77		0.42		0.39	

Education has boomed quantitatively, with enrolments doubling or tripling since the early '50s. Developing countries have devoted a steadily growing percentage of their public revenue to it. At the same time, donor countries have significantly helped developing countries in their educational efforts by providing teachers and school facilities (1). Since 1950 the average annual increase in adult literates has exceeded 20 million people, but because of the high rate of growth of the population there has also been an increase in the number of illiterates.

In the past few years a "green revolution" has got underway in a number of major countries, with output per acre of wheat and rice often doubled, reflecting not only larger and better inputs but also a change in farmer attitudes toward innovation in farm practices which has surprised many who thought that if they could not read they could not count. Its greatest importance is apt to prove to be the attention it has attracted to how much applied science can now do in designing plants to specifications as to climate, soil, water, nutritional content and immunity to pests and diseases.

The difficulties faced in taking these steps forward were much greater than we faced in our development. For example, there has been an intense urge to catch up with us now, not tomorrow. There has been an acute scarcity of capital resulting in high interest costs. They have been forced to fight for markets against not

only our superior technology but some blocking of access to our consumers, made possible by our superior economic power.

While developing countries have in many respects benefitted from the existence of advanced techniques, the sheer complexity of modern technology and its rapid changes have prevented them from reaping the windfall profits of true innovation on which European and later US growth depended and still depend so heavily.

The heavy pressures of democratic political and social institutions on their leadership have often come prior to instead of, as in our case, after their economic and educational revolutions were well underway.

It is clearly too soon to have a clear and objective explanation of the successes they have achieved despite these difficulties. But a few things stand out.

The example of our prosperity has given rise to a "revolution of rising expectations", politically disturbing, but also convincing many that their lives could be improved, and stimulating them to try to do something about it.

At the same time that the technology of modern communication has brought this message, it has also

(1) In 1968 there were 49,368 teachers financed by DAC countries in the less-developed countries.



provided the means for transmitting the knowledge and skills required to achieve progress.

Modern technology has also created new and fast-growing markets for some non-agricultural primary products like petroleum and minerals, as well as provided better means for finding what lies hidden underground.

Perhaps even more important, modern economic science has enabled the managers of our economies and our international monetary system to avoid serious cyclical depressions. The unprecedented rate of steady growth that we have achieved has offered a rising, though shifting, market for most of their exports. Thus despite synthetics and trade barriers and slow growth in our consumption of tropical foods, the exports of less-developed countries have increased in value in each of the last ten years; there is no previous period of more than five years without a decline.

These rising export earnings, reaching a total of \$ 47 billion in 1968, have been supplemented by a near doubling, since 1956, of the annual net inflow of external capital, public and private, from DAC countries, though an adjustment to real terms to take account of price increases would probably cut this increase by about one-third.

With this record why then are there so many and so vigorous complaints from the leaders of the developing world? Is it right that the leaders of the majority of the developing countries should be alleging crisis, despite the astounding progress made so far? I think it is. They have, which we did not, clear evidence before them of what kinds of lives modern science and technology, properly harnessed by man, has made possible for hundreds of millions of others, and cannot help but believe it could do the same for them if only we would somehow arrange it.

To the contrary, though, they see the dollar gap in incomes steadily widening. This results primarily from their dependence on exports to us, which in turn depend in part on our GNP growth. This relationship makes catching up, especially in view of our much larger per capita GNP to start with, a remote affair.

The falling death rates have brought a spectacular increase in population growth rates to a 2.5 per cent average per year. Thus for a great many countries their GNP growth has meant little more than standing still as far as individual incomes were concerned.

Then the levels from which most of the developing population starts are shockingly low; even a 3 per cent increase in per capita incomes won't buy much more if the starting point is \$ 100 per year. And it averages this or less for countries comprising over 2/3, or 1 billion, of the people in the non-communist developing world.

In these countries, and even among a large percentage of persons living in the more prosperous and successful countries, the improvements in living conditions during the decade have been deplorably small. There has been no noticeable reduction in the huge

## 2. GROWTH RATES OF TOTAL AND PER CAPITA OUTPUT (GNP) 1960-1967 ON AVERAGE PER ANNUM AND PER CAPITA GNP IN 1968 FOR SELECTED DEVELOPING COUNTRIES

Country	1960-1967 annual % increase	GNP Per capita 1960-1967 annual % increase	Per capita 1968 \$
Israel .....	7.6	4.2	1,440
Libya .....	19.2	16.0	1,220
Venezuela .....	4.6	1.0	1,000
Argentina .....	2.8	1.2	900
Spain .....	5.9	5.1	850
Greece .....	7.5	6.9	850
Chile .....	4.9	2.4	770
Panama .....	8.4	5.0	610
Jamaica .....	4.1	2.1	560
Uruguay .....	0.4	-1.0	550
Mexico .....	6.3	2.8	530
Gabon .....	4.2	3.2	520
Yugoslavia .....	6.7	5.5	520
Costa Rica .....	5.9	2.4	450
Peru .....	6.2	3.2	440
Honduras .....	5.2	1.8	370
Nicaragua .....	7.5	4.1	360
Colombia .....	4.4	1.2	350
Turkey .....	5.2	2.7	340
Malaysia .....	5.7	2.5	330
Ghana .....	2.6	—	320
Guatemala .....	5.0	1.9	320
Iraq .....	6.9	3.7	320
Iran .....	7.9	5.1	310
El Salvador .....	6.3	2.7	290
Brazil .....	4.2	1.2	280
Taiwan .....	10.0	7.0	280
Dominican Rep. ....	2.9	-0.7	270
Senegal .....	3.6	1.2	260
Ivory Coast .....	7.5	5.3	260
Jordan .....	8.8	6.1	250
Ecuador .....	4.5	1.1	240
Tunisia .....	3.8	1.5	230
Paraguay .....	4.1	1.0	230
Egypt .....	4.7	2.1	200
Bolivia .....	4.9	3.5	190
Morocco .....	3.2	0.3	180
Philippines .....	4.4	1.0	180
Thailand .....	7.1	4.0	160
Ceylon .....	3.8	1.3	150
Korea (South) .....	7.6	5.0	140
Kenya .....	3.2	0.3	120
Nigeria .....	4.0	1.6	120
Pakistan .....	5.7	3.1	120
Sudan .....	4.1	1.2	100
Indonesia .....	2.2	-0.2	100
Uganda .....	3.7	1.2	90
India .....	4.1	1.5	80
Tanzania .....	3.7	1.2	70
Ethiopia .....	4.7	2.7	70





*Mr. Emile van LENNEP, Secretary General of the OECD, Ambassador Edwin McCammon MARTIN, Chairman of the DAC, Mr. Hellmuth FUHRER, OECD Development Department.*

numbers of unemployed or underemployed or in the prospects of the tens of millions of families eking out a living as subsistence farmers, sizeable groups in even the richest countries.

Inequality of income within each country remains a grave problem, conspicuously worse in most cases than in developed countries. The central crisis for the developing countries thus focusses on the vast majority who are experiencing little perceptible improvement in their daily lives.

A better distribution of incomes within countries is a domestic issue, though always easier if accompanied by rapid overall growth. But the great differences in conditions and rate of progress among countries are a proper concern for the international community. National actions by both donors and recipients and, even more, concerted actions within the framework of the Strategy for the Second Development Decade should particularly address both of these inequalities.

## ***Suggestions for the 1970s***

The task ahead is an intensive search for ways to mobilise our human and material resources to do a still better job. Those at the disposition of developed countries are very great indeed.

Only governments can decide together what should be done, in what organisational framework, and under what set of priorities. Only a convinced public opinion can insure that necessary actions will be taken, whether in developed or developing countries or by international institutions. However, I should like to

make several points on a personal basis. These in no sense add up to a comprehensive strategy proposal, but are only fragments for consideration by those who must have views on the decisions to be taken.

- Developing countries' leaders are no doubt aware that there would seem to be a number of countries in which the dominant elements of the population are working, saving, action and innovation oriented, looking forward rather than backward, confident of their ability to change their lives. There seem also to be some countries in which the atmosphere is generally one which is oriented towards leisure, spending, talk and the status quo, looking more to the past.

Rapid, sound development requires a shift of dominant attitudes from the latter to the former. Without some leadership groups who have made the change, modernisation will proceed at a walk, no matter how rich the natural resources or how generous the external help may be. How to expedite this change in viewpoint is a secret for which we should all be looking, of far more practical significance than constructing a new, more sophisticated growth model.

Part of the answer must surely lie in a general sense of deep participation in the national life, its struggles and ambitions. In some successful cases, this seems to have had its origins in external threats by powerful neighbours. In others the political, social and economic structures have fostered this widespread loyalty to national development. Structural change may entail high economic costs but if it can change lethargy into enthusiasm, it may be worth considerable costs and risks.

- Such reforms as generally enforced progressive income, property and estate taxes and redistributions



of agricultural land increase the sense of participation in the benefits of development by reducing present gross inequities in income. They are undoubtedly needed in many countries. But it can be argued — not, of course, as a substitute for these measures — that an even more effective attack on feelings of isolation and on maldistribution of incomes can be achieved by giving more people productive, full-time employment. This is an effort with a rare combination of social, economic and political dividends. The unemployed, educated or uneducated, are everywhere political dynamite as well as representing economic waste on a grand scale and being the source of many social evils. This has been accepted since World War II by most developed countries by making “full employment” a central object of national policy. It could well serve as a central theme for the development effort of the '70s, justifying major investments of human and material resources regardless of whether the GNP return will come sooner or later.

To be a productive worker requires good health. Especially vital is adequate pre-school nutrition, especially of proteins. Neither present income levels nor eating habits will achieve this. Major public programmes will be required, an investment that can only pay off in economic terms in the '80s and '90s.

But there is increasing evidence that even in the short run improved child nutrition can lead to major reductions in expenditures for medical care and it can greatly improve the efficiency of educational expenditures by reducing present excessive drop-out and repeater rates. The food aid currently given by donor countries, especially for school feeding programmes, is making an important contribution to better nutrition. More attention is required by the authorities of developing countries to the needs of pre-school children. Though they can only make a partial contribution to the total problem, donors should be able to find further uses for their surplus foods in such new or extended recipient country nutritional programmes.

Efficiency in the education of potential workers must also be greatly improved by relating curriculum more closely to the needs of the developing society and by utilising modern communication techniques more boldly.

But, of course, healthy, trained workers need jobs. At least some of the many aspects of this difficult problem can perhaps be tackled in the '70s.

For example, far too often all parties concerned design production facilities and techniques on the principle prevailing in the economically dominant industrial world that labour is expensive and capital cheap, whereas in the developing world the reverse is nearly always true.

It is certainly not beyond the technical competence of our engineers and production experts in industry and agriculture and construction to find more labour-intensive ways of producing quality products at reasonable costs, given the cheapness of labour and the high cost of capital.



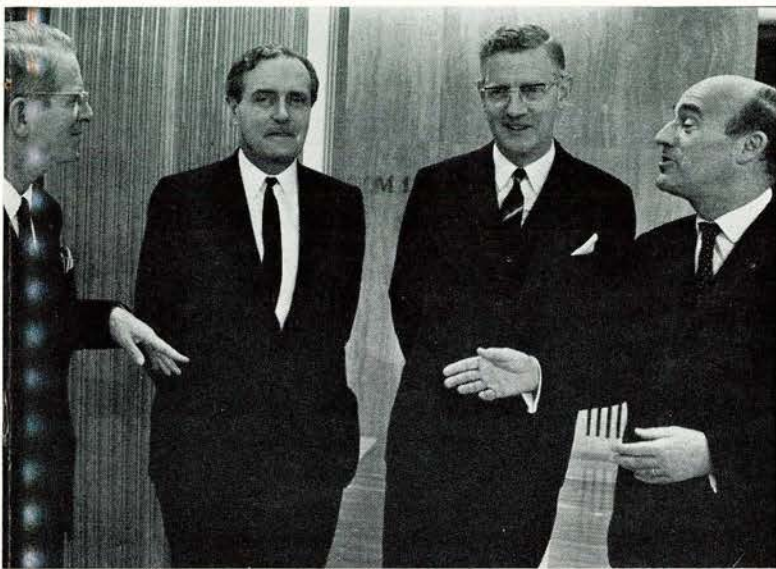
(Left to right) : 1. Dr. Erhard EPPLER, German Federal Minister for Economic Bonn, Ambassador von HARDENBERG, Head of the Permanent German Federal nese Delegation to the OECD, Mr. T. UEDA, Director General, Economic Co-op Ministry of Finance, Japan. 3. Mr. Maurice STRONG, President, Canadian Inter Canadian Permanent Delegation to the OECD. 4. Dr. J. KAUFMANN, Amba SCHEYVEN, Minister for Development Co-operation, Belgian, Mr. B.J. UDINK, the Permanent Belgian

Increased employment through larger exports is also fundamental. Greater acceptance by industrialised countries of competitive goods is a first step. But success will also require a whole series of export-oriented policies on the part of developing countries. How important these can be is illustrated by the success a number of countries like South Korea, Taiwan, Israel, Mexico, Hong Kong, have achieved in expanding their exports of both agricultural and industrial products.

But while these measures can close the employment gap somewhat in the '70s, all the evidence is that as the unprecedented birth rates of the '60s swell the labour force of the late '70s and '80s, they may prove only able to hold the line, even if that. There is no prospect, even dimly on the horizon, of keeping unemployment at tolerable levels, let alone reducing it to what should be a normal rate, without a major slow-up in birth rates.

Too large families reduce the possibilities of indi-





*Co-operation, Dr. SCHIETTINGER, Ministerial Director, Ministry of Economics, Delegation to OECD. 2. Ambassador T. KATO, Head of the Permanent Japanese Delegation to OECD. 3. Mr. S. SHIMOJO, Counsellor, Ministry of Foreign Affairs, Japan, Mr. S. SHIMOJO, Counsellor, national Development Agency, Ambassador James R. McKINNEY, Head of the Delegation to the OECD, M. Raymond Netherlands Minister for Development, Ambassador Roger OCKRENT, Head of Delegation to OECD.*

vidual savings. Too many people for whom the government must provide education and housing and public services reduces the public savings available for productive infrastructure. Too many children in relation to workers reduces the total income per capita possible. Too many children prevents making all literate and adds to the difficulty of giving any but a very few a high quality education.

Conscious international efforts at family planning are unprecedented in human history but no more so than what has happened to population growth rates in many countries in the past 20 years.

There is a simple but fundamental choice between an exploding quantity of people and an improving quality of life. We cannot now, any of us, have both.

- It is clear that the progress of the developing countries in dealing with these grave issues, and others which some of them face, will be much slower, may even fail, if they cannot count on more assistance from developed

countries, more imaginative and wiser in substance and procedure than achieved to date. Otherwise we run the risk that a slow-up in the pace of modernisation will turn into a full stop or even retrogression. It is a process in which a degree of dynamism and hope must be maintained to avoid a feeling of such discouragement that political will and cohesion is lost. If this moment is lost, it may take a long time to achieve an effective regroupment of constructive forces behind the goals of sound development by rational means. Donors have therefore a great interest in re-examining their efforts to see how and at what pace they can improve their performance to meet the urgent needs which exist.

## ***The Second United Nations Development Decade***

The most important event for the progress of development over the next few years may be the action, expected in the fall of 1970, by the General Assembly on a Strategy for the Second Development Decade. "May be" is all one can say now because, despite the discussions of it which have been going on for a year or more in several United Nations forums, it is not yet by any means clear what will emerge. Neither developed nor developing countries have yet faced clearly at their highest political levels the full implications for the international political scene in the '70s of the choices before them. Each country — bloc solidarity is, fortunately, not likely to prevail — must choose its line of negotiation.

One choice for the developed countries would be to decide that a joint programme to promote development, backed strongly by the developing countries, would be worth sacrifices in the short term, and to propose measures which would call for greater, mutually-supporting efforts by all countries reflecting pragmatically both the real limits of their capabilities and the urgent needs of recipients.

Such a new approach would derive its significance not just from new steps agreed to, nor even in new dates accepted in principle for achieving old targets, but also from the expression of a clear intention to continue throughout the decade to seek to evolve new programmes and make new efforts as may be required by continual changes in objective conditions or which may become possible as the informed public, in the end the controlling factor, gains new understanding of the mutuality of long term interests which exists among the countries of the world.

An invaluable rationale for this choice, together with a provocative list of constructive suggestions for the content of such a programme, is contained in the recently published Report of the Pearson Commission, compulsory reading for all those seriously interested in the welfare of the peoples of the world, especially



the two-thirds struggling so desperately to move ahead. The report shows that aid has contributed effectively to development and that there is a clear need for substantially increased flows for financing requirements of demonstrable priority and utility.

Confrontations will not promote development. For all parties they would represent a form of warfare, albeit non-violent, rather than diplomacy, argument and denunciation, not negotiation and compromise. Let us hope that with the skilled help of United Nations authorities, with a long experience in these matters, and with further major efforts in all countries to appre-

ciate the true dimensions of the problems of development for this and future generations, a strategy can be agreed by the end of 1970 which will be not only a real step forward in this co-operative effort, but, even more important, will provide a basis for mutual understanding of what is involved that will facilitate steady improvements of policies and actions throughout the 1970s. Major social progress is seldom the results of "great leaps" forward but rather of a constant widening of understanding and of steady improvements in arrangements for achieving, more and more efficiently, more and more ambitious goals.

## ***New initiatives in aid***

### **AUSTRALIA**

- Funds have been provided in the 1969-1970 budget for an Australian-Asian universities aid and co-operation scheme which is being instituted to enable co-operation between Australian universities and universities in South East Asia in research and training associated with food production.
- For bilateral aid projects, forward commitments have been authorised up to the following limits. One year ahead — 75 per cent of current year's appropriation; two years ahead — 50 per cent; three years ahead — 25 per cent; each subsequent year — 10 per cent.

### **AUSTRIA**

- The Council of Ministers decided in September, 1969, to lift the existing limitations on financial terms for official export credits (5.5 per cent interest rate and a maximum maturity period of 12 years). This decision will enable Austria to provide in future more flexible terms for official export credits including terms with a higher degree of concessionality than in the past.

### **CANADA**

- A major aid policy review at the highest level has been under way in 1968-1969.
- Canadian procurement restrictions were relaxed in 1968, the minimum Canadian content of goods supplied being reduced from 80 per cent to 66 per cent.
- Policies for the stimulation of Canadian private investment in deve-

loping countries have been adopted, including in 1969 an investment insurance scheme.

### **DENMARK**

- The Danish Five-Year-Plan, designed to raise Denmark's flow of financial resources to one per cent of national income by 1972-1973, came into force during fiscal year 1968-1969. A first revision of the Plan took place early in 1969 when the target volumes were raised by 8.5 per cent to take account of price increases.
- A Committee of Experts was appointed by the Danish government in April, 1969 with a view to proposing amendments to the 1962 Act on Technical Co-operation with Developing Countries.
- An institute for Development Research was established in April 1969 headed since October 1st by Prof. Thorkil Kristensen, former Secretary General of OECD. Its function will be to undertake, promote and publish studies on important problems facing developing countries in economic, social and other spheres. The Institute will also conduct training and information courses for technical cooperation experts.

### **GERMANY**

- In an important step to implement the new Supplementary DAC Terms Recommendations, the Cabinet decided in February, 1969 to improve the standard terms of development loans to a new target figure of 2.5 per cent interest rate and 30 years' maturity, including 8 years' grace.
- A Federal Office for Technical Co-

operation merging a number of existing services was set up under the authority of the Ministry for Economic Co-operation in July, 1969.

- A law on development assistance volunteers came into force in June, 1969. It provides for an improvement in the social benefits for volunteers and exempts them from military service.
- In an effort to limit aid tying restrictions, the German Government has decided to permit aid-financed procurement (otherwise limited to German suppliers) in the less-developed countries.

### **ITALY**

- The Italian Foreign Ministry established on October 24th, 1969 an interministerial committee headed by the Under-Secretary of State, Mr. Pedini, and including representatives from the Budget, Commerce and Treasury Departments and of the major official financial institutions, in order to prepare a plan for the implementation of the development aid targets considered in the Italian 10-year economic Plan (Progetto '80).

### **THE NETHERLANDS**

- The Netherlands Four-Year Aid Plan, designed to raise budgetary appropriations to one per cent of national income during the period 1968 to 1971, came into force during 1968. A first revision of the Plan took place in 1969, when the 1971 plan target was raised to \$ 255 million, to take account of a higher than expected growth rate of national income in current prices.



- In the field of private investment, three important initiatives were undertaken during 1969 :

- approval by Parliament of a guarantee scheme covering non-commercial risks attached to private direct investment in less-developed countries ;
- setting-up of the Netherlands' Finance Co-operation for Developing Countries designed to stimulate private investment in less-developed countries in the form of subsidiaries, joint ventures, etc. ;
- establishment of a Development Bank for Indonesia for the purpose of providing loans on a commercial basis to private industry in Indonesia.

## SWEDEN

- All outstanding loan agreements — with the exception of loans on IDA terms — have been re-negotiated and now carry the standard terms introduced in early 1968 (25-year maturities, 10-year grace periods, and 2 per cent interest charges).

## SWITZERLAND

- Parliament approved two new commitment authorisations ("crédits de programme") for technical assistance and humanitarian aid for the period 1970 to 1972, exceeding the previous ones by 48 per cent and 18 per cent respectively.

## UNITED KINGDOM

- Legislation in 1969 extended the possible areas of operation of the Commonwealth Development Corporation (CDC) to all developing countries; the CDC's annual allocations from the aid budget consist in increasing proportions of concessional finance.
- On November 26th, 1969, the British Government made public its forecast for public expenditures including aid until 1973/74. Economic aid is to increase from £ 219 million (\$ 526 million) in 1969/70 to £ 300 million (\$ 720 million) in 1973/74.

## UNITED STATES

- Procurement restrictions were eased in the summer of 1969 by the abo-

lition of "additionality" requirements. This provision had been introduced in 1967 in order to ensure that aid-financed exports be "additional" to regular commercial exports.

- For all AID loans to Latin American countries signed after November 1, 1969, purchases of goods and services are authorised not only in the United States but in all independent countries of the Western Hemisphere, south of the United States, except Cuba. (The present "90-10" origin or componentry rule — whereby at least 90 per cent of the value of eligible finished items must have been indigenously produced in the eligible geographic source countries — will be maintained until the US develops experience with the new untying arrangements).
- The President appointed a Task Force on Foreign Economic Assistance in September, 1969, to review United States economic assistance programmes and to recommend comprehensive proposals by March, 1970. The Task Force is composed of representatives of banking, private industry, the academic community, and other social groups.

## EUROPEAN ECONOMIC COMMUNITY

- The new Convention of Association between the European Economic Community and the 18 Associated African and Malagasy States was signed on 28th June, 1969. Financial and technical assistance extended by the EEC from the date of ratification until 31st January, 1975 to these States and to Associated Countries and Territories will amount to \$ 1 billion. Of this total \$ 810 million will consist of grants and \$ 90 million in concessional loans from the European Development Fund, while \$ 100 million will be lent by the European Investment Bank.

## INTERNATIONAL ACTIONS

- In February, 1969, the Development Assistance Committee of OECD adopted a new supplementary recommendation which should lead to an easing of the *financial terms* of its Members' official aid to developing countries (cf. The OECD Observer, No. 40, June, 1969).

- On July 23, 1969, the second general replenishment of the International Development Association's (IDA) resources came into force. The second replenishment provides for expanding IDA's resources to \$ 1,200 million equivalent, payable in three annual instalments of \$ 400 million each as against \$ 250 million during the previous three years.
- The International Monetary Fund approved in June, 1969, an arrangement to assist members in financing contributions to international buffer stocks. Drawings for the purpose of financing buffer stocks in connection with international commodity arrangements may be made up to amounts equivalent to 50 per cent of the member's quota, provided that drawings under the Funds' compensatory financing facility, which has existed for some time, and the buffer stock facility taken together do not exceed 75 per cent of the quota. The IBRD will also make loans for this purpose.
- The Report of the Commission on International Development, which was commissioned by the President of the World Bank in August, 1968 and prepared by an eight-man team under the chairmanship of Mr. Lester Pearson, was published on October 2, 1969. Besides recommending a larger volume of aid, the Report makes a number of recommendations on trade policy, private foreign investment, terms and conditions of aid, population research and on the international framework of development.
- A Private Investment Company for Asia (PICA) was founded in February, 1969 by a group of prominent financial and industrial concerns in the United States, Japan, Europe, Canada and Australia. The authorised capital of the company is \$ 40 million, of which \$ 16.8 million was paid at inception. Shareholding as well as staff representation are divided into three equal groups of members from the United States, Japan, Europe, Canada and Australia. PICA has been organised as a multi-national corporation to make and facilitate private capital investments in the developing nations of the Far East. Equity capital and medium and long-term debt will be provided both for the establishment of new enterprises and the expansion and diversification of existing companies.



# ON INDUSTRIAL POLICY

by  
Karl SCHMIDT-LÜDERS  
*Director for Industry and Energy, OECD*

Is it possible to forge a "policy for industry" out of the complex of relations between government and industrial firms and branches? This question was raised in an earlier article in the OECD Observer (1) "Towards an Industrial Policy?" written by Reiner Thedieck, at that time OECD's Director for Industry and Energy. It can now be answered in the affirmative, says Karl Schmidt-Lüders, his successor at OECD, who spells out in the following article the main elements of such a policy.

**T**HERE is very little doubt that modern society as represented by the Member countries of OECD is a predominantly industrial society, despite the wide range in the degree of industrialisation from one nation to another. In quantitative terms industry as a whole accounts for some 40 per cent of total gross domestic product for the OECD area, while manufacturing industry alone represents 30 per cent. Moreover, 77 per cent of total goods exported by all the Member countries combined (in 1967) were manufactured products.

While the above is illustrative of the importance of industry in the economies of the OECD countries, it may also be useful to look at a somewhat different question; the role that the OECD area itself plays in the **industry of the world**. There are five industrialised areas in the world which are capable of producing the whole range of modern capital goods including defence equipment; these are the United States, the Soviet Union, Japan, the United Kingdom, and the European area that extends a few hundred miles east and west of the line running between Rotterdam and Taranto. Of these five regions, four lie within the OECD area.

If one turns to the energy sector, it is clear that we are dealing with an area of crucial importance to the entire economy. Energy alone deserves to be called a "key industry": this sector produces only 4 per cent of the gross national product of the combined OECD countries but the remaining 96 per cent are entirely dependent upon the production of these 4 per cent.

Because the activities of the industry and energy sectors are conducted by enterprises—whether privately or publicly owned—which are obliged in their own interest to account for the results obtained, the performance of industry as a whole is transparently open to continual quantitative assessment.

On the whole, the balance sheet and the profit-and-loss statement are reliable yardsticks of economic success. It is a considerable advantage that success and failure can be early recognised and easily measured; this is of particular importance in a world of quickly changing and often contested standards.

Yet, less emphasis should be placed on statistical data because we are dealing with what is **essentially a qualitative matter**: while it is necessary to develop and use unambiguous yardsticks to measure the efficiency of an industrial enterprise or a branch of

industry or to illustrate industrial performance, the complex world of industry and energy can be fully understood only as a constant endeavour to achieve or to maintain a state of equilibrium between different forces, constantly subject to change, and between conflicting interests and opposing trends.

Thus, modern competitive industry is characterised by an absence of uniform or unifiable standards. This very absence is the natural prerequisite of the whole of modern industrial society which, where it is most progressive, is also most pointedly competition minded and market oriented.

The life of modern industrial societies may, indeed, be regarded as a continual struggle towards a balance that can be achieved for a fleeting moment, but never definitively. An idea of the nature of the precarious balance that is being sought may be had from the following three major economic objectives of our industrial societies:

- to maximise the "social product" by stimulating and improving productivity;
- to do this on a basis of maximum participation by the individual;
- to achieve the above aims in a way which approximates as closely as possible to what the respective societies believe to be socially just.

## The "Open" Character of Industrial Society

There is an overwhelming multiplicity of chances and options permitting an equally wide choice of solutions and creating a constant "embarras de richesse". No strictly industrial problem is beyond solution, but there is never one single solution; most are multifaceted and are necessarily becoming multinational.

Classical competition was between different companies of one given branch. Today this pattern is enriched by competition between substitutable materials and processes so that old lines of demarcation between industrial branches are sometimes completely abandoned. In this respect as well, industrial society is becoming an open society, open to new competitors from all sides.

It is not in spite of, but precisely because of, this complex pattern of competition and its built-in com-

(1) OECD OBSERVER No. 5, August 1963.



compensating factors that **industry is a kind of stabiliser of the economy** and not an area of constant crises.

It is, however, inevitable (and often a sign of the healthy efficiency of competition) that industrial enterprises and branches will build up over-capacity. Concerned governments tend to rely on the regulatory interplay between supply and demand wherever and as long as competition can make itself felt. It is in those cases where, for any of a number of reasons, competition is partially or totally excluded that great imbalances between supply and demand call for governmental consideration and action. It is out of these emergency situations that, historically, many "industrial policies" have sprung up.

The realm of industry provides the best possibilities for perceiving the productivity of the economy, in the broadest sense of the term. **Productivity** is regarded, in this context, as **efficiency in converting resources** into goods and services as needed and wanted—the resources consisting of labour, capital and knowledge, all of which are combined by organisation and management so as to improve the quality of each of the elements involved.

## The Nature of "Industrial Policies"

In the interest of their economic power and political stability, governments will always strive to improve the performance and competitiveness of their countries' industry and the security of energy supplies, energy remaining a basic requirement for all industrial activity.

All policy considerations and measures (whether on the national or international level) leading to the attainment of this goal comprise what governments call their "industrial policies".

The difficulty of expressing either the essence of these industrial policies or their detailed composition in a coherent, consistent and logical way, or of establishing guidelines of a more permanent nature, is a natural and inevitable one, given the competitive character of industry which reflects the pluralistic structure of modern society.

Countries with centrally planned economies have formulated overall industrial policies. Even the centrally planned economic systems are becoming more and more pluralistic, and the industrial policies of the countries involved are showing signs of deviation from their original theoretical point of departure.

Thus, "industrial policies" within our modern economies cannot and should not be pressed into a rigid framework of guidelines. Our market-oriented economy needs a free and competitive market of ideas with respect to industrial policies.

Nevertheless, one may suggest a few criteria as the common denominator which all industrial policies have to take into account:

- industrial competitiveness is decided ultimately not in national but in international markets;
- modern governments and modern industries have become partners depending on each other. This relationship is developed furthest in the field of energy, where enterprises producing and distributing energy are often publicly owned and commonly and appropriately referred to as "public utilities";
- the natural conflicts of view between government

and industry can be solved only through mutual understanding and agreement, not by one-sided governmental decrees or through evasive action by industry;

- as industry and energy policies are of a sectoral nature, they cannot be regarded as belonging to the same economic level as, for instance, fiscal policies or monetary policies. The latter are normative policies valid for all sectors of the economy;

- industry and energy policies do not set overall norms for the economy, but they reflect, and also measure, the effects of such norms and guidelines, and they translate them into the language of industry and energy. These policies thereby serve as mirrors reflecting general economic trends in a realm where efficiency can be evaluated and measured in satisfactory quantitative terms;

- it is the important feed-back process operating between industry and energy markets, on the one hand, and overall economic policies, on the other which enables governments to possess early analyses of overall economic performance, and which makes possible a timely and appropriate reaction in the form of "partial" policies, among which we find industry and energy policies;

- it is also through a feed-back process that the needs and the wishes of the individual—represented by the consumer with his largely non-rational and unpredictable reactions—are sensed, registered and translated into trends.

The specific objective of energy and industry policies is to ensure, in the light of all the foregoing, that the economy is provided with the necessary energy, on the one hand, and with industrial goods and services, on the other, at optimum costs and in a manner compatible with prevailing social and cultural requirements. The common denominator of policies in the industry-energy sphere is the notion of efficiency and productivity which in no other sector of the economy can be expressed in such (relatively) clear terms ("return on investment") and measured by (again, relatively) unambiguous yardsticks.

In the case of energy, we must add three fundamental considerations:

- the importance of the question of security of energy supplies, especially in the case of oil;
- the fact that the energy sector is a system of inter-related branches represented by the various interchangeable sources of energy;
- the importance of the government-owned portion of the energy sector and of government-controlled activities in this field.

Every industrial policy will thus reflect the degree of industrialisation of a given country or group of countries and is just as pluralistic as the world which surrounds us and the society in which we live and which we form.

It is, therefore, much more appropriate to consider industrial policy as a collective noun, as a "plurale tantum" so to speak. We have to avoid the ambition to explain everything as coming from a single source. This means we have to forget about the mirage of "the best industrial policy", but must work for a set—hopefully an international network—of different and differing national industrial **policies** which through their adaptability seem to be capable of guaranteeing maximum stability in our world of growing economies.



# MARKET POWER

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*A problem of growing concern to OECD Member countries is how to demonstrated by the adoption in recent years monopolies, mergers and market-dominating enterprises in several Member Practices about to be published analyses and comments upon the munities and the European Free Trade Association. It does not, however, and economic concentration in Member countries, nor of market domin*

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**T**he control of monopoly power is one of the oldest problems of competition policy. Long before the enactment of modern restrictive business practices legislation which has established the contemporary legal basis for dealing with the monopoly problem within the larger context of general competition policy, legislators and courts, especially in England and later in the United States, had already attempted to control monopoly power. While the Common Law Countries (Canada, the United Kingdom and the United States) still use the concepts of *monopoly* or *monopolisation* which have been incorporated into current restrictive business practices law, many of the other Member States which have adopted such laws have introduced the concept of *market dominating enterprises* or *dominant position* or similar concepts (*substantial influence on price, production, distribution, or transport conditions, economic power*).

It is difficult to say whether the growing concern of many Member countries with market power and market domination is due to an increase in the number of powerful or dominant enterprises or in economic concentration, or is merely the result of a better recognition of the problems created by the existence of such enterprises. The reasons which may inspire enterprises to expand their size (in terms of turnover, assets, employees) are manifold. In some industries, to make production technically possible, a certain minimum size of plant is required. The same applies to other business activities such as the use of modern research equipment (e.g. computers)

However, more important than these are the economic advantages of expanding the size of plants to the optimum where costs per unit are at the lowest

possible level. The optimum size of a plant can in many cases only be attained by large-scale production. In addition to these single-plant economies, cost savings or higher efficiency may be achieved by uniting several plants within a single enterprise (multi-plant economies), e.g. through centralised administration, research and other activities.

The problem of the size and efficiency of enterprises has been frequently studied in recent years, especially in the United States, and — in connection with the expansion of international trade and competition — also in Europe. The considerations in Europe centre on the question of how the size of enterprises can be adapted to the dimensions of the Common Market or the European Free Trade Area and to withstanding competition from their, in many cases, larger American competitors. A number of studies recently undertaken in the United States turn on the question of whether, on the basis of actual business results, large enterprises are, in fact, more efficient. These studies have questioned the theory of Professor Schumpeter that large firms are generally more efficient, especially with respect to technological progress, research and innovation. There is no doubt that the advantages of large size for the enterprise itself are not limited to possibly higher efficiency in production, research, innovation, etc. as compared with smaller enterprises but may also lie in better financial resources and stronger market power. It is with regard to this last point that the problem of public control of monopoly and of market power in the interest of maintaining competition arises.

Several approaches to this problem in restrictive business legislation are possible and are in fact found in the law of Member States. Depending upon the



# R AND THE LAW

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*control the various forms of market power. This concern has been of new or supplementary legislation to control countries. A report of the Committee of Experts on Restrictive Business legislation of OECD Member countries, the European Commission attempt to give an account of the causes and actual extent of market power does it pronounce generally upon the economic impact affecting enterprises.*

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evaluation of the effects of economic power on competition, this approach may either be a preventive or a reformative one or a combination of both.

Under the first approach the formation of *unreasonable* or *undue* market power by mergers or otherwise is restricted and such power already in existence is dissolved with a view to preventing, *a priori*, the emergence of the expected adverse consequences of market power. One reason for this *structural* approach may be the opinion that the adverse effects of market power cannot be effectively controlled as long as the position of power itself continues to exist.

Under the second approach, the formation and existence of market power as such is left unaffected, but business practices of powerful enterprises insofar as they have detrimental effects are subject to government control. The main consideration behind this *conduct* approach seems to be that interference with structural changes could prevent the achievement of improved efficiency resulting from such changes, a consideration which may especially apply to small countries, or that would be unnecessary because the possibly detrimental effects of market power can be sufficiently held in check by a system of market behaviour control.

Finally, the *combined* approach is adopted where

neither of the two foregoing approaches is in itself considered to be a sufficient safeguard for the maintenance of effective competition. The underlying considerations for this approach may be that, on the one hand, structural measures may not always be technically feasible or economically reasonable, especially where normal business growth of enterprises is involved, while, on the other hand, conduct control cannot always deal effectively with the adverse effects of market power, especially where powerful positions formed by mergers would exclude competition entirely.

The OECD report examines these three approaches insofar as they are incorporated into the restrictive business practices laws of OECD Member countries, the EEC and the ECSC. The analysis covers the provisions in these laws dealing with mergers, monopolisation and with specific restrictive practices of powerful enterprises. The report analyses in particular the various concepts used in the laws to determine the existence of market power; it discusses the criteria for taking action against the formation of market power by merger and monopolisation and against specific acts of powerful enterprises; finally, it describes the measures which may be, and have in fact been taken under the various laws when detrimental effects have been found to exist.

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## Methods for Determining Market Power under the Laws

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In order to establish whether a particular enterprise or group of enterprises enjoys market power, two stages are necessary. The *relevant*

*market* must be identified and then an assessment made, according to the particular provisions of the law to be applied, whether the enterprise is

exposed to *effective competition* on that market. The relevant market relates both to the characteristics of the product concerned and to the



geographical area where it is sold. The problem of defining the *product market* involves essentially the determination of whether particular products are interchangeable. Therefore the most frequently employed test to determine the product market is the cross-elasticity of demand.

No general rules for the definition of the product market can, however, be laid down since the appropriate definition of the market that is to be considered as *relevant* depends on the facts in the particular case such as the product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes and specialised sellers. The question whether physically different products or services constitute a single product market resolves itself essentially into one of whether these products are significantly competitive in relation to one another. This has been very clearly expressed in some United States cases which have defined the relevant market as the *area of effective competition*. The close interrelation between the definition of the relevant product market and the competition issue is made more apparent by the fact that the more narrowly the product is defined, the smaller will be the number of suppliers of the particular product (the extreme case would be a particular supplier of a branded article) and the more likely the finding of market power or lack of sufficient competition.

With regard to the definitions of the *geographical market*, again no fixed rules have been developed. Factors such as location of suppliers, transport facilities, freight costs and consumer habits must be taken into account in this context. In practice the geographical market issue has been important only insofar as it has subdivided national or community territory into regional and local markets. The definition of the geographical market also comprises, however, a foreign trade aspect which is becoming more important with the continuing reduction or removal of trade barriers and as a result of further economic integration. It has, however, been demonstrated in the study that there is no necessity for the relevant geographical market to be

defined so as to include a territory beyond the area in which the respective law applies as long as imports are taken into account when deciding whether market power in a given area actually exists.

Once the relevant market has been defined both from a product and geographical point of view, the concept of market domination further requires the determination of whether the enterprise has, or — in the case of an intended merger — would have, a *dominant position* in this market by not being exposed to effective competition. Therefore the application of the majority of laws in Member countries dealing with market power necessitates a detailed examination and appraisal of all aspects of structure, conduct and performance in the particular market in question.

Moreover, it is necessary to undertake an assessment of the particular market situation on the basis of such criteria as lack of substantial or effective competition or substantial or dominant influence on such economic factors as prices, production, etc. This creates considerable practical difficulties for the enforcement authorities, particularly when dealing with oligopolies. The evaluation of market domination is less difficult under laws which lay down formal criteria such as a certain market share, according to which an enterprise or a group of enterprises which attains this share is automatically deemed to fall within the ambit of the legislation regardless of the degree of competition still prevailing in the market.

Although the study indicates the possible advantages of a formal method to determine market power — as is applied, for example, in the United Kingdom — such as the greater simplicity in the enforcement of the legal provisions and a speeding up of the administrative or judicial process, it is also stated that a formal criterion, such as a certain market share, is necessarily arbitrary in that it may bring within the law enterprises which have in reality no dominant market power, or may exclude others which, though not reaching the required market share, are in fact market dominating. However, to make the law workable the report points out that a certain degree of formalisation may

become necessary. The recent development in the antimerger law of the United States confirms this necessity. *Merger Guidelines* have recently been issued by the United States Department of Justice; these lay down detailed market share and concentration ratios on the basis of which a given merger will normally be challenged.

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## **Criteria for Taking Action Against the Detrimental Effects of Market Power**

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A finding that market power exists has different legal consequences according to whether *structural* or *conduct* laws are to be applied. While the majority of laws are based exclusively on a conduct approach, there is no law which relies exclusively on a structural approach. Even the United States system, which has by far the most developed structural control features, includes some characteristics of conduct control with regard to market power. A mixed structural/conduct approach, but with much less emphasis on the structural features than in the United States, is found in Canada, Japan, the United Kingdom and the European Coal and Steel Community.

The United States goes much further than any other country in preventing mergers with anti-competitive effects. The relevant United States merger provision — Section 7 of the Clayton Act — prohibiting mergers whose effects *may be substantially to lessen competition or tend to create a monopoly* is concerned with probable danger to competition, and the likelihood of such a danger is taken into account at a relatively early stage of concentration of the market. This confirms the strong emphasis of the entire United States market power law on the maintenance of market structures which do not give the individual firms any significant degree of market power. This distinguishes it basically from the other merger laws which may accept as justification other beneficial effects which the merger has produced or is



expected to produce, and may therefore permit mergers designed to increase substantially the market power of the combined firms provided that competition is expected to remain reasonably workable. Where justifications other than in terms of competition are acceptable, as in the United Kingdom, for instance, this may go so far that in exceptional cases the combined firm is permitted to acquire almost a 100 per cent share in the supply of a particular product. One of the reasons for this policy is the belief that other means, including subsequent control of the merged firms' conduct, may be sufficiently effective to prevent abuses of the acquired market power. This is the underlying philosophy of those laws which do not have any structural control at all.

With regard to merger control, the United States has the greatest experience of any Member country, as is reflected by the large number of cases — the most important of which are dealt with in the study — involving all types of mergers. The most significant recent development in this area was the policy decision by the United States Department of Justice at the beginning of 1969 to extend the enforcement of Section 7 of the Clayton Act to *conglomerate mergers* in particular to cover the so-called *pure* types of conglomerate mergers (i.e. mergers between companies operating in totally unrelated fields).

The other Member countries have not so far developed fixed structural criteria in their laws similar to those laid down in the United States Merger Guidelines of the Department of Justice, and the market share which they have considered as *critical* has in all cases been substantially higher than in the United States. As an example, in highly concentrated markets (where the four largest firms account for 75 per cent or more of total industry supply) shares of as little as 4 per cent held by the acquiring firm and 4 per cent by the acquired firm will be sufficient for a merger to be contested by the Department of Justice.

As to control of monopolisation, the analysis in the study has shown that only three countries have provisions on monopolisation — Canada,

Japan and the United States. In the latter country the monopolisation concept is essentially based on market-structure control which generally involves the dissolution of the monopoly power. The relevant Section 2 of the Sherman Act does not define *monopolise* or *attempt to monopolise* but the Courts have interpreted it as (1) *the possession of monopoly power in the relevant market* and (2) *the wilful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident* (1). Canada and Japan, on the other hand, apply to a great extent a conduct-control approach directed against the practices of the monopolist whether they are applied to achieve a powerful position or whether they take the form of an abuse of the acquired market power.

As regards the legal attitudes classified as a *conduct* approach, the criteria for taking action against individual powerful enterprises are *abuse of a market dominating position, activities contrary to the public interest, interference with the normal operation of the market or unreasonable prices, unfair business conditions, refusal to sell, etc.* Many specific practices have been considered to constitute an infringement under the various laws, although no general rules of prohibited practices committed by powerful enterprises can be formulated. However two practices — refusal to deal and differential treatment — have frequently been held to be an infringement in many countries. It would seem that most countries consider that powerful enterprises have a special obligation not to refuse to deal with and not to discriminate between customers or suppliers. Such a principle is expressly incorporated in the German and Spanish Acts against Restraints of Competition and in Article 86 (c) of the EEC Treaty.

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## Procedure for Enforcing Market Power Laws

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Judicial and/or administrative procedures are applied in Member coun-

tries for enforcing market power laws, which however appear in a great variety of forms. For example, the United States has a mixed administrative and judicial system for the public control of mergers, and a purely judicial system with regard to monopolisation. The United States is also the only country where private actions for damages by aggrieved parties are also admitted in both instances. Canada has an almost exclusively judicial procedure in merger cases as a consequence of the criminal law character of its merger provisions. On the other hand, the United Kingdom has a purely administrative system of investigation by the Monopolies Commission, and orders made by the Board of Trade under the Monopolies and Mergers Act of 1965 are not open to judicial review.

In this connection, mention should be made of the timing of actions against, or investigations of, mergers by the authorities of OECD Member countries and the European Communities. Due to the need for enterprises to have legal security and because of the serious practical difficulties of implementing a subsequent possible dissolution of the merged company, several countries engage in prior authorisation for certain types of mergers. In the United Kingdom newspaper mergers may not be consummated unless the consent of the Board of Trade is formally given following an investigation by the Monopolies Commission. Under the ECSC Treaty certain mergers may not be consummated until the prior authorisation of the High Authority (now the Commission of the European Communities) is obtained. In addition, legal security can also be achieved to some extent by informal clearance procedures which have been employed in the United States and Canada by the respective administrations for firms planning to merge. Although negative clearance given in such cases is neither binding on the administration nor on the courts, it seems that in practice in only very rare cases has action been taken by the administration contrary to the prior opinion given to the parties.

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(1) *United States v. Grinnell Co.* 384 U.S., 563, pages 570-571, 1966. *Trade Cases* § 71,789.



As regards abusive practices of market-dominating enterprises, the more important legislative distinction is between those countries which have legislation prohibiting specified practices generally considered harmful and those which intervene against specific activities of dominant enterprises without issuing a blanket prohibition. In the former case the practices concerned are automatically illegal, and criminal or quasi-criminal sanc-

tions are provided for violations of the prohibitions. In the latter case the practices themselves are lawful until such time as the enforcement authority intervenes and declares them unlawful, the measures taken being mainly orders to enterprises to refrain from engaging in harmful practices. Despite the quite different legal approaches in various Member countries, whether *abuses* of powerful enterprises are directly prohibited by law

or are merely subject to intervention in individual cases, the results achieved in applying the various restrictive business practices laws are often not fundamentally different. One of the reasons is that the laws are in many instances enforced in an informal manner with a view to obtaining voluntary settlement instead of applying compulsory powers by formal decision.

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## New Approaches to Market Power

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The study concludes that neither a predominantly structural approach nor a conduct approach can deal effectively with all aspects of market power. The laws against monopolisation and mergers cannot prevent all forms of market power, especially not market power resulting from internal business growth, and it is hardly feasible to envisage dissolution of powerful enterprises which have grown up before an effective system of merger control was instituted. For this reason provision must be made for controlling abuses of powerful market positions even under a system based primarily on controlling market structures. This need is clearly seen in the case of oligopolies where it is not certain that a breaking-up of the oligopoly would change the pattern of business behaviour of its former members.

On the other hand, a purely conduct approach cannot provide a sufficient guarantee of the maintenance of minimum effective competition and the economic benefits expected to flow from its existence, especially where mergers and monopolisation practices lead to monopolistic market structures from which all competition is eliminated. It would therefore appear that a combination of structural and conduct control features is the most satisfactory solution. However, the weight to be given to one or the other feature must ultimately be left to the individual country's decision, which has to be made in the light of other policy considerations such as the desired scope of restrictive business practices law in general, the role of competition in economic policy-making, present economic structures and the priority to be given to structural changes for the sake of economic rationalisation.

Whatever system of market power control is chosen, some authors have recently questioned the adequacy of the traditional market power concept on which antitrust legislation is widely based. In Professor Edwards' (1) view, the concept of monopoly is inadequate to cover all manifestations of business power, and the concept of oligopoly is inadequate to replace it. He argues that different kinds of power can be derived from four types of market situation :

control of a preponderant share of a single segregable market; position as one of a few competing firms; possession of a large aggregate of resources in comparison with one's competitors; and diversity of activities across many fields of operation. He concludes that modern business structures contain blends of all of these but that the first two — monopoly and oligopoly — are accorded disproportionate importance whereas bigness and diversification have received little attention, although these two phenomena are growing most rapidly, are subject to the least legal restriction, and are the most difficult to evaluate.

Although Professor Edwards' deliberations are based on developments in modern United States industry, it may be assumed that similar developments have taken place in other Member countries. The report therefore recommends that the Committee of Experts on Restrictive Business Practices should undertake further studies, in particular into the economic aspects of the modern forms of business power and how they may be controlled.

The aim of the report was neither to give a critical appraisal of the pros and cons of the various national or community approaches to the control of market power nor to make recommendations for future policy in the form of a model law on market power, or of suggestions of specific measures to be taken by specific countries or of joint action within OECD. By stating and analysing the legal issues of the various approaches to dealing with market power and by recording the practical experience with the application of these laws, the study may nevertheless serve three useful purposes : it may help the national and community legislators to recognise more clearly the various legal issues to be considered when dealing with market power ; it may facilitate the interpretation and practical application of the laws on market power by courts and administrative authorities; and it may prepare the ground for later policy deliberations of OECD in this field by providing the legal background material.

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(1) Professor Corwin D. Edwards, "The Changing Dimensions of Business Power", (appearing in "Das Unternehmen in der Rechtsordnung", Festgabe für Heinrich Kronstein, Karlsruhe (Germany), 1968, pages 237-260).



*Highlights from*  
**OECD**  
**ECONOMIC**  
**OUTLOOK**

*DECEMBER 1969*

**6**

*OECD Economic Outlook No.6, published mid-December, reviews the current situation and prospects for 1970. Its keynote is the need for a period of stabilisation.*

*Since the July issue, there have been important changes in the economic situation. The slowdown of economic growth in the United States has become clear to see. The United Kingdom's balance of payments has strengthened markedly. And the French and the German parity changes will help establish a better pattern of balances of payments on both current and capital account.*

*In the OECD area as a whole, the growth of output in 1969 seems to have slowed down a little to about 5 per cent - reflecting restrictive policies in the United States and also the United Kingdom. In many other countries, expansion has accelerated, creating high demand pressures. Both in the United States and other countries, the pace of price inflation has increased.*

*For 1970, with policies in almost all countries directed to disinflation, a year of below-average growth seems likely. International trade also seems likely to slow down. It seems to have been rising at the unusually fast rate of over 15 per cent. In 1970 the increase might be about 10 per cent - which would, however, be an average rise.*

*The policies responsible for this slowdown will be judged by the extent to which the*



*price rise decelerates - there is normally some time-lag before price movements respond to falling demand pressures - by the speed with which payments imbalances are reduced, by the course of interest rates and, above all, by the ability of national authorities to avoid recession.*

## SUMMARY OF UNDERLYING TRENDS

*Percentage changes, annual rates seasonally adjusted, July forecasts in brackets*

	1958 to 1967 Average	1968	1969		1970	
			1st half	2nd half	1st half	2nd half
<b>Real output</b> (GDP or GNP)						
United States	4.6	5	2½ (3)	1¾ (1½)	½ (2¼)	3¼
Other OECD	5.8	6½	7½ (7)	7 (5¾)	5½ (5)	5½
Total	5.2	5¾	5 (5)	4 (3½)	2¾ (3½)	4¼
<b>Prices</b> (GNP deflator)						
United States	1.8	4	4¾ (4¼)	5 (4½) (a)	3¾ (3¼)	3¾
Germany	2.9	2	2¾ (3)	4 (3½)	5 (3½)	3
Other OECD	3.6	3¾	5 (4½)	5 (4)	4¼ (3¾)	4¼
Total	2.5	3¾	4½ (4)	5 (4)	4 (3½)	3¾
<b>OECD trade</b> (values)						
Imports	9.4	12¾	15¾ (13½)	15½ (9½)	7 (8½)	7¾
Exports	8.8	12¼	15¾ (13½)	16¾ (9½)	8 (8½)	7¾

(a) Includes the federal pay rise in mid-1969.

of the year will see a revival of growth in the United States; and there could — unexpectedly — be an abrupt downward shift in U.S. business sentiment. Moreover, when policy is formulated, full attention needs to be paid to the fact that prices are likely to respond to falling demand pressures only with some time lag: restrictive action additional to that now generally envisaged, while bringing little immediate improvement in price performance, would increase the risk of recession. Trends in several of the major countries are likely to be crucial.

### • United States

In the United States cost and price trends may be on the verge of weakening following the easing of demand pressures. The rather disappointing experience to date mainly reflects cost pressures generated in earlier boom conditions. But widespread doubt as to the success of the stabilisation programme may also have played a part. Demand has so far been resilient, and recent investment surveys show that intentions remain strong. The possibility of a significant absolute fall in demand and output in the next six months or so cannot be excluded; the situation depends heavily on business confidence, as reflected in fixed investment decisions, retention of labour and especially stockbuilding, factors which could change quickly. But demand, notably in housebuilding, should respond quickly, if necessary, to an easing of monetary policies.

By the middle of October, unemployment had not risen above 4 per cent, still inside the acceptable limits. At this stage, it seems more important to guard against premature relaxation of policies — which could sacrifice the chance to improve price performance — than against the danger that reflationary action might be delayed too long. Evidence that price increases are slowing down is still limited. And even if real demand follows the rather smooth path of deceleration and renewed acceleration at present envisaged, the extent to which price trends will improve will, for some time yet, remain uncertain, especially as numerous wage agreements are due to be negotiated in the coming year. In the long run, adequate price performance may depend as much on the development of new attitudes towards the appropriate size of increases in money wages as on demand management alone.

## DEMAND MANAGEMENT

It would be generally agreed that the United States, France and the United Kingdom all need to maintain restrictive policies for the sake of restoring internal and external equilibrium. This implies a diminution of the external demand supporting other countries; and normally these countries could be expected to respond by stimulatory measures. But since most of them also need to damp down their internal demand and cost pressures, some general reduction of growth rates in 1970 seems to be appropriate. At the time of writing, the risk of a cumulative downturn seems less than the risk of continuing inflationary tendencies.

Developments such as are indicated by the forecasts in the table above cannot be characterised as a recession. But how much risk is there of recession developing unexpectedly? One danger might be that countries were failing to allow for the repercussions on them of developments in other countries: in fact, however, countries' forecasts appear reasonably self-consistent. But they are based on the expectation that the middle



## • Other OECD countries

Most other OECD countries are likely to see some fall in the pace of expansion between 1969 and 1970. In practically all countries, policies are now directed to keeping the growth of demand in line with — or below — the expected growth of productive potential, and this may continue for some time to come. This is clearly true of France and the United Kingdom. The situation is less clear, however, in some countries which have, up to now, enjoyed particularly strong current balance positions — especially Germany and Italy.

## • Germany

Conditions in Germany will have an important influence on business attitudes in surrounding countries. During 1969, demand has risen faster than anticipated. The economy was clearly beginning to strain at capacity limits by the summer, though neither the trade balance nor consumers' prices were by then very substantially affected. For the next few months, large outstanding orders and new large wage increases will probably keep demand pressures very high; and as cost increases work through, prices could rise fast by past standards. But there could be a change in sentiment affecting, in particular, business investment. The capital outflows resulting from the revaluation have already provided some tightening of monetary conditions, though the authorities have partially offset the effects by easing banks' reserve requirements. The probable fall in the real external surplus, and any further tightening of monetary conditions, should lead to easier demand pressures in the course of 1970 — though it is difficult to predict how rapidly conditions might change.

## • Italy

Italy is the main country in the OECD area where a noticeable margin of slack persists (though in some industries, particularly construction, demand pressures have been high). On the assumption that more normal conditions are quickly re-established, domestic demand seems likely to grow strongly, with a rise of perhaps close to 15 per cent in the wage bill between 1969 and 1970. Apart from making up shipments delayed by strikes, exports are likely to rise less fast than they did in most of 1969 because of the general deceleration of world trade. The risks of excessive real demand pressures do not seem very great. And though there could be an immediate problem in absorbing rather large and sudden wage increases, Italy's present cost position relative to those of other countries seems

## GROWTH OF REAL GDP OF MEMBER COUNTRIES

1958-1968, 1969 estimates and 1970 forecasts

	Weights in total (a)	1958-67	Annual percentage changes		
		Average	1968	1969	1970
Total OECD	100.0	5.2	5.7	5	3 $\frac{1}{2}$
Major 7 Countries	89.0	5.2	5.8	4 $\frac{3}{4}$	3 $\frac{1}{4}$
United States (GNP)	51.2	4.6	4.9	2 $\frac{3}{4}$	1 $\frac{1}{2}$
Canada (GNP)	3.7	4.7	4.7	5	4
Japan (GNP)	8.4	10.7	14.2	12 $\frac{1}{2}$	11 $\frac{1}{4}$
France	7.5	5.1	4.2	8 $\frac{1}{4}$	4
Germany (GNP)	7.8	4.8	7.0	7 $\frac{3}{4}$	4 $\frac{1}{2}$
Italy	4.4	5.6	5.4	6	7 $\frac{3}{4}$
United Kingdom	6.0	3.3	3.6	2	3
Other OECD North (b)	8.1	4.7	4.1	5 $\frac{1}{4}$	4
Austria	0.7	4.3	4.1	5 $\frac{1}{2}$	4
Belgium	1.2	4.4	4.0	6	4 $\frac{3}{4}$
Denmark	0.8	5.0	3.6	7	3 $\frac{3}{4}$
Finland	0.5	5.3	2.0	8	6
Ireland	0.2	3.7	4.9	4	4 $\frac{1}{2}$
Netherlands	1.5	5.0	6.2	5	3 $\frac{1}{2}$
Norway	0.6	4.8	3.8	4 $\frac{1}{2}$	4
Sweden	1.6	4.5	3.3	4 $\frac{1}{2}$	3 $\frac{3}{4}$
Switzerland	1.0	4.9	4.0	4 $\frac{1}{2}$	4 $\frac{3}{4}$
Other OECD South (c)	2.9	5.8	5.1	7 $\frac{1}{2}$	6 $\frac{1}{2}$
OECD Europe	36.7	4.8	5.0	6	4 $\frac{1}{2}$

(a) GDP for 1968 in dollars at current rates of exchange.

(b) Including Luxembourg and Iceland.

(c) Spain, Portugal, Greece and Turkey.

sufficiently favourable to enable the wage increases to be borne without serious loss of competitiveness.

## • Japan

In Japan, the recent tightening of monetary policies was a reaction to symptoms of faster-rising costs and prices rather than to the persistence of high interest rates overseas. The spring wage-round yielded the biggest wage increases for about twenty years and wholesale prices rose faster in the summer, partly because of higher import prices. The pace of expansion seems likely to slow down somewhat, with less impulse from exports, leading to some easing of demand pressures. This might, in turn, permit an easing of policies, with the aim of maintaining about a normal rate of growth of output.

## • Smaller countries

In most smaller OECD countries, demand pressures are currently quite high. Policies, especially monetary



policies, have become more restrictive both for domestic reasons and, defensively, to keep pace with the general rise of interest rates. Faced with a prospect of more widespread disinflationary policies in major countries, there may be a tendency for smaller countries to play for safety in policy formation. But neither balance of payments constraints nor internal cost pressures seem, in general, to call for substantially new policies. Countries particularly dependent on trade with Germany seem, however, likely to experience some net addition to demand or cost pressures and this may call for offsetting action. The unilateral tariff reductions and other steps effected by Austria constitute a useful example of how to combat additional price pressures.

## PRICE INFLATION

The price rise in 1968 was already well above that for the previous decade. In 1969 there has been a further acceleration in which all major countries have shared. Some slowing down of the rate seems in prospect for most countries. But the general price rise in 1970 is likely to remain well above average : among the major countries, only the United Kingdom and possibly Japan are likely to see increases close to past average rates. Elsewhere the rate of increase may remain rather large by past standards. Both Germany and Italy may see the general price level rising faster as a result of larger wage settlements.

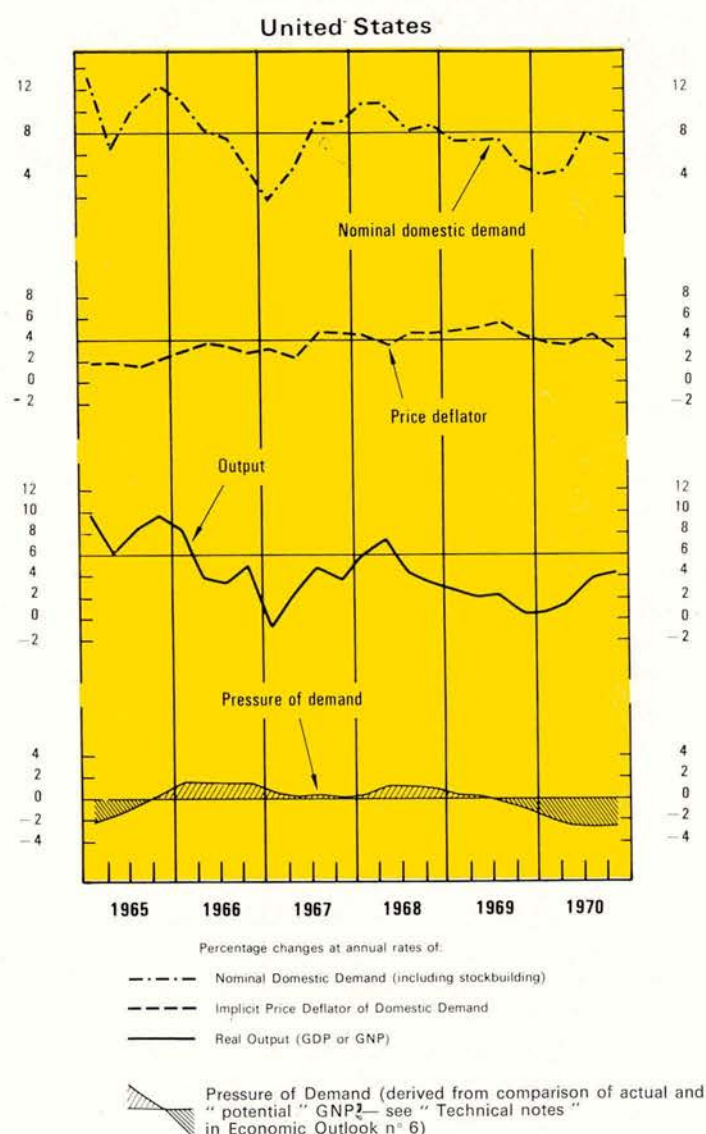
In the United States, the behaviour of prices is largely explained by cost increases following from recent excess demand pressures, though a continuation of inflationary expectations may also be playing a part. The acceleration has affected world trade prices, and

## DEFLATORS OF GNP AT MARKET PRICES

### Annual percentage changes

	1958-67	1958-1968		1968	1969	1970
	Average (9 years)	Smallest annual rise	Largest annual rise		Forecasts	
United States	1.8	1.2	4.0	4.0	4 $\frac{3}{4}$	4
Canada	2.5	0.7	4.5	3.6	4 $\frac{1}{2}$	4
Germany	2.9	0.7	4.3	2.2	3	4 $\frac{1}{4}$
United Kingdom	3.0	1.3	4.9	3.7	4 $\frac{1}{4}$	3
(at factor cost)	(2.9)	(1.7)	(4.0)	(2.5)	(3 $\frac{1}{2}$ )	••
Italy	3.8	-0.5	8.7	1.5	3 $\frac{1}{4}$	4 $\frac{3}{4}$
France	3.8	2.5	6.4	5.0	6 $\frac{1}{2}$	5 $\frac{1}{2}$
Japan	4.4	2.6	5.9	4.0	5	4 $\frac{3}{4}$
Total OECD	2.6	2.0	3.8	3.8	4 $\frac{3}{4}$	4 $\frac{1}{4}$

## A. INDICATORS OF DEMAND

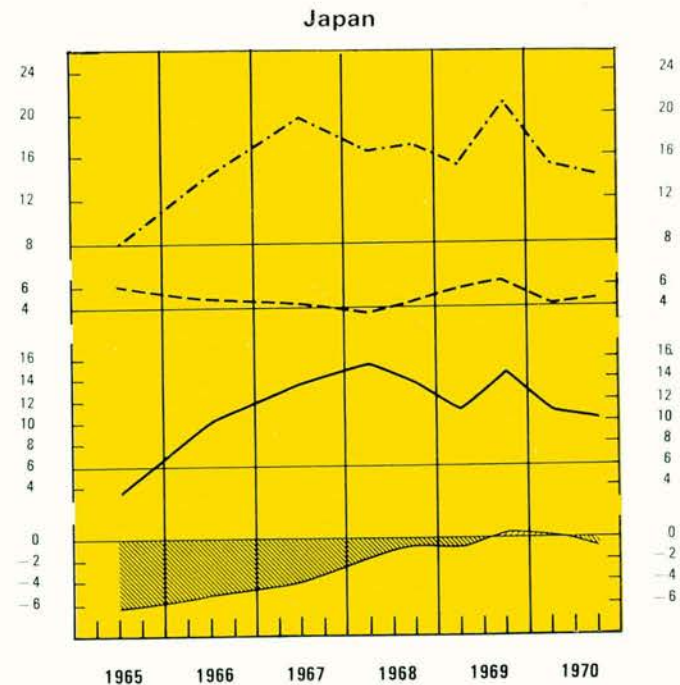
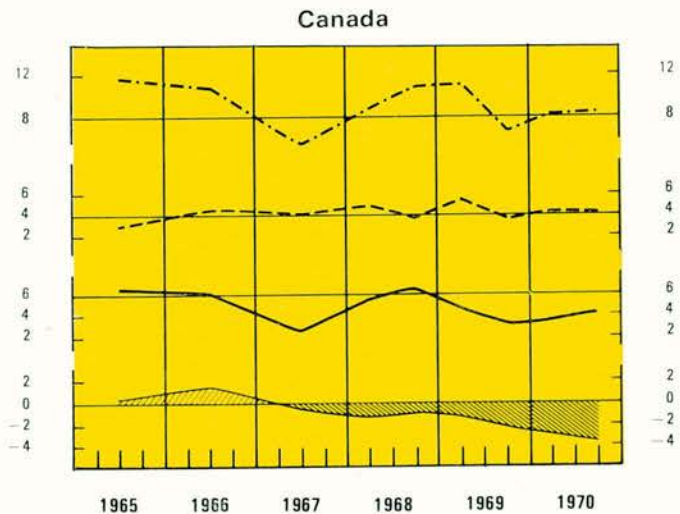
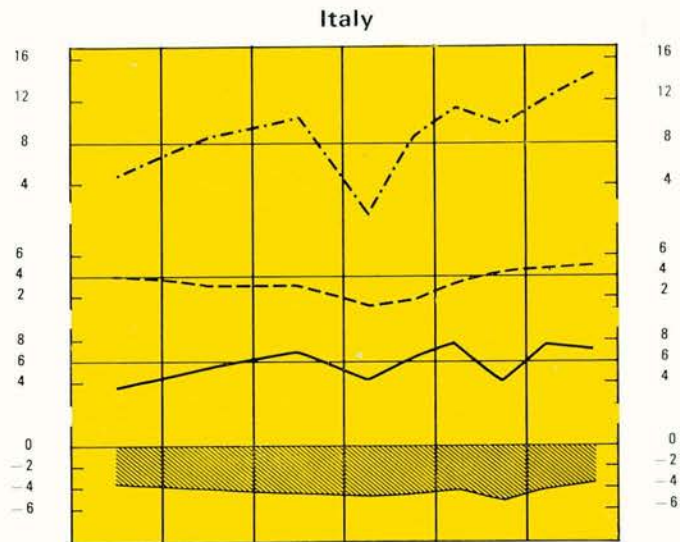
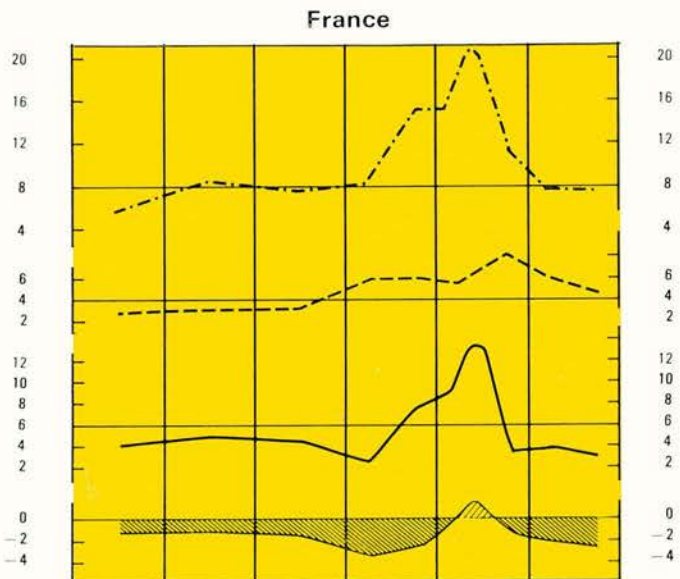
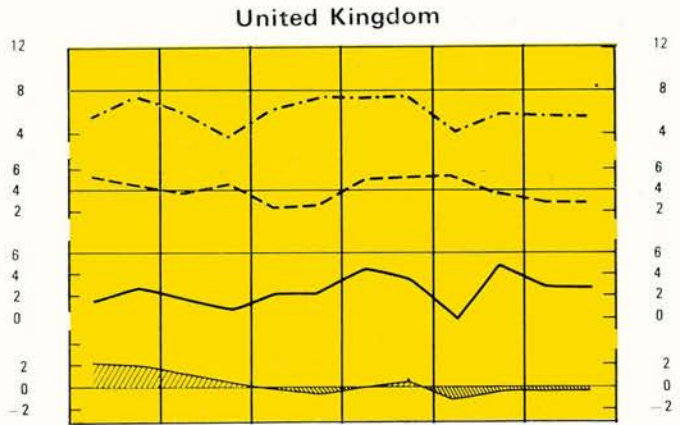
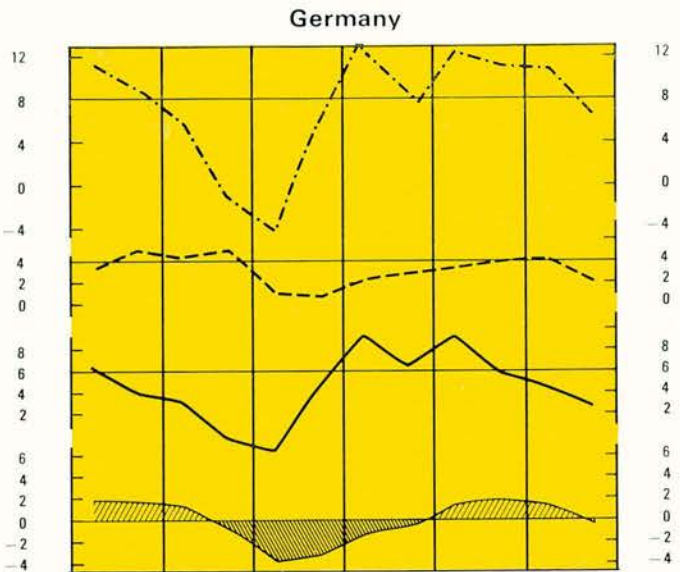


has also contributed to price and wage increases in Canada, which have not yet responded satisfactorily to disinflationary policies. In many other countries, unit labour costs benefited until recently from the upswing in activity; but, with the scope for cyclical gains in productivity largely exhausted, stronger pressures on costs and prices have now developed. In the coming months, rather rapidly increasing prices may have to be accepted while underlying demand pressures are in the course of being corrected by the present disinflationary policies.

Despite the obvious difficulties, most (though not all) governments believe incomes and prices policies have a role to play. It is clear, however, that a period when prices are rising unusually fast provides the least favourable conditions for their success. Such policies cannot usefully be regarded as an emergency expedient,

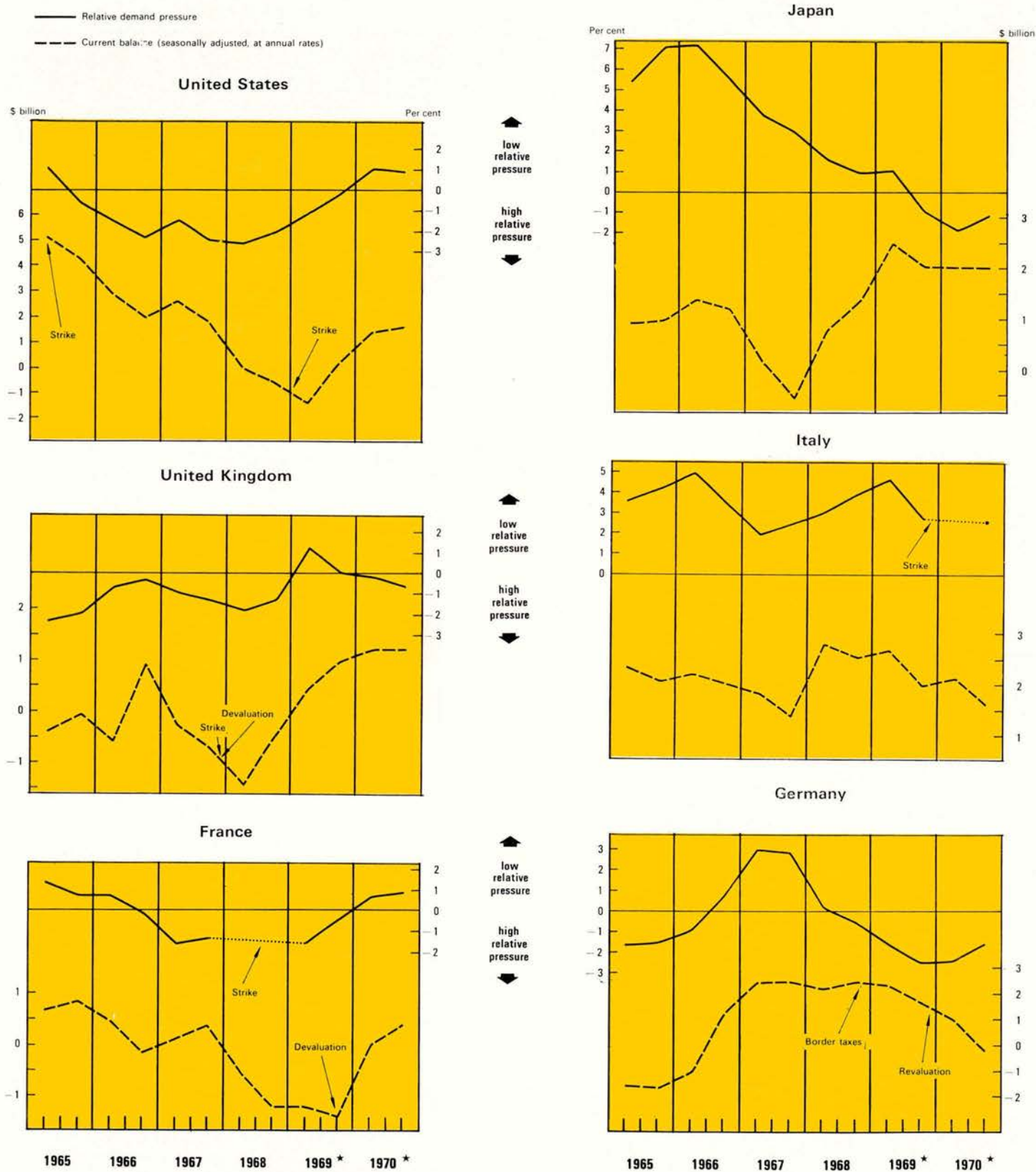


PRESSURES IN SEVEN COUNTRIES 1965-1970 (estimates and forecasts)





## B. RELATIVE DEMAND PRESSURES AND CURRENT BALANCES



for the country itself and the average of such measures in partner countries reweighted by their shares in the trade of the given country. Current balance figures have been adjusted for the United States dock strike in early 1965 and for other shifts in trade flows.



to be introduced when the need for quick results is particularly strong, but rather as a useful adjunct to policy in a longer perspective.

Over the longer period, significant differences are likely to re-emerge between the rates of price rise that individual countries will in practice accept as tolerable. Such differences in attitude have an important bearing on the problem of securing a balanced growth of world trade. The problem can be further complicated by the important structural contrasts between countries which lead to differential price developments in domestic and export markets.

## PAYMENTS PROSPECTS

Changes in relative demand and cost pressures, and the changes in the French and German exchange rates are likely to lead to an improved pattern of international payments which may nevertheless not yet reach, in some instances, the full balance of payments adjustment desired. On present policies, the United States current account should swing from deficit (effectively caused by strikes early in 1969) to some surplus; the trend of the United Kingdom's current account should remain favourable; and that of France should strengthen. Counterparts would include a major reduction of Germany's current surplus; some fall in that of Italy; and a reversion of the smaller OECD countries

generally to more normal, less favourable, positions. The French and German parity changes should have a major settling effect on speculation in foreign currency markets.

Forecasts for current balances of individual countries are subject to large margins of error, especially in view of the recent parity changes. The combined effects of these on other countries' current balances may, by and large, be offsetting — though some countries particularly dependent on trade with Germany, such as Austria, stand to be affected.

Much of the substantial improvement suggested for the United Kingdom is likely to have been obtained by the end of 1969. Some further improvement can be expected so long as no undue relaxation of domestic demand management policies takes place, though there seems likely to be comparatively little additional effect from the 1967 devaluation, either on exports or imports. For France, improvement in the immediate future may depend mainly on the reduction of domestic demand pressures; but the benefits of the devaluation (and of the Deutsche Mark revaluation) should progressively be felt. The changes forecast in both the United States and the German balances reflect the very different domestic conditions they expect in 1970. In Germany, the effects of revaluation should be supplemented by the persistence, into 1970, of above-average demand pressures. In the United States, on the other hand, improvement of the current balance would take place at a time when demand pressures were tending to

## FOREIGN TRADE OF THE OECD AREA (a)

*Values, per cent changes, seasonally adjusted  
annual rates - Estimates and forecasts*

	1968 \$ billion (b)	Average 1959-60 to 1966-67	From previous year			From previous half-year			
			1968	1969	1970	1969 1st half	1969 2nd half	1970 1st half	1970 2nd half
TOTAL (c)									
Imports	164.4	9.4	12.8	15 $\frac{1}{2}$	9 $\frac{1}{2}$	15.8	15 $\frac{3}{4}$	7	7 $\frac{3}{4}$
Exports	158.7	9.1	12.3	16	10	15.7	16 $\frac{1}{2}$	8	7 $\frac{3}{4}$
INTRA-OECD									
Exports	111.0	10.6	13.8	17 $\frac{1}{2}$	10 $\frac{1}{4}$	19.7	16 $\frac{1}{2}$	8	9 $\frac{1}{4}$
EXTRA-OECD									
Imports	48.6	6.8	10.5	11	6 $\frac{1}{2}$	8.4	13 $\frac{3}{4}$	4 $\frac{1}{2}$	4
Exports	45.7	6.6	8.8	13	9	11.3	16 $\frac{1}{4}$	8 $\frac{1}{4}$	4
Memorandum Item :									
Recorded figures (d)									
TOTAL (c)									
Imports	••	9.4	13.0	14 $\frac{3}{4}$	10	13.0	15 $\frac{1}{4}$	9 $\frac{1}{4}$	7
Exports	••	9.1	12.9	15	10 $\frac{1}{2}$	12.4	16 $\frac{1}{2}$	9 $\frac{1}{2}$	7

(a) Adjusted for statistical discrepancy in the recording of intra-OECD trade, and for the timing effects of the U.K. dock strike (late in 1967), of the French strikes (in 1968), of the U.S. dock strike (early in 1969), of the Italian strikes (in late 1969) and for the estimated shift between 1968 and 1969 of the German imports and exports affected by speculation and export tax.

(b) Recorded figures.

(c) Including trade with unspecified origins/destinations.

(d) Adjusted for statistical discrepancy in the recording of intra-OECD trade.



## CURRENT BALANCES, 1968 TO 1970 AND LONGER-RUN TRENDS

\$ billion, estimates and forecasts

	Average		1968	1969	1970
	1960-63	1964-67			
United Kingdom	-0.03	-0.48	-0.72	0.70	1.20
United States	2.70	3.75	-0.28	-0.60	1.50
RESERVE CURRENCY COUNTRIES	2.67	3.27	-1.01	0.10	2.70
France (a)	0.80	0.27	-0.86	-1.30	0.20
Germany	0.43	0.25	2.84	1.50	0.40
Italy	0.10	1.64	2.64	2.45	1.80
Belgium- Luxembourg (b)	0.06	0.15	0.29	0.35	0.35
Netherlands	0.20	-0.10	0.06	0.15	0.05
TOTAL EEC	1.59	2.21	4.97	3.15	2.80
Canada	-0.86	-0.75	-0.09	-0.65	-0.75
Japan	-0.42	0.38	1.05	2.20	2.00
Other OECD North	-0.59	-0.90	0.10	0.25	-0.40
Other OECD South	-0.12	-0.58	-0.48	-0.50	-0.65
TOTAL OECD	2.27	3.63	4.55	4.55	5.70
Adjustments (c)	-0.5	-0.5	-0.8	-0.6	-0.3
OECD CURRENT BALANCE WITH REST OF WORLD	1.8	3.2	3.7	3.9	5.4

(a) Transactions with non-franc countries.

(b) Secretariat estimates on transactions.

(c) For inconsistencies in recording of intra-OECD transactions.

become lower than would be considered desirable in the medium term. The position of Canada seems likely to be somewhat less satisfactory than in the recent past. Italy is likely to remain in large current account surplus, though at a lower level than in the recent past. Japan's strong surplus position seems unlikely, on present trends, to be much reduced in 1970.

## MONETARY PROSPECTS

In the first three quarters of 1969 increasing monetary tightness in the United States led to an unprecedented pull of funds through the Euro-dollar market. Waves of speculation led to recurrent large inflows — and subsequent outflows — of funds to Germany. Monetary conditions were tightened generally in other OECD countries. A feature of the year was the enlarged capital outflow from Italy. The revaluation of the Deutsche Mark had already led by mid-November to a substantial reflux of capital from Germany. The tightening of German monetary conditions caused by this outflow was only partially eased by relaxing banks' reserve requirements. Interest rates on the Euro-

dollar market, after an initial fall, remained firm in November.

In the period ahead, the pattern — and scale — of capital flows may depend largely on developments in domestic monetary policies. So long as stringent monetary conditions are maintained in the United States, this should continue to exert some pull on external funds. The fact that outstanding Euro-dollar liabilities of U.S. banks have not on balance risen markedly since mid-July (they have fluctuated around \$14 billion) might however suggest that further large net inflows such as occurred earlier in 1969 are now less likely. At some point, the United States' authorities will wish to ease monetary conditions, if only moderately. If other countries were then anxious to maintain relatively stringent conditions — whether for balance of payments or domestic reasons — the pattern of monetary forces and international capital flows would change again. Despite improvement of the United States' current account, the official settlements position might well be less favourable than in 1969. The overall payments positions of other OECD countries would then be further strengthened.

Such developments might generally be regarded as acceptable in the context of other trends in the coming period. But the speed with which very large amounts of capital move from one area to another underlines the limitations that need sometimes to be imposed on the use of monetary policies for domestic demand management. To the extent that external considerations effectively limit the use of monetary instruments, the need to have alternative fiscal instruments readily available is all the greater. A further consideration is that interest rates as high as at present have disadvantages not only for OECD countries but for developing countries as well.

This general assessment summarises chapters dealing in turn with domestic prospects — for output, demand pressures, costs and prices; and external prospects — for trade and current payments. A special article reviews the use of monetary policies *during the past year* in countries of the OECD area and describes how interest differentials and speculative forces both acted to stimulate flows of capital from one centre to another. On the eve of the inauguration of Special Drawing Rights a short note brings up-to-date the account of the growth of international liquidity, featured first in Economic Outlook No 5.

Developments and prospects in seven major countries — the United States, Canada, Japan, the United Kingdom, France, Germany and Italy — are discussed in greater detail in the series of country chapters which completes Economic Outlook No 6.



# ADULT TRAINING

## *as an instrument of economic stabilisation*

*Adult training is coming to be discussed not only as a means of gradually improving the skill level of a country's working population but also as a tool of short-term economic policy. It may be used as one of the instruments for fighting imbalances in the economy and thus for reconciling full employment with price stability and productivity growth. For this purpose it would have to be organised and administered in such a way that it could be rapidly varied in volume and direction to meet changes in both the overall level of demand for labour and specific needs for various skills.*

*An examination of manpower training schemes in light of this new approach is being carried out by OECD's Manpower and Social Affairs Committee, and a first investigation has resulted in a survey and conclusions tentatively formulated by the Secretariat, on which this article is mainly based. In a second round of examinations an expert group will study the radical reforms in the United Kingdom's training system which have taken place since passage of the Industrial Training Act of 1964.*

A first study of adult training programmes in six countries, with particular stress on Sweden and its programme for "rapid action" in the labour market, suggests that a rapid expansion of government-financed vocational training can absorb a certain part of any increase in unemployment caused by anti-inflationary stabilisation policies or more spontaneous recessions and can also provide income maintenance as well as a useful occupation for redundant workers. It can offset the curtailment of training activities by private industry during such periods and can lay the groundwork for a renewed upturn by improving the occupational skills of the unemployed and enabling them to qualify for better jobs when employers again need additional labour. Combined with the use of other manpower policy instruments, expansion of vocational training on a large scale during a slack period, when forecasts of the pattern of events may be ambiguous and uncertain, can give the authorities time to prepare more general economic policy measures for a return to full employment and to await their effects.

When the overall demand for labour again increases, or the situation permits a return to a more expansionist overall economic policy, trainees can be released to meet the increasing demand, and training can take on the more selective role of preparing workers for shortage areas and occupations. This mechanism would help the economic policy-makers to bring about full employment in such a way that inflationary pressures are reduced. If, nevertheless, it again becomes necessary to apply fiscal and monetary policies to restrain such pressures, and unemployment tends to result, the existence of training possibilities and income protection

for those affected should lessen the usual political resistance against anti-inflationary policies of restraint. In other words: the existence of a flexible adult training programme can contribute to giving governments greater freedom of manoeuvre in counteracting internal and external disturbances. Such a system would also make it possible to offset local employment disturbances thereby helping to prevent more generalised fluctuations.

### *The Critical Size*

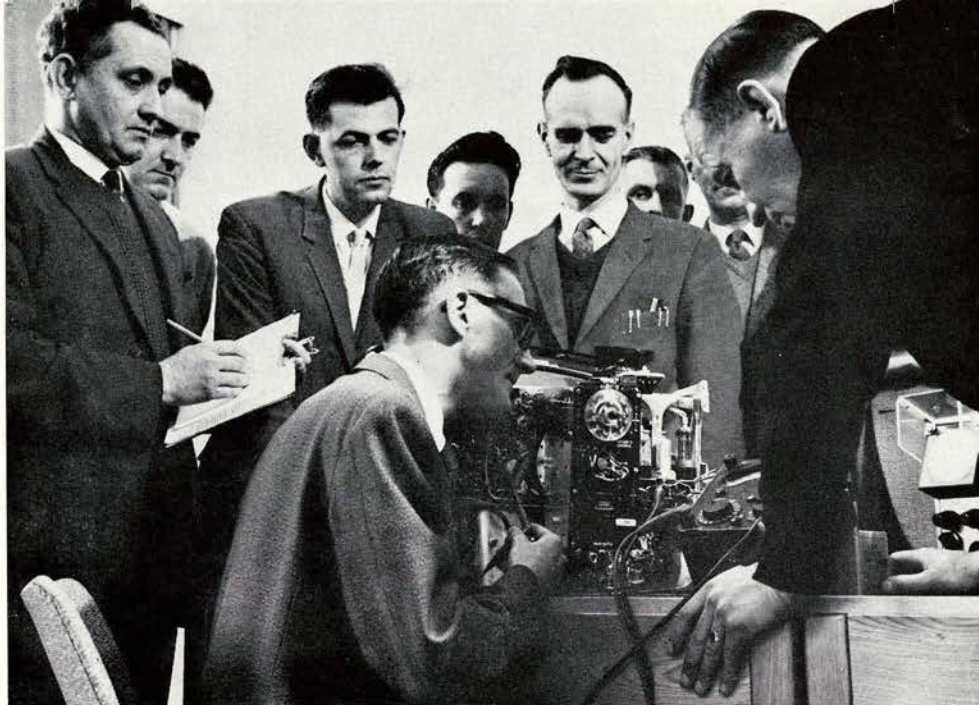
In order to play an appreciable role in both the short-term task of helping to adjust general, sectoral or local imbalances and the longer-term improvement of the skill level, an adult training system must be able to reach a substantial portion of the work force and to offer a wide variety of occupational possibilities. This means that it must attain a not inconsiderable size.

Leading manpower administrators in Sweden think that labour market policies should be able to affect some 5 or 6 per cent of the labour force. Only if the measures under their jurisdiction had this scope could they meet variations in the market's demand for labour in such a way as to provide anything approaching a "guarantee" of full employment. During the seasonal employment troughs of early 1968 and 1969 the measures used actually affected over 2½ per cent of the work force, nearly one per cent consisting of persons in adult training. (The rest were in relief work and other

1) The study can be obtained on request from OECD's Manpower and Social Affairs Directorate.



*Adult training can be used to avoid unemployment caused by anti-inflationary stabilisation policies. A class at the Ministry of Labour's College for Training of Instructors near Glasgow in the United Kingdom.*



locally created temporary jobs or in sheltered employment for disadvantaged groups.) This means that the adult training programme was nearly doubled in two years time — between spring 1966 and spring 1968 — so as to counterbalance the reduction in employment. The number of persons in training might have been expected to decrease again now that a new upswing is underway. But because the government is planning for further long-term expansion in the programme, there has been a virtual halt in the increase (aside from seasonal variations). The content of the programme, however, has switched toward more short-term courses directed specifically to meeting the most acute shortages, according to the most recent information from the Swedish authorities.

Such variations in content, occupational emphasis and duration of training may be as important as the ability to step up (or down) the number of people in training. Thus at times of great inflationary pressure, courses will tend to be short and specialised so as to meet specific urgent needs. During a period of slack, on the other hand, relatively long training can be used to broaden and deepen the skills imparted, so that the trainee will have a wide choice of occupations open to him according to his own bents and the likely needs of employers when recovery sets in.

In fact, if this is provided for at the planning stage, trainees can be encouraged to take a job before a course has formally finished if the skills in which they have been trained are in sufficient demand and employers can be counted on to provide on-the-job training; on the other hand if employment is still slack, it should be possible to let the trainees stay on longer than they ordinarily would and to wait for suitable openings to come up.

Such elements of flexibility are to be found in American and Canadian "basic education" courses, which do not confer particular work qualifications but attempt to instil basic skills and pre-occupational training, and in the Danish and Swedish methods of permitting the individual to go through a series of courses resulting in more advanced or variegated skill.

At the other extreme, training for jobs of high skill content may be more practicable during periods of unemployment because the choice of candidates is

wider and hence more likely to include those qualified for particularly difficult courses.

Questions have been raised about the efficacy of training programmes during a period of large and prolonged unemployment such as prevailed for example in the United States during the late 1950's and early 60's. Some experts think that if the number of those who cannot find jobs immediately after training reached 50 per cent or so, the reputation of the programme might suffer and budgetary allocations and applicants fall off. But others hold that the merits of training in such cases must be weighed against possible alternatives such as mere maintenance of income through unemployment insurance or costly relief work. As compared with the former, training has the advantage of contributing new knowledge and skills and preparing for greater future productivity both for the individual and the economy. As to public works directed to the untrained and unemployed, the costs are often much higher.

One suggestion in cases where trainees have difficulty in immediately finding jobs is that the training be combined with various forms of publicly supported employment opportunities so as to avoid frustration. Another approach has been to find a solution midway between training and employment as is being done in the United States, for example, where unemployed workers have been taken into the public service temporarily and their jobs combined with training so as to give the individual the greatest possibility of moving into regular public service employment.

### *Problems of Administration*

If adult training programmes are to be expanded and geared to the new role of balancing employment disequilibria, a number of practical problems will have to be solved. The Manpower and Social Affairs Committee is studying these and examining the programmes of Member countries for relevant experience. One major dilemma is how to reconcile the need for flexibility in the number of trained teachers with the teachers' need for job security. If, it has been suggested, the teaching staff is recruited from industry during periods of declining employment, they, like the trainees, should have no difficulty in finding jobs again when the employment



level rises. Such proved to be the case in Sweden where, in order to combat a reduction of employment in 1967 and 1968, training capacity was increased from 21,000 (in March 1966) to 35,000 (in the same month of 1968) and new teachers were hired to handle the influx. When, later in 1968, employment recovered and the content (though not yet the volume) of the training programme was changed, some 450 teachers were released and they readily found jobs again in their previous occupations.

A permanent nucleus is to be maintained, however, with a larger number of teachers in each area than would be required if the programme were operating at its minimum level. When the number of trainees in an area or occupational sector declines, the Swedish system is to assign some of the excess teachers to developing curricula for future classes. During such periods this permanent corps might itself also receive further training and retraining; the temporary teachers might have to be given higher salaries than normally would be the case in order to compensate for the insecurity.

Another problem that has arisen is how to cope with the fact that people become unemployed at different times. There have — particularly in Sweden — been experiments with staggered entrance of trainees. This is more costly than grouped entries, but the authorities consider that for certain types of training there is an offsetting benefit since unemployment allowances would normally have to be paid during the waiting period.

Setting the level of student allowances is a subject of debate. One view is that if vocational training is to be made an attractive alternative to inactivity compensated by unemployment insurance, the grant should be substantial enough to act as a kind of incentive and to constitute a realistic alternative to a job even for workers with dependents. Thus in France and Belgium the system of allowances is based on the idea that the trainee should, for both psychological and pedagogical reasons, be treated as a worker, and allowances are based on the wages formerly received by the trainee. In Sweden the allowances are of the flat-rate type, that is they are independent of previous income, with variations for family size and lodging costs. This form, which is due to the origin of the system as a programme for unemployed persons, appears to be a drawback now that efforts are being made to stimulate employed persons to undertake retraining for shortage occupations.

Building up a comprehensive public adult training system with adequate short-term flexibility with respect to both total volume and specific structural composition is a long-term proposition. Its full implementation will take a number of years and require a decision-making body capable of looking beyond the immediate needs of individual enterprises, branches or areas. Several suggestions have been made as to how such a central body can react rapidly to changing needs both in the composition of courses and their overall level. First, it must have a certain freedom of action as regards its budget, both as to the amount of credits and their allocation. It must have the ability to take important

decisions centrally without waiting for new appropriations by Parliament, at the same time delegating wide executive powers to regional and local bodies. For the procurement of premises and equipment, recruitment and training of instructors and other staff, selection and administration of trainees, establishment of curricula and methods of training, simple straightforward rules of procedure should be set up so as to permit courses to be started rapidly when necessary. Finally, the responsible bodies should co-operate closely with labour and management organisations as well as local authorities regarding the content of the programmes, the choice of occupations and the geographical allocation of training activities, centres and courses.

### *Costs and Benefits to the Society*

During the 1960s attention has been devoted to the evaluation of adult training programmes in the United States and Canada, and to some extent in Sweden and the United Kingdom. Despite difficulties of methodology and incomplete basic information from the field, results of the benefits (in terms of increases of income for the trainees and indirect returns to the government treasury from increased taxes and reduction of other expenditure for the unemployed) are several times higher than the costs. It would, however, be desirable for such studies to estimate benefits and costs for the society as a whole. If this were to be done, several factors would have to be taken into account which have not as yet been fully considered; the increase in national product resulting from the movement of workers from low-productivity to higher-productivity jobs; the indirect rise in total employment that takes place when trainees fill vacancies which would otherwise remain open (as distinct from replacing other workers) and the resulting increase in employment of auxiliary workers; and finally the advantages gained from the fact that overall demand management can be used more expansively if labour shortages are prevented or rapidly met by a training programme of high flexibility. Such indirect effects will be of very different size under different circumstances. Obviously the most favourable ratio of total "societal" benefits in relation to the real costs is likely to be that for a retraining course which engages unemployed persons, both as teachers and trainees, on unoccupied premises to produce skills that will be needed in bottleneck areas when the training is terminated. It would seem highly profitable, therefore, to provide a certain over-capacity in the administrative resources of adult retraining systems so that training courses can be started when and where this constellation of factors applies.

Viewed in a larger context, adult training is related to the concept of continuing education, and in some countries it is coming to be felt that every individual should have the right to acquire new skills and knowledge throughout his life. If this idea is extended, it may be that those who become unemployed will in future have a right to training as today they have a right to unemployment insurance.



# TECHNICAL ASSISTANCE SECTOR

*In its programme of technical assistance to countries of the Mediterranean area, OECD has accorded a high place to the agricultural sector in the Ebro region of Spain. While the Spanish authorities themselves have supplied staff, buildings and equipment, OECD, besides providing instructors and advisers, has helped to organise post-graduate courses in horticulture, animal husbandry and agricultural economics.*

*The technical co-operation staff of OECD have now prepared an evaluation of the project (1) which will be of value in the preparation of similar technical assistance programmes in*

## *The Centre for Agricultural Research and Development of the Ebro Region*

The first Spanish Four-Year Economic and Social Development Plan (1964-1967) foresaw a substantial increase in fruit and vegetable production for home consumption and export, the establishment of modern wholesale markets, conditioning and packing stations, canning factories and a cold chain. A major role in this programme was allotted to the Ebro Basin which extends from the Basque mountains in the north-west to the shores of the Mediterranean in the east, and which contains about one-fifth of the arable land of Spain.

The role of the Centre for Agricultural Research and Development of the Ebro Region, set up by the Spanish authorities following an agreement with OECD on the establishment of a long-term technical assistance programme in the region, was conceived as that of co-ordinating the various research and administrative efforts relating to development, and providing training for officials, extension engineers and other agricultural personnel at a practical level.

The Departments of the Centre, which has a permanent staff of some 50 agricultural scientists and engineers, reflect the range of its major activities :

- agricultural development;
- horticulture;
- ecology;
- animal husbandry;
- phytopathology (study of plant diseases);
- cereals, fodder crops and processing industry;
- agricultural techniques and rural engineering.

From the beginning the Centre has tried to make its mark on a whole range of related activities in applied agricultural research; projects are linked closely with technical assistance from OECD, either in the form of training for the task or consultants' advice on technical training. Research in hand relates to the agricultural structure of the Ebro Region and its sub-regions, the supply and demand

for major products, and the organisation of the distribution system. In addition, the Centre carries out comparative studies in farm management and production costs, and technical studies in respect of the prototype central markets and standardisation of fruit and vegetables.

An important element are the Centre's activities and the post-graduate courses in horticulture, animal husbandry and agricultural economics, provided with OECD help, and which to an increasing measure absorb the time of the Centre's staff. Since 1964 six courses of about seven months' duration have been held, with horticulture and arboriculture for a subject, as well as two one-year courses in animal husbandry. In addition, the Centre provides short specialised courses and seminars on economics in the autumn for the benefit of its regular students as well as for technicians and scientists of the Agricultural Extension Service. Recently a separate 4-weeks course was initiated on the economics and technology of refrigeration.

## INCOME PER HEAD (PESETAS PER YEAR) (Value in 1964 pesetas)

Province	1964	1965	1966	1967
Navarre	36,547	38,844	41,940	43,508
Logrono	35,662	36,763	39,308	41,444
Tarragona	35,504	36,971	40,067	42,093
Lerida	34,978	36,607	40,042	42,491
Huesca	34,037	35,506	38,586	41,244
Saragossa	32,776	34,797	36,936	39,400
Teruel	24,734	27,024	28,935	31,008
Spain	30,768	32,650	34,937	36,840

Source: Economic forecasts "Commissariat for the Plan".



# FOR THE AGRICULTURAL IN SPAIN

*other Mediterranean countries. This evaluation attempts to assess the assistance provided by taking account of the dynamic character of the objectives and the means chosen to achieve them. It is based on sets of questionnaires addressed to the scientific and pedagogical co-ordinators, professors, students, trainees, and the management of the Centre for Agricultural Research and Development of the Ebro Region set up by the Spanish authorities in 1963; together with interviews with selected personalities among these groups.*

(1) Final version of the Report to be published.

## TECHNICAL ASSISTANCE PROGRAMME - EBRO CENTRE PROGRAMME IMPLEMENTED

Year	HORTICULTURE			ZOOTECNHY			ECONOMY/DEVELOPMENT			TOTAL		
	Consul- tants m/m	Training m/m	Cost (1)	Consul- tants m/m	Training m/m	Cost (1)	Consul- tants m/m	Training m/m	Cost (1)	Consul- tants m/m	Training m/m	Cost (1)
1963	18.5	1.5	28	—	—	—	1.0	3.0	10	19.5	4.5	38
1964	22.5	36.0	178	6.5	21.5	90	1.0	—	8	30.0	57.5	276
1965	20.0	39.5	197	4.5	20.5	76	6.5	9.0	32	31.0	69.0	305
1966	15.0	64.5	249	14.0	63.0	214	5.0	15.0	45	34.0	142.5	508
1967	21.5	64.5	258	19.0	56.0	215	4.0	20.5	60	44.5	141.0	533
1968	26.0	83.0	365	22.0	65.0	270	11.1	52.2	134	59.1	200.2	769
1963 to 1968	123.5	289.0	1,275	66.0	226.0	865	28.6	99.7	289	218.1	614.7	2,429

m/m : man/months. (1) In thousands of francs.

The Centre has instituted a permanent Information Service in collaboration with the Provincial Extension Service, which facilitates the rapid dissemination of research findings originating in the Centre's co-ordinated organisations.

Over the five years of its existence total expenditure by the Spanish authorities for the Centre from various sources amounted to about 120 million pesetas, including investments of some 20 million pesetas in agricultural equipment and accommodation for professors and students. The construction of an experimental station for livestock research is under discussion.

### *The OECD Technical Assistance Project*

The initial objective of the project, set forth in a Spanish request to OECD in 1962, was to create a Technical Centre for the development of the horti-

cultural sector of the Ebro, whose task would be to prepare and implement a regional development programme in the agricultural sector; to improve the information and education available to farmers through the training of competent agricultural engineers and extension service personnel; and to study the setting-up of modern plants for the processing and handling of fruit and vegetables. Later, livestock products were included in the competence of the Centre.

As a result of discussions between OECD and the Spanish authorities, it was finally proposed that the OECD expert staff should prepare a production plan for fruit and vegetables, establish a post-graduate course in horticultural techniques and economics, and prepare a programme of practical training, on the understanding that the Spanish authorities would establish the research and training centre.

*(continued on page 34).*



The evaluation exercise has shown that at the time of the inauguration of the courses, five years ago, there was a pressing need for training civil servants in the latest theories and methods of agriculture, in order to enable them to carry out their duties in the framework of development planning, which had then just been introduced in Spain. No institution existed in Spain that could organise such a concentrated refresher course for professional people, in the time required. The situation is not quite the same today. Whereas in 1964 some 40 people, most of them employees of the Ministry of Agriculture or the Institute of Colonisation, took part in the courses, today's participants are more often than not young engineers with little or no professional experience, and the Centre itself wishes to limit their number to about 15 students per course, leaving up to 10 places available for participants from other countries (South American countries in particular). Thus the courses that were originally intended for engineers in the Ebro Region have shown themselves to be of much wider interest and scope; they attract professional people and post-graduates from all parts of the country and abroad.

### *Management of the Project*

The size and diversified nature of the project call for a fairly sophisticated machinery to manage it. This includes :

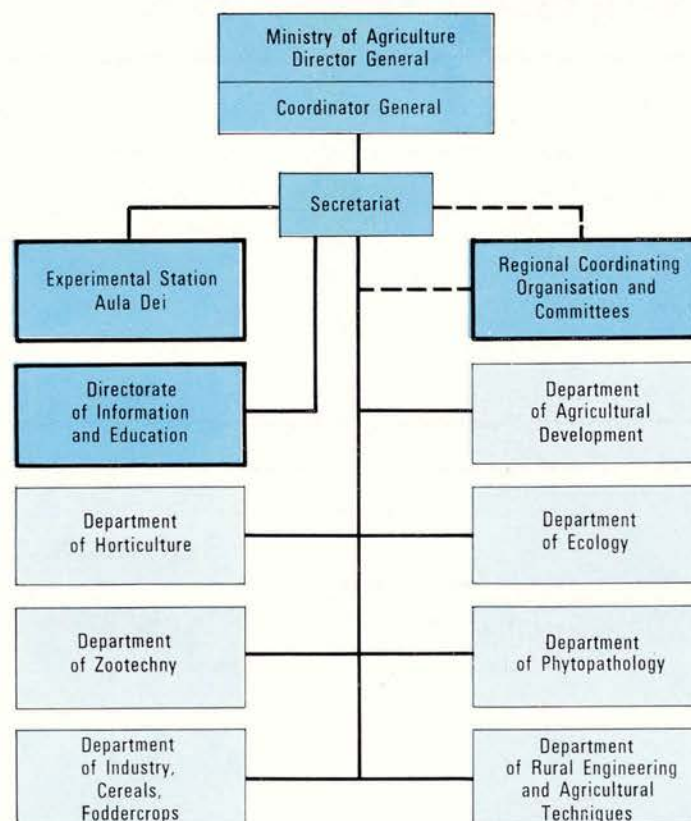
- financial programming and supervision;
- overall project planning and implementation;
- management of the courses;
- administration of individual consultant missions and training abroad.

Financial programming and supervision are the responsibility of the Technical Co-operation Service of the OECD's international staff, which prepares the technical assistance programme and its annual budget for the Technical Co-operation Committee. The annual budget for each project is drawn up in consultation with the national authorities concerned; in the case of the Ebro Development Centre, this is done jointly with the Ministries of Foreign Affairs and of Agriculture in Madrid.

Normally, the OECD Technical Co-operation Service retains full responsibility for overall project planning and implementation; but in the Ebro project it relies largely on guidance emanating from the annual meeting with senior project consultants and the authorities of the Centre, which takes place at the end of each year. Some 20 participants attend the so-called "Co-ordinating Meetings" — the Co-ordinator-General of the Ebro Centre, the Co-ordinators of its various Departments, the Director of Studies and the Administrative Director, the consultants responsible for overall co-ordination of courses and the senior professors participating in the courses or in research; the OECD international Secretariat is represented by members of its Directorate of Agriculture and its Technical Co-operation Service.

The administration of consultants' missions and training abroad is a task which is divided between co-ordinators and consultants on the one hand, and the OECD Secretariat on the other. The training programmes are tailor-made to the needs of the Ebro

## ORGANISATION CHART OF THE CENTRE FOR AGRICULTURAL RESEARCH AND DEVELOPMENT OF THE EBRO REGION



Centre on the specific job a student goes back to, and the consultants are in a position to say where and when suitable training places are available. Up to one hundred missions have to be arranged annually by the OECD Secretariat, as well as two or three dozen study visits and scholarships.

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There is no doubt that the Spanish authorities consider the Ebro Development Centre an important element in their overall effort to modernise agriculture. The Centre is, in fact, held to be a possible model for similar institutions in other Spanish regions and possibly other countries.

The evaluation study has shown that the Centre is at an early stage of its development and its internal structure and plan of action have still to be improved and established on a firmer basis, allowing for the larger amount of flexibility and adaptability which is becoming a common feature of most institutions in a modern society.

On the 10th of July an agreement was signed between the Ebro Centre and the International Centre for Advanced Mediterranean Agronomic Studies whereby the Ebro Centre would provide supplementary technical economic and social education in the horticultural field for graduates of the higher Schools and Faculties of Agriculture and would examine the international problems posed by horticultural development.



# INNOVATION IN THE UNITED KINGDOM'S NEW UNIVERSITIES

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*It is increasingly realised that in order to remedy the well-recognised deficiencies of present university systems, there must be profound changes implying important innovations. In many ways innovation has become the key concept in the development of education for the decades to come.*

*One of the main objectives of OECD's efforts in the field of education is to contribute to the generalisation of the innovative process. As one approach to this end, the Scientific Affairs Directorate has carried out a series of case studies in depth of new institutions and educational reforms with a view to discovering to what extent they are really innovative in solving a series of specific problems. The first of these studies, dealing with the new universities of the United Kingdom has just been published (1) and serves as a basis for the following article. Succeeding reports will examine new universities in Germany, non-university higher education in Canada and the UK and recent reforms in France, Sweden and Yugoslavia; these will be followed by an overall attempt to discover what conclusions can be drawn as to the conditions and mechanisms likely to lead to effective innovation in higher education.*

(1) The study "Innovation in Higher Education: the New Universities of the United Kingdom" was carried out by H.J. Perkin, Professor of Social History at the University of Lancaster, itself one of the new British universities.

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**T**he 1960's have probably been the most prolific period for the founding of universities in the United Kingdom's history. In 1960 there were twenty-two universities; since then the number has more than doubled; although some of the new institutions existed previously as university colleges or colleges of advanced technology, nine are completely new. OECD's study focusses on these nine plus Keele which was opened to students in 1950 but is generally considered to be the forerunner of all the others.

The ten "new universities" are unique in British experience. First of all they were founded by the central government rather than by private or corporate benefactors or by local education authorities as had been the case during the 19th century(1). The state provides full support, not only for running expenses but for capital outlay on buildings and equipment as well.

The second unique feature is that, by contrast with earlier institutions, which underwent a period of tutelage to some existing university (most frequently London), the Ten have been able to offer degrees of their own from the very beginning and hence have been able to plan and control their own curricula, structures and organisation. Thus they are not only innovations in themselves, but possess a freedom to innovate which is often lacking in older institutions where elaborate machinery involving large numbers of people makes it easy for major reforms to be vetoed. The opportunity to innovate is, moreover, self-reinforcing in that the newness, flexibility and freedom to experiment of the new universities makes them able to attract many of the academics and administrators who are most interested in change.

## The Beginnings at Keele

Many of the distinctive features of the new universities of the 1960's were pioneered more than a decade earlier at Keele. Originally conceived as an experimental institution, Keele owes much of its innovative character to the late Lord Lindsay of Birker, Master of Balliol College, Oxford, and a Labour Member of Parliament who, with a group of other influential people, petitioned the Government immediately after the war for a new university in North Staffordshire and who became its first Head. Lord Lindsay was disturbed, as were other educators, by the increasingly narrow specialisation required for an honours degree (at Oxford he helped pioneer the combined honours course in philosophy, politics and economics) and by the growth of what later came to be known as the "Snow line" between arts and sciences (2). The idea embodied at Keele was in a sense to recreate Renaissance man through a course that would trace the evolution of the earth in space and of man in the context of Western civilisation. In the curriculum, breadth has been given precedence over specialisation in a number of ways, the most original of which is a "foundation year" given to all first year students whatever their eventual field of study. This course consists of more than 200 lectures by 50 lecturers from different disciplines supplemented

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(1) In nearly every case local individuals or institutions provided funds as well and in many cases contributed the site.

(2) After C.P. Snow, whose concern with the gap between the "two cultures" — science and the humanities — is the subject of many of his novels and other writings.



by small group discussions and is called by the author of OECD's report "the most original innovation in British university education in this century". To accommodate it, the university course was extended from the usual three years to four (four years is more common to Scotland). Other novel features of Keele : all students were to be resident, and, in contrast to the so-called civic universities, the aim from the beginning was not only to become a focus of higher education for the region but also to attract national and even international interest. Lord Lindsay believed that no experiment was possible at this level unless the institution could grant its own degrees, and the educational authorities accorded Keele this privilege.

By no means all of Keele's innovations were followed by the later universities; the completely residential university proved too expensive, for example, and the educational authorities rejected the idea of other four year courses, but Keele's educational philosophy had a profound influence as did other of the school's pioneering ideas.

## Sussex and the Sixties

Creation of Keele had been an exception to the post-war rule that expansion of student numbers should take place within existing institutions. But by the middle of the 1950's it was becoming clear that the demand for university places had been grossly underestimated and that planning had to reckon not only with the "bulge" — in the college age group — but also with the "trend" — towards longer school attendance. Little by little the idea gained currency that new universities should be created to help fill the gap, and this course was definitely decided upon during discussions between the educational authorities and a group of local leaders from Brighton (in Sussex) who were concerned about the lack of local university facilities and the area's dependence on London.

Out of these and subsequent negotiations with the "Academic Board", which made the basic policy proposals for Sussex, emerged a pattern for the new universities. It was quite different from that of existing institutions which had generally begun small and grown slowly to university status. For Sussex and its successors it was decided that a large student body should be planned for and full capacity reached within ten years so that the initial momentum and pioneering spirit would be maintained and distinguished scholars and able undergraduates attracted from the start. A fully viable university, it was decided, required a staff of at least 350 to 400 which would mean that, if British student-faculty ratios were to be maintained (they are among the lowest in the world at an average of 8 to 1 as against 15 to 1 in the US, 30 to 1 in France, 35 to 1 in Germany) the student body should reach at least 3,000.

Growth towards this goal should be supervised by a site-development specialist so that the physical and functional inter-relationships would be well planned and coherent. Unlike the civic universities which were originally "nine to five" affairs, mainly for local students with residents lodged away from the academic buildings, the new university would, in line with its regional and national roles, have a high proportion of residents (1), and would accommodate them on the campus itself.

As at Keele the new university would be able to grant its own degrees — graduate as well as undergraduate — and would be innovatory in curriculum and organisation, promoting interdisciplinary studies and experimenting with new "maps of learning". (The term was originated by the present Head of Sussex, Asa Briggs.) Sussex itself changed the maps significantly by inventing "schools of studies" to replace traditional departments. Each school represents a fairly broad grouping of subjects — e.g. social sciences, arts, biological sciences — and in each the students have certain basic courses in common before going on to a specialisation that is in itself not narrow, technical subjects like applied engineering being avoided in favour of the broad principles involved. The schools system was used by only a few of the later universities, the others adopting their own organisational forms to achieve the greater breadth and flexibility.

Specialisation was pushed back to the graduate level, and for this purpose the one year master's course with systematic teaching as well as research was adopted; Sussex did not invent the master's degree but has used it with considerable success having more than twenty master's programmes going. There is also an arts/science scheme to help students in both cross the "Snow line".

## A Shakeup for the System

The success of Sussex in securing a university (it opened in 1961) stimulated a host of other ambitious localities into action : in the three years following the announcement of Sussex, the educational authorities received enquiries and applications from twenty-eight different areas, twenty of them in England and eight in Scotland. During the same period the problem of numbers was reaching crisis proportions, and the educational authorities authorised the establishment of six more new universities — not only to accommodate the growing student body, but because they had become convinced that university education needed a shakeup and that new institutions, starting without traditions with which the innovator must come to terms, were more likely to find and test means of education which other institutions would find worthy of emulation.

The six new English universities (2) plus those opened more recently in Scotland (Stirling in 1967) and Ulster (in 1968) have an impressive record of experimentation with new ideas. Their physical appearance itself is strikingly different, and has given rise to the term "plate-glass universities". Pedestrian and automobile traffic are separated, the most futuristic arrangement being that at Essex where the whole university is built on platforms 25 feet above road level.

In dealing with the problem of residence, an effort has been made to break down the traditional barriers between those who live in and those who live out and to integrate living facilities with teaching, studying and other activities. The tendency has been to move away from traditional residence halls with their expensive social

(1) Since university grants now enable students to go to any university no matter how far from home, the number of students living away from home has risen in all universities from 58 per cent in 1938-1939 to 80 per cent in 1961-1962.

(2) York 1963, East Anglia 1963, Essex and Lancaster 1964, Kent 1965, Warwick 1965.





*Sussex University was designed by the well-known architect, Sir Basil Spence.*

and catering services to more flexible and less expensive arrangements. Thus, at Essex, high towers have been built, each floor of which is a self-contained flat with studies, study bedrooms, communal facilities and kitchen, and these are used by residents and non-residents alike.

In order to reduce the costs of building, prefabricated techniques have been used for the first time in university construction, and Lancaster has so reduced the costs of residence buildings (£700 per student as against at least twice as much for traditional halls of residence) that it has been able to finance them through commercial loans on which both interest and amortisation (on 30 year mortgages) can be paid out of student rental fees.

At York, Kent and Lancaster the principle of the college used at Oxford, Cambridge and St. Andrews has been revived but the new colleges are mainly a device for breaking up the student body along other than academic lines and they do not have separate endowments or responsibility for selection of students or staff. Every student and staff member is attached to a college for meals, common room facilities, sports and other social functions; there are from 300 to 600 persons per college — some of whom live there. Teaching takes place in the colleges, the courses being provided centrally and for all students. The author of the report says that it is too early to judge the success of this type of arrangement but that "if the benefits of the Oxbridge collegiate tradition can be gained without its excessive costs and wasteful duplication, then the collegiate structure offers the best hope of uniting the social cohesion of small units with the economies of large-scale academic organisation."

Another direction which innovation has taken is the evaluation of student progress. In a university system which, in the words of Professor Perkin's report, is "conservative in its attachment to the formal written exam at the end of the first degree course", the new universities have led the way in experimentation with alternative or complementary methods. Thus at East Anglia

the exam now counts for only 60 per cent of the final degree results, the other 40 per cent being based on a continuous assessment of seminar papers and oral reports; students are kept informed of these ratings.

Lancaster along with Sussex pioneered in student participation, not on the university governing bodies but in disciplinary machinery, which in both cases is run by the students themselves for all but the most serious offences. Sussex recently invited students to attend sessions of the main governing bodies as observers (unless confidential matters are to be discussed). At East Anglia students have been associated with every stage of the planning of the university, both the campus and the curriculum.

## Training the Flexible Generalist

But it is in the teaching itself that the new universities have been most innovative. They have not invented all or perhaps even most of the new approaches to education but they have applied their own and others' ideas in a massive way. Mixed marriages of the most varied kind are to be found throughout the curricula, many of the new courses founded and taught by professors who felt that such combinations could never be adopted in the older universities. Thus for example a degree course is given in molecular sciences at Warwick, and at Essex in comparative studies (a combination of literature, government, art and sociology). Lancaster has a department of systems engineering which includes both human and accounting elements as well as technology and closely associated departments of operational research and marketing and financial control which together provide a strong core of business studies.

The emphasis on producing less narrowly oriented specialists takes different forms in the different schools but is encouraged by all of them in that they have avoided the practice, traditional in the civic universities, of sepa-



rating students into two streams, one taking a general pass degree and the other honours. As to crossing the "Snow line", it is felt that this cannot really be done by the universities as long as arts students can drop science and maths before they reach university age. As it is, most of the drift that takes place is one-way — from sciences to arts — with those who cross over often being the weakest science students. Yet many interesting attempts are being made. Thus York has a five year dual-degree scheme in which students spend the first three years on a B.A. course in a natural science subject followed by two years in the arts or social sciences and emerge with the degree of Master of Humanities.

The concern for breadth and flexibility has, moreover, been translated into experimental teaching methods: discussion groups held by several teachers from different disciplines or attended by students from different fields; small group sessions to supplement lecture courses but held by a leader with another type of training. Teaching aids of all kinds have been used, including in one case the video taping of a series of lectures by a professor who was going on leave, and at Sussex a Centre for Academic Services has been set up with a team of experts in various media from brochures to closed-loop film to help planning particularly difficult courses.

Finally the universities have been interested in studying themselves; three of them have full time appointments in higher educational research, and Lancaster has the first department of higher education in the country.

## Some Present Constraints

As striking as the innovations are, the report notes important areas in which the universities have not been noticeably innovatory and explains these in part by the constraints inherent in the system: the new universities have been created by the existing university system itself, planned by professors and administrators from other universities (though acting as individuals rather than representatives of their institutions). Thus they have kept within the framework of British traditions, a fact which some non-British observers have considered a limitation on their freedom to invent. Moreover, funds come from the educational authorities who have set limits and, increasingly, determined the broad course of development — the range of subjects to be provided, for example.

Perhaps the most striking problem in this connection is that of unequal opportunity. Compared with other countries the ratio of "working class" students is higher than in other Western European countries — 27 per cent as compared with 24 per cent in Norway, 23 per cent in Belgium, 9 per cent in the Netherlands and France and 5 per cent in Germany. But this is within a system that is still "frankly elitist" with only 13 per cent of the age group in higher education and less than half that number in universities. Except at Lancaster in the North-West where flexible entrance requirements have been adopted so as to allow almost any intelligent student to be admitted whatever his age or formal qualification, the new universities have not made any specifically innovatory approaches to creating greater equality and in fact their record is less good in this respect (again with the exception of Lancaster) than the average for the country as a whole. Dr. Perkin's study points out that this inequality has its



*Warwick University in Coventry, the newest of the new English universities, opened in 1965.*

roots well below the level of the universities, which simply take the best qualified students, but suggests that further steps might be taken. "Although by no stretch of the imagination the results of deliberate policy," he notes "the problem of equal opportunity is one which the new universities ought to search their hearts about and try to redress."

"Just how much the new universities have given a 'shake-up' to the rest of the university system it is still too early to say", the author concludes. "All that can be said is that the new universities by their very newness have had more opportunity than the old to try out more of the new ideas that have been abroad in the university world, and their success and failure have been closely watched by the rest. Meanwhile, their very existence has in one sense given a profound 'shake-up' to the rest: their recruitment of academic staff at all levels of the profession has caused, as no ordinary expansion of existing institutions could, a migration of scholars on a scale not seen since the Middle Ages, if then, with as profound effects on the exporting as on the importing institutions."

"Soon the new universities of the 1960's will become older ones and will be committed to existing systems. If they cannot learn any better than previous new universities to remain flexible and to continue to make radical changes and interesting experiments, then the conclusion of this report must be that for the health of the university system, to prevent hardening of the academic arteries and stagnation of the scholastic and scientific bloodstream, there ought to be once in every generation the founding of a wave of new universities as numerous and experimental as those of the United Kingdom in the 1960's."



# MAN-MADE FIBRES:

## *a growth industry*

*Great expansion in the use of man-made fibres has been one of the most striking features of the growth pattern of the textile industry during the last two decades. These fibres now account for almost 40 per cent of total output of all textile fibres taken together. Of the two basic kinds of man-made fibres, cellulosics and non-cellulosics (or synthetics), the latter, which came into large-scale production only after World War II, have been in the lead not only as to production but also as to consumption and productive capacity.*

*In 1967, there were indications that the expansion of productive capacity for synthetics was tending to outrun the domestic market's capacity to absorb the output, but no precise information was available to determine to what extent this was true.*

*This state of affairs prompted OECD's Special Committee for Textiles to undertake a study of this important industry, the findings of which have just been published (1). The following article highlights some of the main traits of this industry as they emerge from this report.*

(1) "Man-Made Fibres - Production, Consumption and Capacity", OECD 1969.

**T**he pattern of consumption of textile raw materials in the industrialised countries has changed considerably in the last two decades. In addition to the cellulosic fibres used by the industry since the Nineteen Twenties, fibres developed from synthetic materials have made and are making heavy inroads in many end-uses of textile products and are competing with and even replacing the traditional kinds of textile raw material. Used unblended or blended and mixed with other kinds of fibres, man-made fibres now account for nearly 40 per cent of total fibre production in the world.

The long-term growth of man-made fibres since they first came into production is impressive. World production of cellulosic fibres, amounting to about 200,000 tons in 1930 (roughly 3 per cent of world production of textile fibres), increased by some 1,700 per cent to 3.5 million tons in 1968 while during the same period production of wool and cotton increased by 58 per cent and 92 per cent respectively. After the Second World War, the large-scale manufacture of synthetic fibres started. Amounting to only about one per cent in 1950, they now account for 19 per cent of the total world production of textile fibres, which represents an increase of about 5,300 per cent in 18 years. During the same period the relative importance of cotton and wool diminished considerably; cotton's share in total world production fell from 82 per cent in 1930 to 56 per cent, and that of wool from 14 per cent to 8 per cent.

The spectacular growth of synthetics, much faster than that of cellulosic fibres, is partly a result of the rapid succession of newly developed fibres — the polyamides, which came into commercial production in the late Thirties, the polyesters in the Forties and the acrylics early in the Fifties. Several other synthetic fibres came on to the market at that time and later, and research now seems to be directed mainly towards the modification of existing types of fibres and this has already produced notable results. Among the synthetic fibres, the acrylic and polyesters have been growing more rapidly than the polyamides with the result that the pattern of production in 1968 is different from that of 1960 (see Chart 1).

At the present time, there are about 230 firms in the OECD area producing man-made fibres, most of them being engaged in the synthetic sector. About half are in Europe, about 80 in North America and 35 in Japan. These figures do not, however, permit any conclusion to be drawn as to the structure of the industry and particularly as to the size of firms, since in almost every country a relatively small number of leading firms account for the greater part of the total output.

### *Growth of Capacity*

As to the cellulosic fibres there has, during recent years, been practically no long-term increase in pro-



## 1. SHARES OF VARIOUS TYPES OF FIBRES IN TOTAL PRODUCTION OF NON-CELLULOSIC FIBRES (Percentage)

	EUROPE	UNITED STATES	JAPAN
<b>Polyamide</b>	1960 61.2 1968 45.9	1960 60.8 1968 41.3	1960 34.1 1968 31.3
<b>Polyester</b>	23.6 27.4	n.a. 26.0 *	19.0 26.5
<b>Acrylic</b>	9.1 * 23.2 *	n.a. 16.3 *	18.6 * 23.3

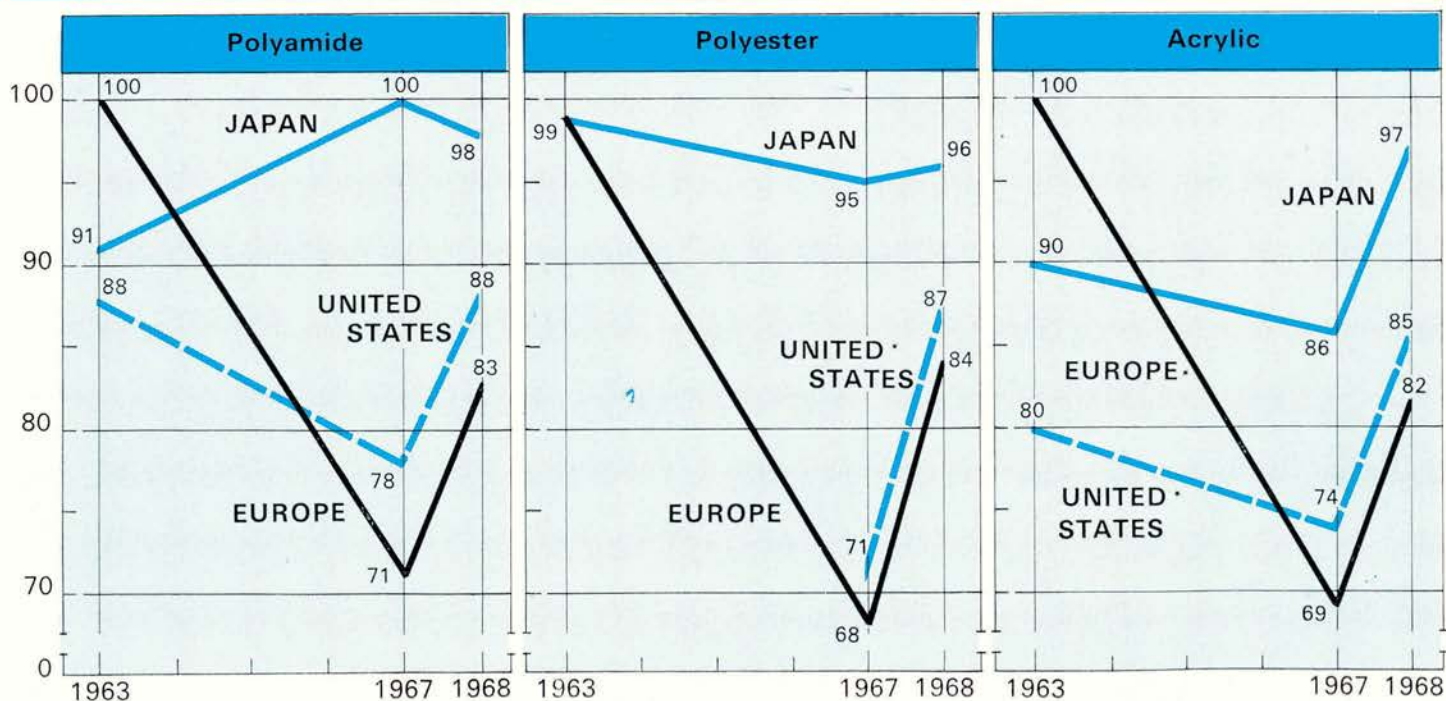
\* Staple only.

duction capacity, and growth of production has, therefore, led to a progressively higher utilisation of capacity. For synthetics, on the other hand, the long-range increase in capacity is impressive; the total increase over the period from 1960 to 1968 amounts to 542 per cent for Europe, 318 per cent for the United States, 242 per cent for Canada and 400 per cent for Japan. Particularly rapid growth is evident in capacities for polyester and polyacrylic fibres.

The study of OECD's Committee for Textiles found that, while this increase in capacity was more or less in step with rising sales until 1963/1964, from that time onwards it has increasingly outstripped production. As a result the rate of utilisation of capacity dropped continuously, reaching its lowest point in 1967. This drop was particularly sharp in Europe (see Chart 2), and, the available information indicates, affected all three principal fibres. Not only did Europe show the sharpest fall in the three regions shown in the table, but the utilisation of capacity there in 1967 was lower than in the other regions. It should, however, be noted that in the man-made fibre industry, the production capacity increases by steps for technical reasons and that newly created capacities are not immediately absorbed by growth in consumption. If a relatively large number of firms expand their capacity at the same time, a lengthy period may elapse before consumption catches up with the increase in production facilities. A certain amount of surplus capacity may therefore appear and this will be even more marked if, as happened in most European countries in 1967, consumption increases at a slower rate.

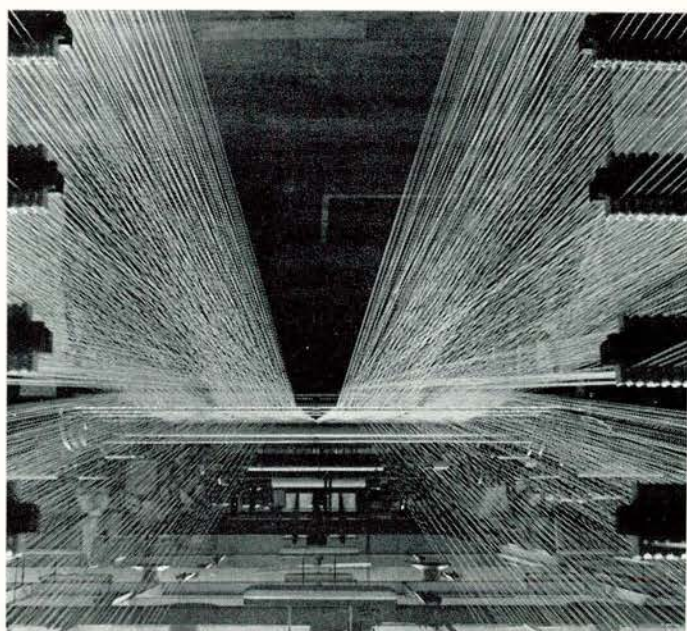
The causes for the particular regional distribution of under-utilisation of existing capacity are to some

## 2. UTILISATION OF CAPACITY FOR VARIOUS NON-CELLULOSIC FIBRES (Percentage)



\* Staple only.





High tenacity nylon cords are looven into tyre fabrics.

extent found in the drastic increase in capacity resulting from the construction of new plants and the expansion of existing ones, a process stimulated by the fact that some main patents (e.g. for polyester fibres) expired in these years. This period coincides with a downturn in prices. In addition, man-made fibre production in 1966/67 was affected by the considerable decline in activity in the European textile industry, and by the rundown of stocks at all levels of the industry. In this respect, the years 1966/67 may be said to have been of an exceptional nature. The subsequent upturn in activity in the textiles industry then led to considerable increases in output of man-made fibres and to a markedly greater utilisation of production capacity in 1968.

### *Outlook for the Future*

As to the future, planned capacity for synthetics up to 1970 will be of the order of 30 to 40 per cent (42 per cent in Europe, followed by the United States with 40 per cent and Canada and Japan with 32.8 per cent and 30.3 per cent respectively) with differences as between the various types of fibres. The discrepancy is expected to be particularly marked in the United States where capacity for polyester fibres may expand by 69.8 per cent, acrylics and polyamides considerably less (roughly 25 per cent for both). In Europe the increase in capacity for acrylics and polyester is expected to be above that for polyamides (47 per cent and 58 per cent respectively, against 32 per cent). Thus production can also increase substantially by 1970, depending of course on the degree of utilisation of capacity at that time (see Table 1 for various assumptions).

There is no way of assessing whether production will in fact grow at the rates permitted by the capacities existing in 1970, but one may point to some

factors likely to cause production to increase in the future. First, there are the foreign markets and particularly those outside the OECD area, which may well continue to grow in importance as outlets for the industry. The fact that production of man-made fibres outside the OECD area, and especially that of synthetic fibres is still low, but is rapidly increasing, is a pointer to the absorption potential of those countries' markets. Furthermore, exports are at present of major and increasing importance for domestic production in the European countries and also Japan (see Table 2). At home, the price of man-made fibres relative to other materials may keep man-made fibres competitive and even increase their competitiveness. Moreover, man-made fibres may well continue to find new applications. Insofar as they enter into private consumption, they may gain from long-term growth in private income. In short, several factors can be seen to play in favour of further growth in the consumption of man-made fibres; they include modifications in qualities and consumers' acceptance of man-made fibres, and the relative position of these fibres vis-à-vis other fibres.

## 1. GROWTH IN PRODUCTION ATTAINABLE OVER THE PERIOD 1968 TO 1970 ASSUMING VARYING DEGREES OF UTILISATION OF PRODUCTION CAPACITY PLANNED FOR 1970 (Percentage : annual compound rates)

Assumed degree of capacity utilisation 1970		OECD Europe	United States	Japan
Polyamide	70 %	5.6	— 0.8	— 6.4
	80 %	12.9	6.0	1.5
	90 %	19.8	12.5	6.2
	100 %	26.6	18.6	12.0
Acrylic	70 %	11.8 (1)	1.5 (1)	— 0.7
	80 %	19.5 (1)	8.6 (1)	6.3
	90 %	26.8 (1)	15.1 (1)	12.7
	100 %	33.6 (1)	21.3 (1)	18.8
Polyester	70 %	14.7	13.1 (1)	— 0.7
	80 %	22.6	21.0 (1)	6.2
	90 %	30.0	28.3 (1)	12.7
	100 %	37.1	35.2 (1)	18.7

(1) Staple only.

## 2. FOREIGN TRADE AS PERCENTAGE OF PRODUCTION OF MAN-MADE FIBRES

	Europe		United States		Canada		Japan	
	1960	1968	1960	1968	1960	1968	1960	1968
Exports ..	32.5	48.1	7.3	4.1	12.9	9.4	7.6	18.9
Imports ..	10.3	28.5	4.0	5.7	14.1	30.2	0.1	0.1
Balance ..	22.1	19.6	3.3	— 1.6	— 1.2	— 20.8	7.5	18.8



# TECHNOLOGICAL GAPS IN THE PHARMACEUTICAL INDUSTRY

*How wide are the technological gaps between the United States, Japan and Western Europe? How can they be explained? It is questions such as these that interested the Science Ministers of OECD countries and, at their request, OECD's Committee for Science Policy initiated a series of studies — a general report and sector reports — which are now being published. Nine sectors heavily dependent on research were chosen, one of which was the pharmaceutical industry, which has a turnover of \$ 10 billion for the OECD area as a whole. A Group of Experts was set up to study the nature and the causes of technological gaps in this sector; its Chairman was Dr. M.N.G. Dukes, Research Manager, N.V. Organon (Netherlands), and its members came from nine countries (1). This article is based on the report of the Group of Experts.*

(1) Belgium, France, Germany, Italy, Japan, Netherlands, Sweden, United Kingdom, United States.

In the pharmaceutical industry success depends mainly on the development of new medicines based on new compounds with often quite specific, biological effects and hence research is of primary importance.

Today, if a science-based pharmaceutical firm is to have any prospect of growth, it must employ a research staff of more than 100, with a corresponding minimum budget of about \$1-2 million per annum in Europe. But it is more usual for firms with international activities to employ close to 1,000 or more people on research, and to operate with corresponding research budgets. The largest supranational firms may spend up to \$100 million.

The United States has a research expenditure which in absolute terms is of another order of magnitude than that of the other countries (Table 1). On a per capita basis, it is still substantially above that of other countries with one exception — Switzerland, where per capita expenditure may be higher than in the United States. Switzerland may have spent some \$5 per head in 1967 as against under \$2.50 for the United States.

The growth rates for research expenditure are perhaps more revealing than the absolute level. In most countries expenditure on pharmaceutical research has been doubling every three to five years. The fastest growth seems to have been in Japan, where expenditure almost quadrupled over the years from 1960 to 1964. The United States also appears to be increasing its expenditure at least as fast as the other OECD countries for which statistics are available. Moreover although the proportion of the United States industry's research budget spent abroad is increasing, it still accounts for less than 10 per cent of the total.

Nevertheless, United States subsidiaries or associated companies spent \$20 million on research abroad in 1965, and this sum may have significantly altered the figures and trends for the countries in which these funds were spent. This is particularly true in the case of the United

Kingdom, where it is probable that at least \$6 million of the research expenditure for that year, or some 20 per cent of the total, was that of United States companies.

## Research Manpower

As to research manpower the divergence between the United States and other countries is probably less, according to the experts, than for research expenditure. The manpower figures show that only a few countries are engaged to a substantial extent in pharmaceutical research. Of the nine countries in Table 2, only six employ more than 1,000 personnel on such research; the inclusion of Switzerland and Germany would only increase the total to eight. Although the other countries, in particular Belgium and the Netherlands, make a very valuable contribution in a limited and specific area, they cannot expect to compete on any broad basis with the United States, which employs almost twenty times as many people.

The total number of people employed in pharmaceutical research in the OECD countries in Europe is much greater than that in the United States (about 25,000 as against 16,400). According to the experts, this inequality between the US and Europe is probably not as marked as the global figures would lead one to suppose; European research is organised differently and requires more supporting and administrative staff. This, together with a lower degree of mechanisation, has some influence on productivity.

The main differences between Europe and the United States are in the utilisation of pharmaceutical research manpower. In the United States the vast majority of the industry's total R and D staff is concentrated in a relatively small number of big firms: 25 per cent of them employ 85.2 per cent of the personnel. In Europe there are more research teams but they are smaller; moreover, some of their work may duplicate what is done in some other



## 1. RESEARCH EXPENDITURES IN THE PHARMACEUTICAL SECTOR

(in millions of United States Dollars)

	1960	1961	1962	1963	1964	1965	1966
Belgium . . . . .				4.3		5.2	
France . . . . .				24.36*	27.55*	28.42*	
Germany . . . . .					40.00*		
Italy . . . . .	(10.4)	(14.4)	(14.4)	(14.4)	(15.0)	(15.0)	(20.0)
Japan . . . . .	10.3	19.0	19.8	27.9	36.9		
Netherlands . . . . .					9.03		
Sweden . . . . .	3.8	4.8	5.9	7.9	8.7	10.8	12.9
United Kingdom* . . . . .	21.0	21.8	23.2		29.1	32.5	
United States . . . . .	212.0	238.0	251.0	270.0	282.0	365.0	399.0

(in United States Dollars per Capita)

	1960	1961	1962	1963	1964	1965	1966
Belgium . . . . .				0.46		0.55	
France . . . . .				0.51*	0.56*	0.58*	
Germany . . . . .					0.69*		
Italy . . . . .	0.21	0.29	0.29	0.28	0.29	0.29	0.38
Japan . . . . .	0.11	0.20	0.20	0.29	0.38		
Netherlands . . . . .					0.74		
Sweden . . . . .	0.51	0.77	0.78	1.04	1.13	1.30	1.65
United Kingdom . . . . .	0.40	0.41	0.43		0.53	0.59	
United States . . . . .				1.42	1.46	1.87	2.02

Source : Country Replies to O.E.C.D. questionnaire.

\* International Statistical Year on Research and Development Statistical.

country owing to the diversity of national laws on drug testing and registration.

### Sources of Innovation

Of the important drugs marketed in six European countries, more were discovered in the United States than in any other single country (See Chart). Germany is the only country where the number of important drugs of local origin marketed (36.5 per cent) is higher than those of United States origin (29 per cent). In the Netherlands, the Swiss and American drugs are equally important. In the United States, Switzerland is the first and Germany the second foreign supplier.

The year-by-year breakdown of American drugs introduced on the European market over the period 1950-1967 does not show whether the gap between Europe and the United States has become smaller or wider. During these years the United States has been more productive in the field of drug discovery than Europe as a whole, particularly if one takes into account the fact that the United States employed slightly less specialised research manpower than Europe. However, Swiss manufacturers compare very well; they are in constant touch with American science and technology through their research facilities in the United States set up as early as the 1930s.

The fact that new American drugs succeeded in obtaining a leading position in almost all of the countries studied is very revealing; each of these countries has its own pharmaceutical industry, sometimes strengthened by protectionist measures, and in none of them were American drug competitors offered more favourable conditions at the start.

A further analysis based on national drug lists confirms

these findings. One hundred and thirty eight drugs introduced since 1950 were selected and classified by country of origin. In the experts' view, these percentages may not provide an exact reflection of the state of the art in scientific research, but they do show orders of magnitude. The

## 2. MANPOWER WORKING IN PHARMACEUTICAL RESEARCH AND DEVELOPMENT BUSINESS ENTERPRISE SECTOR

	Total				Scientists and Engineers
	1963	1964	1965	1966	
Belgium	429		488		94 (1965)
France		2,715 *			876 * (1964)
Italy				3,000	850 - 900 (1966)
Japan	6,843				3,399 (1963)
Netherlands				700 - 800	—
Spain		92 *			17 * (1964)
Sweden	780	875	930	1,045	—
United Kingdom (1)				6,000	1,600 (1966)
United States		15,055	16,390		8,890 (1965)

Source : Country Replies to O.E.C.D. questionnaire.

\* International Statistical Year on Research and Development .

(1) This relates to the pharmaceutical industry as a whole and not merely to the ethical sector.



United States is responsible for nearly half the drugs launched on world markets.

## Causes of Disparity : Management

If a drug firm is to innovate, it must concentrate extensively on marketing and must ensure a close relationship between sales and research. The experts consider that the management problem may help to accentuate technological gaps. Some management and marketing techniques are used less frequently in Europe than in the United States. Firms with advanced technologies are less conservative in their attitudes to marketing ; but the scarcity of skilled marketing executives in certain OECD countries may hinder their efforts to exploit the market to the full.

One of the managerial skills most important for innovation is the evaluation of potential new products. A great deal of time and money can be wasted by pursuing a particular project when it would have been abandoned had a realistic appraisal of its potential been made. Long-term planning is another management problem which may contribute to technological gaps. It is unusual for companies to make detailed plans for more than two to five years, which is a relatively short period by the standards of other industries. But some of the largest companies plan fifteen to twenty years ahead. This is understandable in a field where high-risk research (for example, into the fight against atherosclerosis) may not pay off much sooner.

## Size of Firms

A main cause of disparities in the field of management is the difference in size of firms. Since some firms produce chemicals and pharmaceuticals, there are no complete statistical data for use in international comparisons of firm size. The experts note, however, that the degree of concentration seems slight in Europe : of 320 firms in the United Kingdom 63 per cent have less than 25 employees. The proportion of firms with under 50 employees is 82 per cent in Italy and 71 per cent in Sweden.

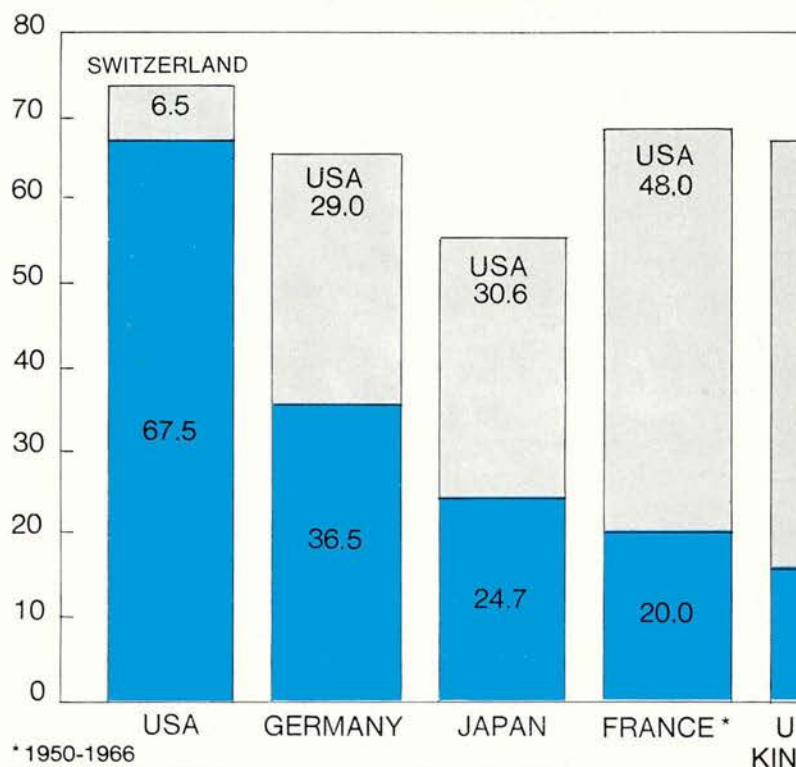
The increasingly stringent control of quality, efficacy and safety of pharmaceutical products will make it more and more difficult for the very small firms to remain in the sector of ethical drugs (those sold on prescription only). The most effective form of advertising, namely personal visits to doctors, is becoming increasingly difficult for the small firm owing to the shortage and high cost of medical representatives and to the fact that such work offers few attractions to qualified scientific men.

## Size of Markets

As the European market is still fragmented, many European firms tend to limit their activities to their own country, so that production units are small and can therefore sustain only a limited research effort ; in particular, they cannot undertake the basic research on which most multinational pharmaceutical manufacturers are at present engaged.

The size of the home market may not be as important in the pharmaceutical industry as in other sectors since the rising cost of research has encouraged, and indeed

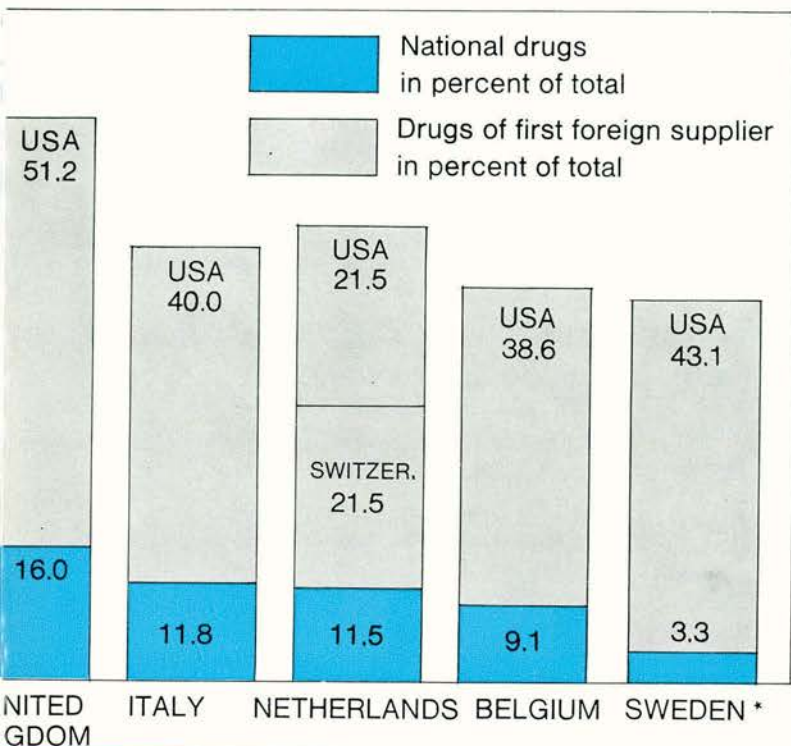
## THE ORIGIN OF SIGNIFICANT OF NINE COUNTRIES



Laboratory of a Swiss pharmaceutical



## NEW DRUGS IN THE MARKETS FROM 1950 TO 1967



firm in the United States.

constrained, companies to think in terms of international markets, served either by subsidiaries or by licensed agents. For historical reasons the Swiss have almost come to regard the United States as a "home market".

## Education and Government Policies

According to the experts, differences in education and in the supply of highly qualified personnel may be one cause of technological gaps. In some countries university staffs have little interest either in productive research leading to the discovery of new drugs or in training scientists for careers in the pharmaceutical industry. In several European countries there is also a real shortage of biologists. Lastly, in most European countries the universities pay little or no attention to training in business management and it is difficult in these countries to find scientists who have training in industrial management.

The quality of industrial research and development is closely related to the standard of the science faculties in the universities of the country concerned. The very strong position of the Swiss pharmaceutical industry can at least partly be traced to the excellent quality of teaching in chemistry, and to some extent of pharmacology, in Swiss universities.

Another factor which may lead to technological gaps is government policy. As to the pricing of drugs, State health services are necessarily anxious to avoid excessive costs; it is nevertheless a fact that in the Western countries almost all pharmaceutical research is financed out of sales and part of the price is thus used for the discovery of new products.

Price control in the various countries takes extremely different forms and the whole concept underlying the need for such controls has recently been questioned. In many countries the imposition of rigid price control or political pressure on prices has undoubtedly had an effect on the pharmaceutical industry.

Differences in patent legislation are also prejudicial to research; whatever the country involved, inadequate legal protection for discoveries may well be a major obstacle to pharmaceutical research (as it is in Italy where any firm has been free to imitate a new product whether it originated in Italy or abroad).

Differences in national laws on the manufacture and distribution of pharmaceutical products often lead to the wasteful repetition of work before a product can be marketed in another country and thus hold up the utilisation of the drug. The experts consider it particularly urgent to harmonise European legislation.

The practice of a government in these matters may be strongly influenced by the recommendations of the World Health Organisation or by the practice of other governments; for instance, the regulations of the United States Food and Drug Administration are often an inducement to other countries to follow suit to a certain extent. Similarly, the institution of the British Committee on Drug Safety has exerted some influence in other Commonwealth countries. Harmonisation efforts have been initiated in the European Communities, EFTA and Benelux. But the experts emphasise that harmonisation within a limited group of countries, whilst itself desirable, leaves unsolved the problem of Europe-wide or ultimate world-wide harmonisation.



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