

the OECD OBSERVER

The Economic
Outlook for
OECD Countries
July 1974

Strategies to
Solve the Problem
of Noise

Reallocation of
Resources to
Pollution Control

The Impact on
Shipping
of a Re-opened
Suez Canal

Ireland's
Science Policy

Four OECD
Actions

New Development Aid Figures



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PHOTOS: Cover: Salgado Junior; page 2: L. Jouan-OECD; page 6: Almasy; page 7: Salgado Junior; page 10: The Open University Library, United Kingdom; page 13: Yves Dejardin-Rapho; page 31: Compagnie Financière de Suez; pages 32-33: AP; page 38: Institute for Industrial Research and Standards, Dublin; page 39: (Left to right): Japanese Delegation to the OECD; Salgado Junior; Japanese Delegation to the OECD; D. Moore-Australian News and Information Bureau; pages 40-41: L. Jouan - OECD.



COVER : Development aid as measured in dollars increased in 1973, but in real terms it fell while the total resource flow—also in real terms—remained the same as in 1972.

Published bi-monthly in English and French by THE ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

EDITORIAL OFFICES

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Annual Subscription Rates : £ 1.80, \$ 4.50, F 18.00.

Single copies : £ 0.40, \$ 1.00, F 4.00.

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Anker Randsholt, Editor of the OECD OBSERVER and Head of the Publications and Distribution Division of the OECD Information Service, ceases active work for the Organisation with the publication of this issue of The OECD OBSERVER. Anker Randsholt who has been Editor of the magazine since its start, will continue in economic-political journalism, his main occupation before he came to OECD from Denmark in 1962.



THE FLOW OF RESOURCES TO THE DEVELOPING WORLD: THE 1973 RECORD

There was a decline in development aid in 1973 as measured by the percentage of GNP devoted to official development assistance (ODA) by members of OECD's Development Assistance Committee (DAC).

This percentage is probably the best indication of trends since it avoids distortions due to changes in exchange rates and prices (1). It was 0.30 per cent in 1973 as against 0.34 per cent in 1972 for the members of OECD's Development Assistance Committee as a group.

In US dollar terms, the total official development assistance (ODA) of DAC Members showed an increase of 9 per cent in 1973 from \$8.7 billion to the record figure of \$9.4 billion, but if changes in exchange rates and price increases are taken into account, it fell by some 6 per cent. In 1973 ODA amounted to about \$4.80 per person living in developing countries, a decline of about 30 per cent in real terms compared to 10 years ago.

The Target for ODA

DAC Members as a whole moved away from the 0.7 per cent of GNP target which the United Nations has recommended that each donor achieve by 1975. DAC Members have taken various positions with regard to this target. Four of them (the Netherlands, Belgium, Sweden and Norway) have accepted it without reservation; eight (Australia, Denmark, France, Canada, Germany, Japan, New Zealand and the United Kingdom) have accepted a date after 1975 and five have not subscribed to it at all.

Eight DAC Members achieved some progress in their aid effort as measured in terms of the ODA to GNP ratio—Austria, Denmark, Germany, Italy, Japan, Norway, New Zealand and Sweden. But a fall in this ratio for some of the major donors (France, the Netherlands, the United Kingdom and the United States) outweighed this progress, and the DAC average declined. In particular, the United States, which is the largest donor (32 per cent of DAC Members' combined ODA in 1973), recorded a fall in its provision of ODA, not only in relation to GNP, but also in absolute value.

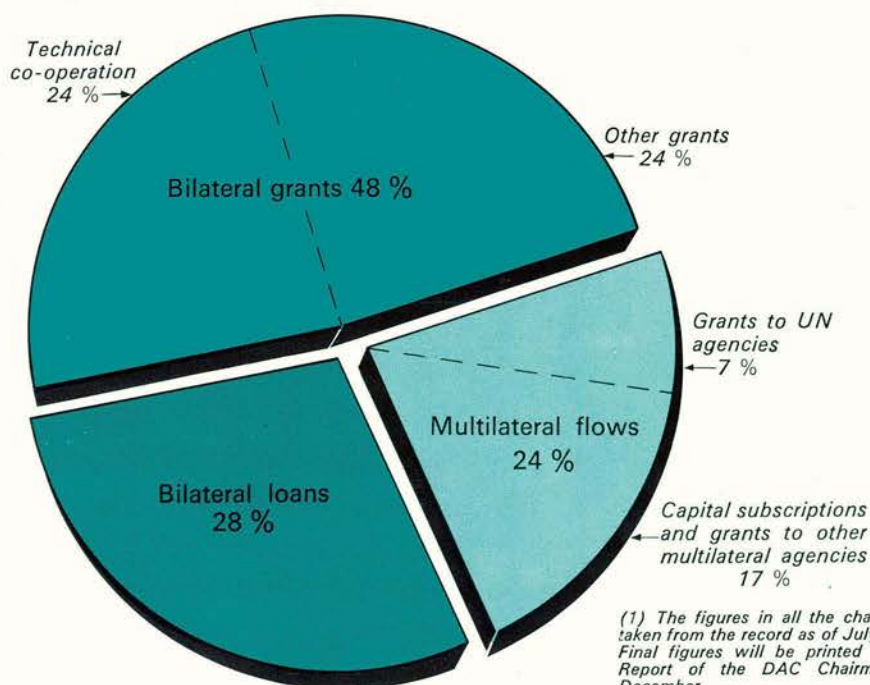
The Composition of ODA

There was a slight decline in the share of grants in ODA (including grants to multilateral agencies) which slipped back from the record level of 72 per cent in 1972 to 71 per cent in 1973. Bilateral grants increased by only 2.6 per cent in nominal terms, and fell to less than half of the total outflow of ODA (48 per cent in 1973, compared to 50 per cent in 1972). Their relative

(1) The DAC uses the word aid to refer only to Official Development Assistance, which consists of grants and loans at concessional terms extended by the official sector for the purpose of fostering recipient countries' development and welfare.

The total flow of resources comprises ODA, grants by private voluntary agencies, and loans, credits and investment at market terms. This last group of transactions favours growth and development and they are taken into account. But because they are at market terms, the word aid is not appropriate when referring to them or any total that includes them.

**A. MAIN COMPONENTS OF OFFICIAL DEVELOPMENT ASSISTANCE BY TYPE
(ODA 1973 : \$9.4 billion)**



(1) The figures in all the charts are taken from the record as of July 20th. Final figures will be printed in the Report of the DAC Chairman in December.

stagnation was due mainly to lower expenditures on bilateral food and programme aid.

As regards the other main components of ODA, contributions to multilateral agencies (24 per cent of ODA in 1973) rose in nominal terms by 18 per cent to \$ 2.2 billion, an increase of about 3 per cent in real terms. *Bilateral loans* roughly maintained their share of 28 per cent in total ODA. As gross lending rose in 1973, the relative stagnation of net lending (which was about the same in real terms as in 1972) largely reflects increased amortisation backflows.

As regards *food aid*, wheat prices more than doubled between 1972 and 1973, and other food prices rose substantially. According to preliminary data, food aid shipments dropped sharply. Expressed in dollar terms, bilateral food aid grants decreased slightly, and the dollar value of food aid channelled multilaterally by DAC Members through the United Nations World Food Programme and the Commission of the European Communities remained virtually unchanged. Food aid financed out of the budget of the European Community was stepped up from \$ 87.6 million to \$ 143.9 million, with additional amounts contributed by the United Kingdom (\$ 12.7 million) and Denmark (\$ 1.6 million).

Softer Terms and the Target

The terms of Official Development Assistance which have been improving over recent years improved further in 1973 as the grant element increased from 84 per cent in 1972 to 87 per cent (the share of grants in new commitments rose and loan terms softened).

The main provision of the Recommendation on the Terms and Conditions of Aid adopted by the DAC in 1972 is that Members should use their best efforts to reach and maintain an average grant element (2) in their ODA programmes of at least 84 per cent.

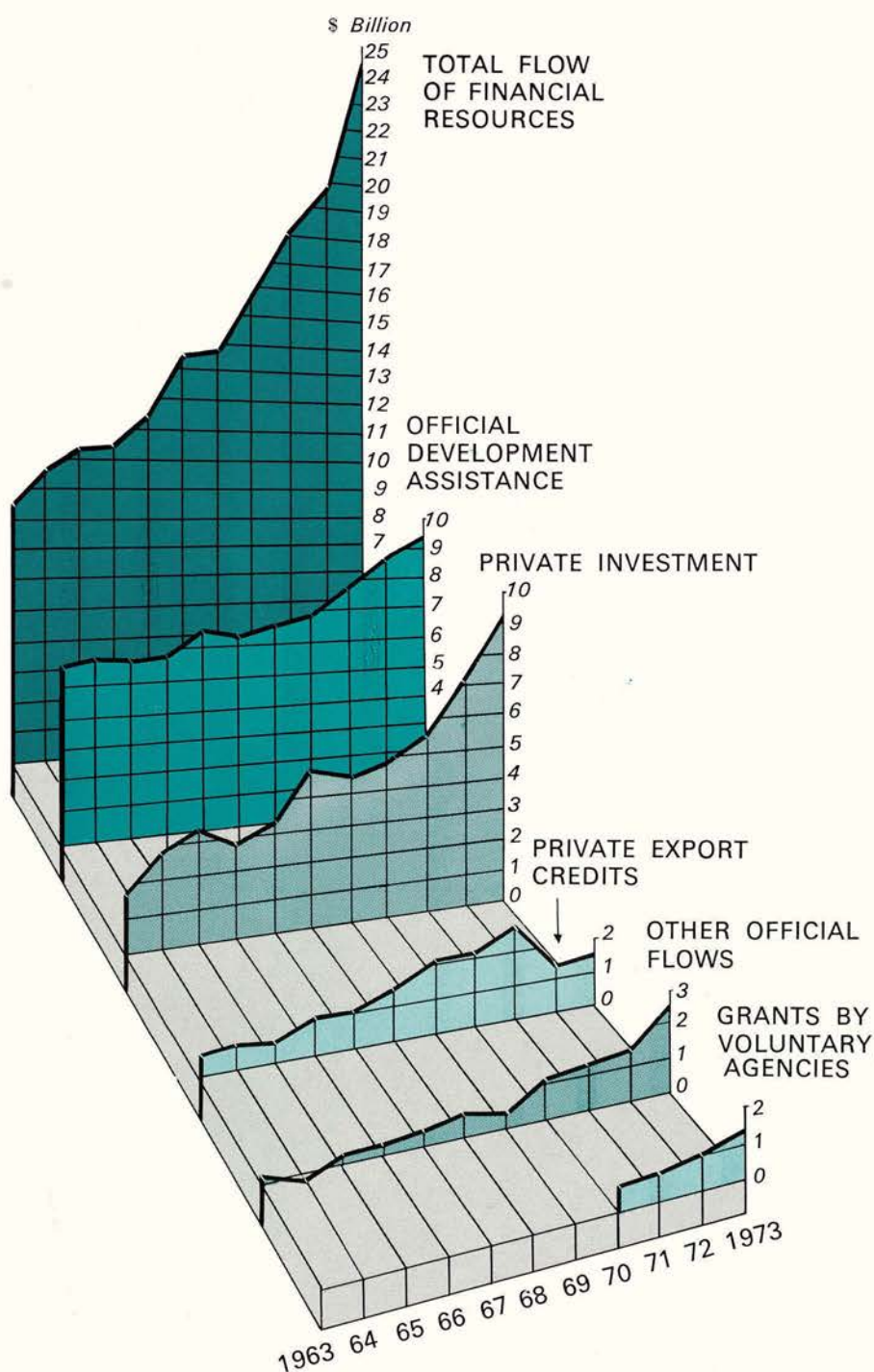
In 1973, thirteen out of the seventeen DAC countries complied with this general terms objective. Of these thirteen, eight raised their grant element above the levels of 1972: Denmark, France, Germany, the Netherlands, New Zealand, Sweden, the United Kingdom and the United States. Australia, Belgium, Canada, and Norway roughly maintained the already high concessionality of their ODA programmes. Switzerland complied on terms grounds

(2) *The grant element is in essence a measure of the softness or concessionality of a transaction, and takes account of the maturity, grace period and interest of a loan. It is the difference between face value and the discounted present value of the stream of repayments, including interest, to which the loan will give rise, expressed as a percentage of its face value. In calculating it, a standard rate of interest is used which is assumed roughly to reflect the market rate of interest in donor countries. This rate of interest (or more accu-*

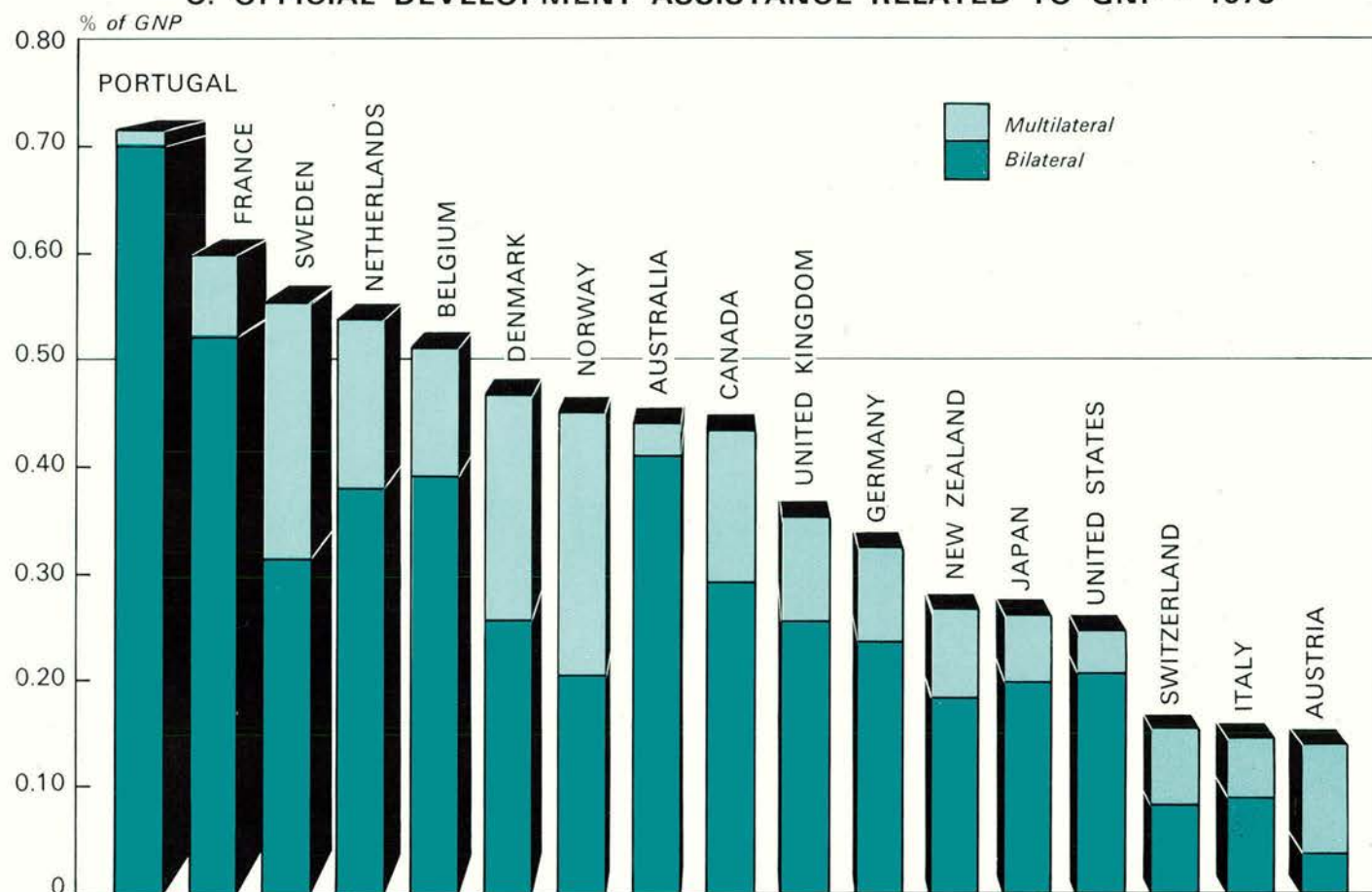
rately, rate of discount) is conventionally taken as 10 per cent. Some examples may help to understand the concept:

- The grant element of a grant is 100 per cent, since there are no repayments.
- The grant element of a loan at 10 per cent is nil, because the actual and standard rate of interest are the same.
- The grant element of a 30-year loan, amortised 6-monthly in equal instalments, with a 10-year grace period, extended at 2½ per cent interest is 62 per cent.

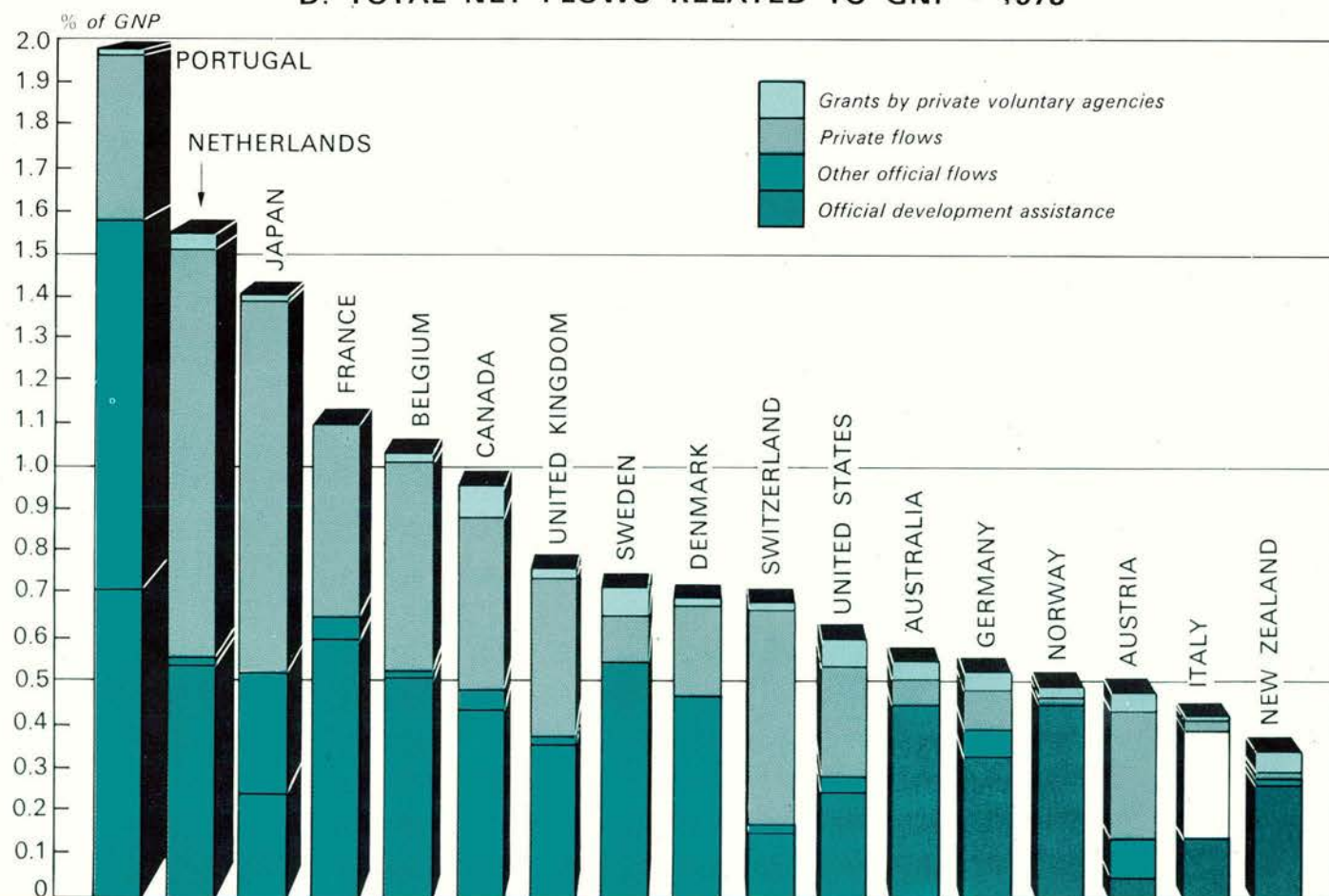
B. THE TOTAL FLOW OF FINANCIAL RESOURCES FROM DAC COUNTRIES TO DEVELOPING COUNTRIES AND MULTILATERAL AGENCIES - 1963-1973



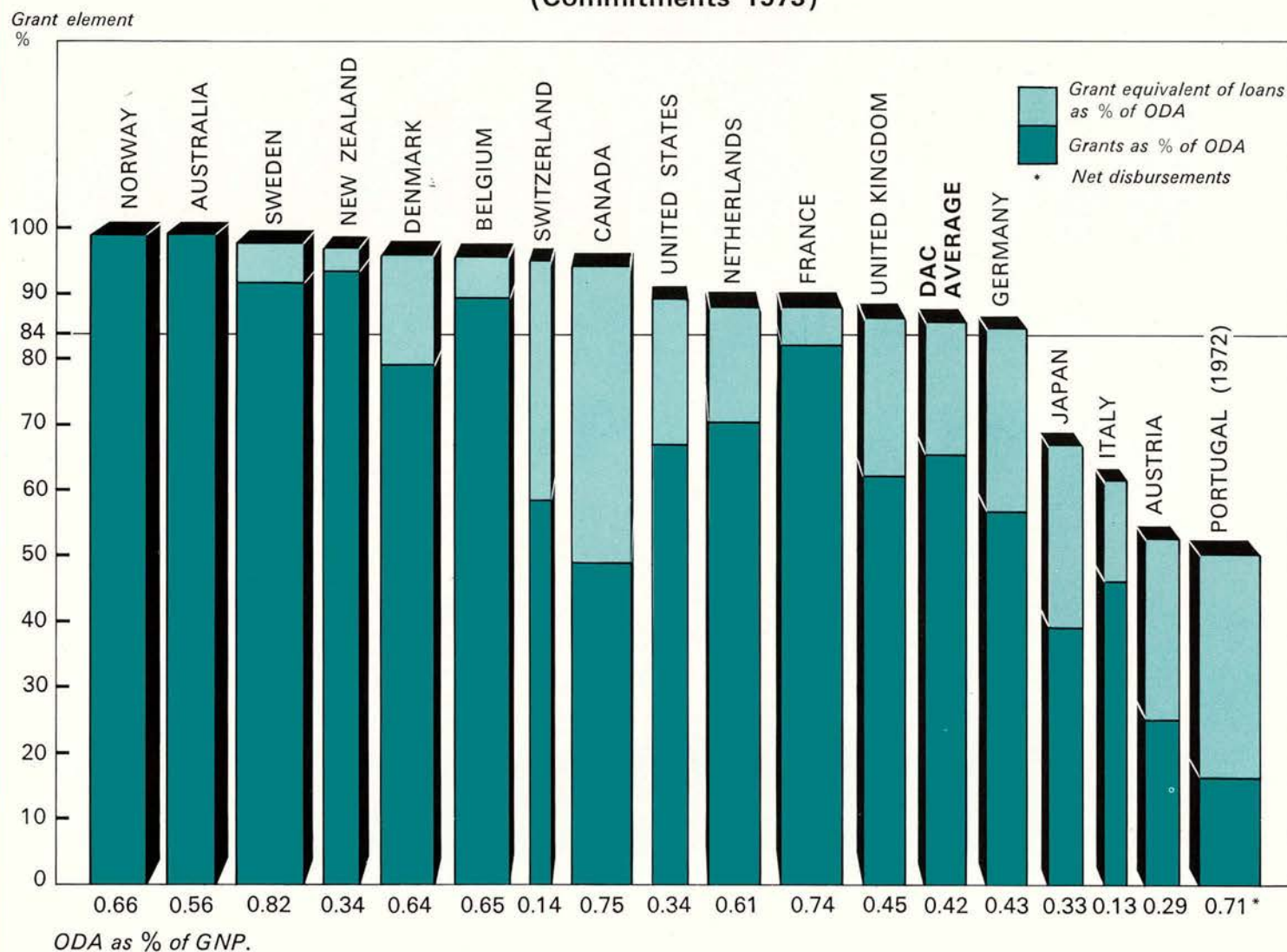
C. OFFICIAL DEVELOPMENT ASSISTANCE RELATED TO GNP - 1973



D. TOTAL NET FLOWS RELATED TO GNP - 1973



E. TOTAL GRANT ELEMENT OF OFFICIAL DEVELOPMENT ASSISTANCE (Commitments 1973)



proper, but as in previous years, the volume of its commitments was too low for it to be considered as having met the terms target.

Of the remaining four countries, the information for Austria and Portugal is incomplete. Italy, which has not accepted the terms target owing to the special problems of her economic structure, softened the terms of its small programme. Progress was made by Japan, whose aid programme is of relatively recent origin. It raised the grant element of its ODA from 61 per cent to 68 per cent.

export credits are provided by Germany, Japan and the United States, and their volume almost doubled. Direct private investment rose to a new record of \$5.9 billion and bilateral portfolio investment by 50 per cent, but this was partly offset

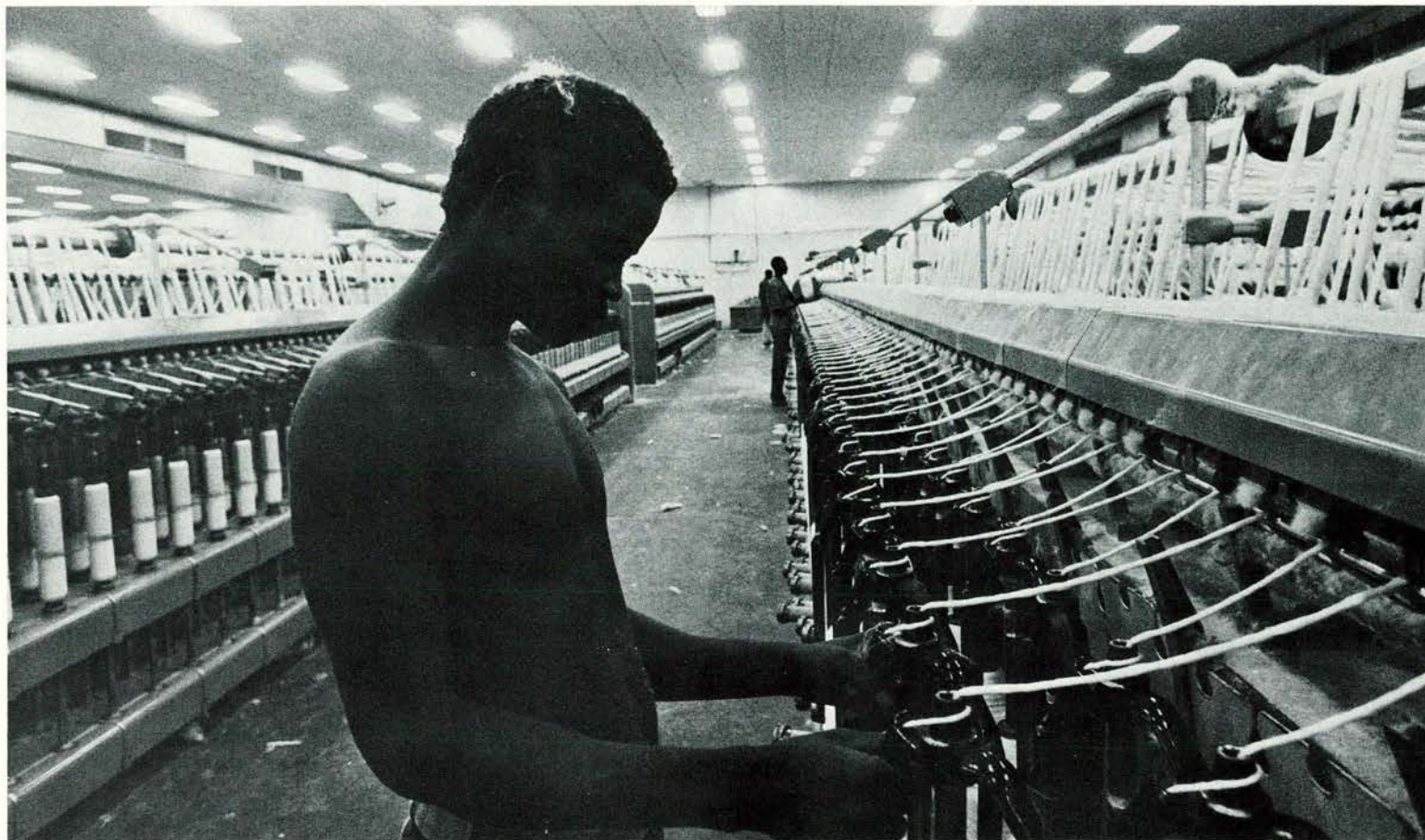
by lower purchases of multilateral portfolio securities by private investors. Private export credits were 25 per cent below their 1972 level and grants by private voluntary agencies increased by 30 per cent. Thus the total net flow of resources

Total Resource Flow

Export credits, private lending, private investment and grants by voluntary agencies together, which are not considered aid but do constitute part of the net flow of resources, increased more than official development assistance. Most official

Drying seeds for the next planting season in Zaire.





Above : a textile plant in Niamey, Niger.

rose sharply in absolute terms—by 21 per cent, to a new record of \$ 24 billion but in terms of GNP remained at the same level as in 1972—0.78 per cent. This figure, however, excludes most Eurocurrency lending, which is not officially reported to the DAC and which has expanded rapidly in recent years and may be estimated to have reached at least \$ 9 billion gross in 1973. (Some estimates go as high as \$ 12 billion). While no figures are available on individual countries, it is known that DAC Members accounted for a major part of these funds. Thus the total net flow of financial resources to developing countries actually increased substantially in 1973. The target of 1 per cent of GNP recommended by the United Nations and accepted by all DAC Members would probably have been reached in 1973 and possibly exceeded if all Euro-market lending were included.

Recorded performance varied considerably as between individual countries. Five countries (Belgium, France, Japan, the Netherlands and Portugal) exceeded the target level of 1 per cent. For some countries the percentage fell, in particular the United States which recorded a further decline from 0.66 per cent in 1972 to 0.58 per cent in 1973.

Terms of Total Resource Flow

Since flows at market terms increased their share in the total flow at the expense of ODA, terms would have hardened for this reason alone, but the effect was intensified by the general rise in market rates. It is difficult, however, to quantify the implications of this: the increase in the debt burden due to harder terms is to some extent offset by inflation, and it would seem that individual developing countries may be affected differently.

The Outlook

The outlook is difficult to assess in the present circumstances, but DAC Members have stated their determination to make all possible efforts to maintain and enlarge their aid flows to developing countries, and to improve the terms of their aid further. They are also prepared to extend relief assistance in various forms to the poorer developing countries which have been most seriously affected by the prices of oil and other essential imports and, in channelling their aid, to give priority to the countries whose needs are the greatest and most urgent.

Development Aid and the Population Problem

Following the recent article on this subject that appeared in the February 1974 edition of The OECD Observer, additional information was received from the United Nations Fund for Population Activities (UNFPA). The up-to-date situation on the UNFPA is as follows.

In 1972, the data for UNFPA show \$46½ million in resources, of which \$27.6 million

was allocated for use in 1972 or as soon thereafter as possible and \$18.9 million was "earmarked" for use in later years. Expenditure on action programmes in 1972 was \$18.1 million. The UNFPA is taking steps to solve the problem of the "pipeline"—the unexpended balance of 1972 allocations and the "earmarked" funds for future years—a problem common to many rapidly growing aid programmes.

THE MUTUAL ENRICHMENT OF SCHOOL AND COMMUNITY along with a few caveats

Increasingly educators believe that without close, effective working relationships with parents and community institutions they cannot mobilise the full resources they need to enable each child to achieve his or her full potential. With the problems, possibilities and limitations in mind, this has become a continuing consideration in the work programme of OECD's Centre for Educational Research and Innovation (CERI) and was the subject of a recent conference held in the United Kingdom. A small group of some thirty experts and practitioners in education, administration and community activities of fourteen Member countries participated.

At the very least, school and community must be mutually intelligible, if either is to be of any use to the other. At the most, a genuine partnership between the two in pursuit of a clearly defined goal can achieve valuable, enduring results. This view is being increasingly taken by educators as some of the earlier euphoria attached to the subject is replaced by realistic assessment of existing experience.

That much of this experience confirms belief in the value of partnership is beyond question. The goals of such partnership vary. Integration of social services for the child, problem-solving in and for an industrial setting—and hence curricular enrichment, perpetuation of styles of teaching or learning not necessarily found in mass systems: these are only three, and the list could be extended indefinitely.

Yet school-community integration is not the panacea it was for a time thought to be. The benefits from such programmes do not flow automatically. Practical application of the school-community ideal has encountered sobering difficulties. Furthermore, much of the rationale behind the ideal remains to be demonstrated and proven. Indeed, both the practical difficulties and the underlying, often conflicting, expectations may put the result of any particular programme very much in doubt.

Even a quick glance at some of the reasons usually given for school-community involvement indicates the limits, cautions and caveats that must be underlined. For instance, the *economics argument*—that money can be saved or used more efficiently by joint use of facilities. On the face of it, that seems self-evident. However, the law of diminishing returns may well operate in the case of community use of school scientific or domestic sciences equipment. At some point, increased wear and tear, maintenance costs, loss of teacher time (spent sorting and tidying up), begin to produce negative economic consequences.

The *pedagogical argument* in favour of school-community integration generally leans on the “learning-by-doing” and “reality-is-outside-the-school” axioms. Especially the latter.

Here a case may be made for the often disjointed, confusing “reality” outside the school which must be explained coherently *inside* the school, in a relatively calm and removed manner. May not that be a major job of the school?

It is exactly this failure to ask the right questions at the start, according to many experienced practitioners, that is behind many of the problems and failures of planned school-community undertakings. A realistic assessment of what can be achieved in specific circumstances and a similar evaluation of the motivations involved probably best explain a frequently observed phenomenon: successful examples of school-community projects are generally those which developed almost spontaneously in reply to a localised specific problem.

Such were the conclusions of the OECD Conference on School and Community, which found it useful to consider the entire subject in terms of five main themes:

- school-based community development
- use of community resources by the school
- “deinstitutionalisation” or end of the formal school
- relations between school and place of work
- consequences of community participation.

School as a Base for Community Development

The notion of “community development” initiated originally in the context of the problems of developing countries. The relationship of education or “the school” to the desired end was clear—literacy was universally regarded as basic in the transmission of skills through printed materials.

The goals of industrialised societies, however, are manifold and often contradictory. Thus it is not possible to produce models of community development which are appropriate for all contexts. In this sense it may be more useful to think of “community enrichment” in order to indicate the variety possible. Nevertheless, an analysis of the theories and attitudes underlying

community development or enrichment in advanced societies yields three "ideal types" or models:

• *The Universal Model*

Proponents of the first model, which can be called "universal", claim that there is a lack of community-mindedness and organisation among *all* sections of society, including the relatively affluent as well as the poor. Community development is seen as a panacea promoting mutual involvement and concern in societies where anomie and alienation have been dominant characteristics.

• *The Mainstream Model*

The second model is the mainstream of community development practice, particularly in the United States and the United Kingdom and generally in Western Europe as well. Unlike the first model, it is exclusively concerned with the problems of the *materially poor*, although its proponents believe its principles are universally applicable. The crucial theoretical distinction is that the second is largely devoted—in Seymour Lipset's phrase—to "tidying up the ragged edges of the good society". It is involved with attitudinal change among the poor and among those whose work impinges most directly upon the lives of the poor, particularly State and local authorities. The implicit, and often explicit, premise of mainstream community development is that the *major* problems confronting the poor are localised and their solutions can best be found in the immediate locality.

• *The Radical Alternative*

The third model is most easily described as a negative response, or radical alternative, to the first two. Its proponents argue that although the universal model is diagnostically useful in highlighting the nature of the disease, its usefulness is attenuated by its very universality. If the powerful affluent are viewed as having essentially the same problems as the powerless poor, then the causal link between the existence of the former and the existence of the latter is conveniently ignored, they assert. Further, they see much of mainstream community development as deliberately marginal in impact, not getting to core issues such as unemployment, poor housing and so forth.

• *Implications for School Involvement in the Community*

The school-community problem emerged primarily from the apparent failure of compensatory education programmes, that is, school-based attempts to improve the achievement of children from materially and culturally deprived backgrounds. The Headstart group in Mississippi (United States), for instance, was among those which argued that school-based projects were not enough, that the school must be related to wider community problems and school curricula changed in order to promote such a relationship. Other educational practitioners have come to the same conclusion.

Two attempts by English schools—representative of many such programmes there and elsewhere—to relate themselves to their immediate environment contain implications for educational and community development theory and practice.

The Lawrence Weston School, Bristol. Lawrence Weston itself is a large new housing estate, whose school is a compre-

hensive institution of about 1,000 pupils. When the school was being planned, provision was already made for adults as well as children in the school library. Success of the scheme led to a full-time Activities Organiser, whose job was to develop the use of the school for extra-curricular community purposes, covering at least twenty-four enterprises ranging from pop groups to wine-making and judo. Interrelationships among generations greatly developed (in the school choir are found a pupil, his parents and his grandparents). Future plans include a crèche which will allow mothers of young children to pursue courses at the school. School involvement in the community has had favourable effects on scholastic performance (over the last three years, the number of children staying on at school after the age of fifteen has increased by 75 per cent).

The Educational Priority Area Scheme, Liverpool. Most of the features of the Lawrence Weston School experiment were present in the Liverpool Educational Priority Area, but given the economically depressed, educationally deprived locale, they were difficult to implement. The Liverpool experiment was also explicitly more radical: it concentrated overtly on the contentious issues of curriculum reform and attitudinal change on the part of the teachers. Dr. A. H. Halsey's summary of the team's preliminary conclusions includes these recommendations: "the balance of the curriculum should change from 'academic' to 'social' and be based on the realities of the immediate environment ... Schools [should] increase the time devoted to creative pursuits in order ... to involve parents and community". Thus, "realising that education is about himself and his community just as much as about a more remote middle-class world, the child will gain a sense of his worth and parents will more readily give their interest and support". Such is Dr. Halsey's statement of the ultimate goal.

Use of Community Resources by the School

The very idea of making school use of community resources is closely related to the new orientations in education. In turn, the minimum or maximum use of these resources sheds light on the nature of the school involved, ranging from the traditional, or "straight" school, to the freer "school without walls".

Traditionally an entire class, or a smaller group, usually conducted by the teacher, makes a "field trip", paying a visit to a museum, a town hall meeting or even to a town hall without the meeting. Factories have since been added in the name of "social significance", though too often they are simply a diversion from daily classroom routine. Such field trips, however, have been elevated to a purposeful educational experience wherever the school has made the effort:

- to invest the expedition with a purpose beyond that of an "outing"
- to allow the student an opportunity for an experience deeper than that of a guided tour
- to follow up in a penetrating, comprehensive way back in the classroom.

Less traditional schools regard community resources as primary educational facilities. "Schools without walls", as an extreme instance, are totally decentralised. Each learning activity takes place in a community location, be it museum, hospital or bank. Whereas most "alternative schools" (see below) send their students out into the community as part of their educational philosophy and practice, the "wall-less" schools merge completely into the community, making the most exten-

sive use of its resources. The community *is* the curriculum, involving a radical transformation of the "school" as both structure and institution.

Deinstitutionalisation or the End of the Formal School

An "alternative schools" movement with its emphasis on smaller, more personal and more flexible educational settings is springing up in the United States. In some other Member countries similar schools have been recognised as part of the education system for some time. Begun outside, and in criticism of, the public school system, particularly in the United States, it is now beginning to affect it. Popular names such as open-concept schools, free schools and "schools without walls" help describe the movement. More precisely, "alternative schools" have these things in common:

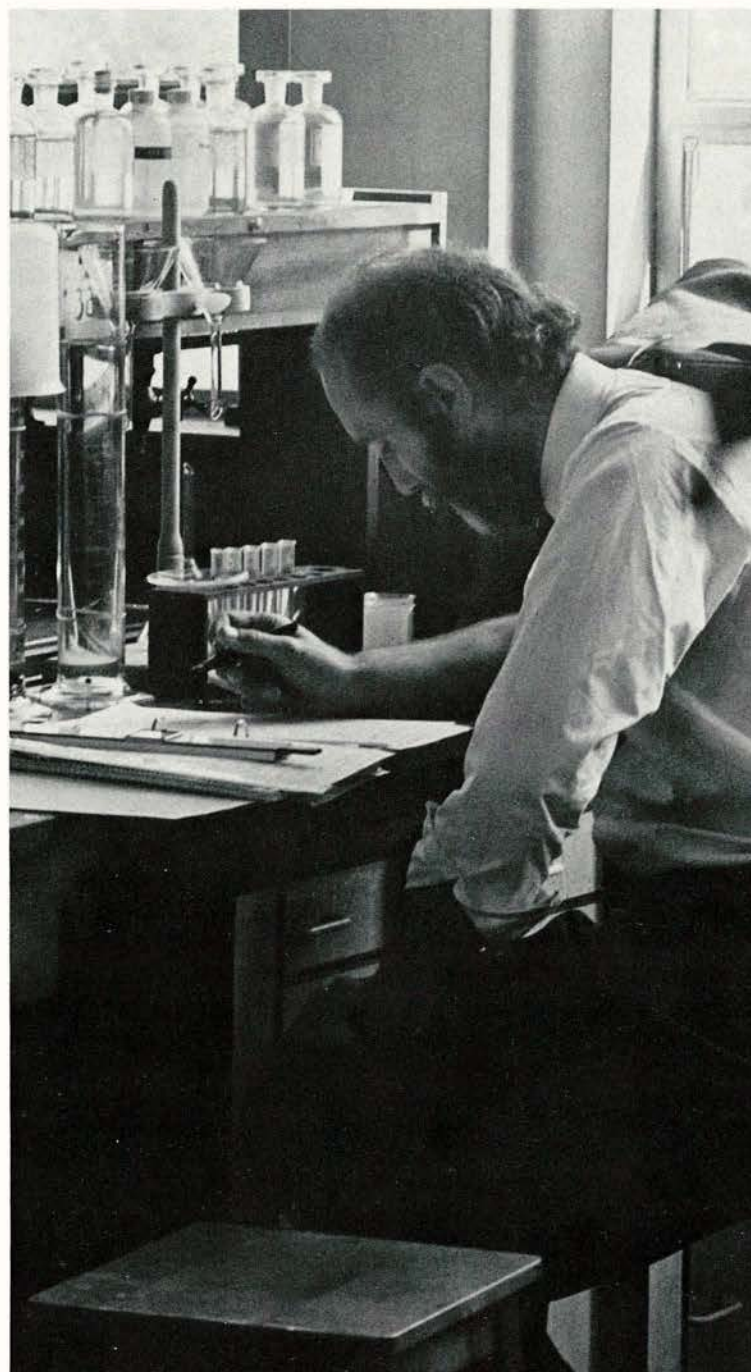
- they are usually—and increasingly—committed to respond to some unmet needs of a particular student subgroup
- they are usually committed to developing a more reinforcing and interactive relationship with the local community
- they are usually committed to learning goals and objectives other than—or in addition to—cognitive knowledge
- they are usually considerably smaller than the institution the students previously attended,
- they are usually committed to operating procedures which are the antithesis of large schools, emphasising flexibility, personal treatment and student involvement in decision-making.

The quantity of analytic literature on alternative schools is small (as on the subject in general), but the descriptive literature is large and the trade-off framework of gains vs. losses is still a useful measure. It can be applied to the practice of student involvement in decision-making, courses, instructional techniques, or more pertinent here, the use of community resources and interactions with parents.

• *The Next Generation of Alternative Schools*

Predictions are difficult, but possible directions for tomorrow's alternative schools might be indicated. There will be the development of a wide variety of choices (alternatives) which include not only—or even primarily—the content of instruction, but the nature of the institutional context within which the instruction occurs. The alternative schools will continue to be small, maximum size will probably be under 100 students. The schools will physically resemble collections of different kinds of buildings, each with an "alternative", spread across a few square blocks of a city with some core facilities—gym, cafeteria, theatre, machine shops, library—a short walk from any one of them. The facilities might well be available to the community.

New alternative schools will come and go as demand rises or falls. Leased building space will most likely be used, instead of the present capital investment in huge edifices, easing the phasing out of one alternative and replacing it with another. The administrative decision-making mechanisms for a school district will be difficult to develop, but not impossible. Dividing districts into a variety of small units, each with enough physical separation to allow it to evolve relatively freely into its own form with the power of self-selection by parents and students, could immensely reduce the difficulties schools now have, opening the way for much wider educational opportunity and experimentation—and the satisfying of more communities.



A science student works in the laboratory of the Open University during a one week summer session.

Relations Between School and Place of Work

To a considerable extent, the relationship between the school and the work-place or work-life is dependent on the inner organisation of the school. A crucial factor is the way a school or classroom task is viewed and programmed. In most schools, vocational or otherwise, learning tasks are generally structured as closed or "production-type" tasks, regardless of subject. That is, all is really known beforehand—every element is specifiable and the outcome virtually predictable. Neither the pupils, nor the teachers, have an opportunity to use imagination, creativity or the testing of various hypotheses. All is given in the textbook, the teachers' pointed questions and instructions, or in so-called self-instructional programmes. The predominance of this closed-task structure prevents good relations between school and place of work for several important reasons:

- the learning process is likely to encourage submissiveness, whereas increasingly society, including industry, is looking for people capable of suggesting new solutions to problems; there is much less need for people who are clever at repeating the old solutions;
- relations between pupils are likely to be split up, so that pupils do not acquire the important experience of co-operation and team work characteristic of the work-life;
- the curriculum tends to remain static, while new knowledge and problems increase at a growing rate outside the school-room;
- teachers are trapped in a role as intermediaries of possibly obsolete knowledge and limited in their possibilities of keeping in touch with new trends and developments in their fields as part of their daily job situation;
- it is more difficult to make interdisciplinary projects part of the learning process or to make use of situations or problems spontaneously occurring outside as well as inside the school.

As a result of the traditional, closed-task approach of most schools, pupils' perceptions and ideas about the work-life are generally casual and usually inaccurate. In turn, employers pay little attention to what the pupils have learned in school, planning to retrain them on the job.

● *Towards a New, Open Model*

The experiences of two Norwegian vocational schools indicate the kind of open model that might replace the more closed one just considered. The first is an industrial school of about 500 students and 50 teachers; the second is a commercial school of about 200 students and 20 teachers.

The first case involves work done in a two-year course on industrial electronics. Here students are not principally occupied in reading textbooks, solving hypothetical problems or spending time in listening to lectures. Instead, most of their learning tasks come directly from local industry. A company, for example, has an electronics problem which it does not know how to solve, and has approached the school about it. Students and their teachers go out to the company, make a sketch of the problem, gather relevant data on how the equipment concerned functions and under what specific conditions. Back in school, they organise work groups on the problem. As a solution begins to take concrete form, one group—or perhaps one pupil—is set to concentrate on the task, often building a simulation model.

If the students get stuck during the "research" process, they ask help of the teacher, who might have the answer, but who is equally likely to guide them to relevant literature, or give them a clue, then ask them to go back and rethink the problem. Finally, the practicality of the solution is tested by the company itself.

The second case involved a project, called "totally designed tasks", for the one-year class of the Norwegian commercial school. With the curriculum as the starting point, tasks were established which included a variety of such different subjects as book-keeping, typing, language, commercial arithmetic, etc. The tasks could be solved in an ungiven number of ways. The pupils worked in groups, each group finding its own way. To solve the problems, pupils would have to visit firms, banks, public offices, and the like. Tasks were designated by the teacher, but were of a very practical nature. The pupils themselves had to make contacts with the places of work. The experience of conducting inquiries and collecting data on the spot resulted in much more relevant and accurate information about

the work-life than in the usual closed-task school. In some situations the statements of textbooks turned out to be obsolete—and to have been so for some years. The learning process for both teachers and students was improved, as was the interaction of school and commercial community.

Consequences of Community Participation

"Participation" has become a catchword in the educational debate of many countries, "participants" including students, teachers, administrators and a school's community. Participation can be direct or by some form of representation, or delegation, active or passive; and it can occur at the action or at the policy level, or at both. The ultimate test is the effect at the action level.

Here the discussion of the consequences of participation is limited to those which have to do with the relationship of the school to its community or communities, about which these points may be made:

1. Most schemes for participation will lead to giving formal recognition to elements of the educational process which have previously occurred informally. Introducing persons not formerly within the teaching system will certainly tend to perturb the present system. It will also mean that students must respond to their peers, their parents and their communities while still in school. Reciprocally, the school will be in a position to influence parents and communities in heretofore unexplored ways: its formally recognised activities will expand far beyond the limits of the traditional formal curriculum.
2. Participation will tend to make manifest the motivation of the participants in the educational process, making them more effective in their roles. Bringing parent or community groups into the schools can have a significant effect on student motivation by making what goes on in schools more relevant. As for teachers, participatory arrangements serving to make them more effective in their role will increase their prestige in their own as well as in other eyes, thus heightening their own motivation.
3. Participation arrangements will make it possible to develop new educational roles over a flexible educational spectrum, reducing overall role antagonisms. For a considerable time, however, there will be a confusion of standards, that is, a tendency to emphasise process—"learning to learn"—over content, as in traditional schooling. At the same time there will be a continued call for criteria to evaluate participation schemes as well as any new resulting self-selection process.
4. Participation will tend to reduce the importance of the traditional students/teachers format of education. A multiplicity of new roles will be created in schools, from school psychologist to poet-in-residence. Parents and other community resource persons entering the system will introduce a new master/apprentice relationship. Together they will create what might be called "the educating society", to indicate the new, richer relationship of school and community.
5. Certain forms of participation will vitally affect the economics of schools. A higher motivation among students will make for less costs, as the experience of London's Open University has demonstrated (its costs are consistently under those of comparable institutions). Capital investments could well be considerably reduced, as shown in the extreme case of the Parkway School of Philadelphia, which has gone all the way in abolishing its school buildings and using the community as its school.

ACTIONS AND STRATEGIES FOR NOISE ABATEMENT

with emphasis on economic incentives

The Urban Environment Sector Group of OECD's Environment Committee has examined what has actually been done about noise by Member countries, particularly in Europe. Further, the Group has assessed strategies for the continuing reduction and containment of noise nuisances with an emphasis on economic incentives.

Noise consistently rates in public opinion polls as the *single most disturbing factor* in urban living. What is more, all noise measurements made in OECD Member countries point to traffic noise as the principal offender in populated areas. (Aircraft noise may be worse (1), but a comparatively fewer number of areas are affected). In the case study approach just taken by OECD's Urban Environment Sector Group (which is the basis of this article), what has been done about vehicular noise has been given first consideration. Problems of industrial and construction noise follow.

Controls on Use of Vehicles and Aircraft

Measures for controlling noise from vehicles in use are now being applied in most European countries. Further work within the International Standards Organisation (ISO) is in progress on even better techniques for measuring sound production by individual road-users, a prerequisite for more effective enforcement and control. In Switzerland, the long-established restriction on the movement of heavy vehicles at night, which was extended to all day on Sundays, is being enforced without undue dislocation of commerce or excessive traffic flows on other days. In Lausanne, a particular effort is being made by a *police noise squad* to ensure observance of vehicle use regulations relating to noise. During the past ten years the squad has called in for testing 20,000 vehicles because of excessive noise. The main offenders were two-wheeled vehicles. Only a very small number were trucks. During the same period 1,900 vehicles were impounded for noise infraction.

The initiative for *aircraft noise emission* limits, as for new vehicles (see immediately below), is now effectively at the international level, but aircraft *use* regulations on the national level are in operation as well. In many European countries, there is noise-control and regulation of landing and take-off procedures, and a ban on night flying from international airports which apparently operates without undue distortion of air-traffic flows at other times.

Noise Emission Limits for Vehicles and Aircraft

Action to improve noise emission standards for new motor vehicles in Europe is now effectively dependent on EEC directives, which are binding on all major western European car-producing countries (except Sweden). Discussions are underway in EEC's Working Party on Vehicle Construction to adapt methods of vehicle noise measurements more closely to actual

driving conditions in urban areas, and to devise easier methods of measurement for enforcing limits on vehicles in use. As for new vehicle noise limits, in the United Kingdom, the Transport and Road Research Laboratory has recommended target limits of 75 dBA for private cars and 80 dBA for commercial vehicles by about 1980 (2).

The initiative for new vehicle noise emission standards has shifted in effect from the national to the international level. Similarly, noise emission standards for new aircraft, both in Europe and throughout the world, are now determined within the context of the International Civil Aviation Organisation (ICAO).

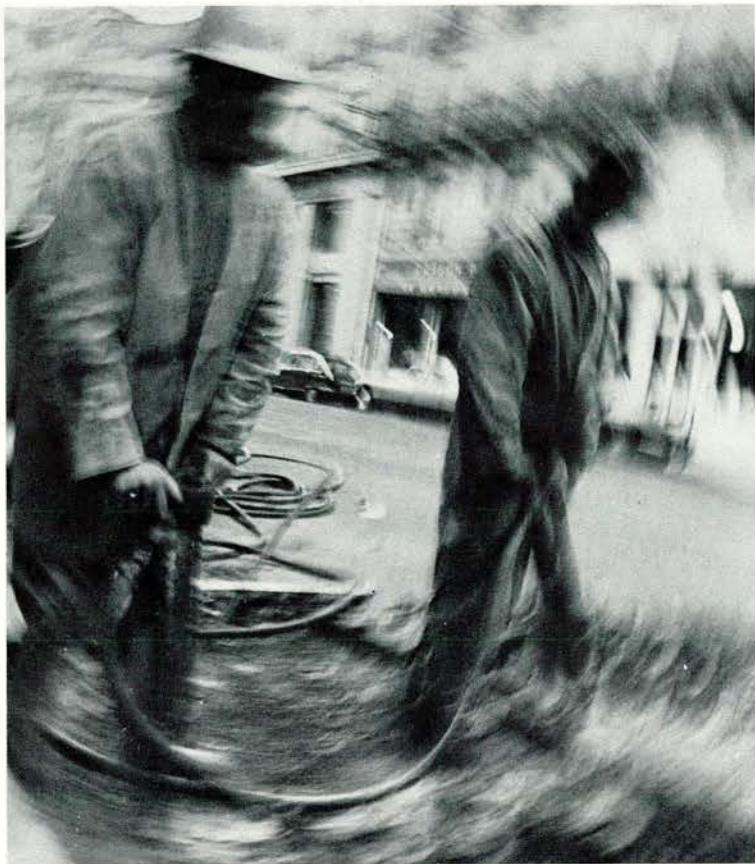
Construction Noise

Construction noise is under particular attack in at least four European countries. In France, according to regulations decreed in 1969 and 1972, certain types of new construction machinery must be approved by the national government. In addition, retrospective regulations require that certain basic noise-reduction devices be fitted to old equipment which does not now have them. Regulations concerning likely future types of new equipment are in preparation. A double standard is being observed: requirements are less strict for equipment which is used more than 50 metres from buildings. This mitigates the retroactive effect of regulations on existing equipment. The French objective is to work towards a limit of 80 dBA (measured at a distance of 7 metres) for equipment intended for use in urban areas.

In Switzerland, action to regulate construction machinery has been left largely to Cantonal authorities, although under powers acquired in 1971, the Federal government is planning to introduce an Environmental Protection Bill which will most probably include noise emission standards for construction equipment. In West Germany, the Construction Noise Act of 1965 authorises the Federal government to lay down construction equipment noise emission limits. One feature of these regulations is that they include a built-in reduction of the relevant limit—usually 5 dBA—at a specified date. Equipment which already meets the future limit is officially designated as "in compliance with advanced noise abatement specifications", the intention being

(1) See "Aircraft Noise: the Problem and What Can Be Done", The OECD Observer, December 1973, pp. 32-33.

(2) The "dBA" is the "A"-weighted decibel which involves subjective reactions to noise.



to make such equipment more attractive to purchasers and thus to producers.

Apart from these noise emission standards for construction equipment, there are or will be measures for dealing with the total noise emission on construction sites. The German Construction Noise Act provides for overall site-noise limits varying according to neighbourhood noise sensitivity. The forthcoming Swiss Federal Environmental Protection Bill will include construction site-noise limits. Under powers contained in a Protection of the Environment Bill reintroduced this year in the British parliament, local authorities would be able to set noise requirements for construction sites, in consultation with the contractors, before construction begins. These powers would be additional to the private citizen's right to institute a court proceeding against any private-sector noise-maker (see below).

Industrial Noise

Industrial noise has some of the characteristics of construction noise, but is not similarly limited in duration. Measures to control industrial noise are being taken in Germany, where regulations made under the 1968 Industrial Noise Act set limits for noise from industrial premises, varying according to type of locality. In Switzerland, the Federal Employment Act of 1964 requires advance approval for projected industrial installations to ensure compliance with noise "reference limits" drawn up by a Federal commission of experts. Under the terms of the UK Protection of the Environment Bill, powers would be given to local authorities for establishing "noise zones" in which special action could be taken against industrial noise. Noise levels at factory boundaries, according to the Bill, would be measured and officially registered. It would then be an offence to exceed these levels without permission. The latter might be granted if a factory were to expand, for example, or go from part-time to full-time operation. The next stage for the noise abatement

operation will be to reduce the permitted noise levels at factory boundaries within the "noise zone".

The United Kingdom approach differs from that of other countries of Europe (as well as from that taken by Japan and the United States) insofar as no *general* limits are rigidly established. This is in accordance with the United Kingdom's noise-control philosophy that any such general standard must tend to be either too stringent to be reasonably enforceable in all situations, or too lax to be really effective in all but a few localities. It is felt that the system envisaged by the Protection of the Environment Bill will allow local authorities the proper scope for bringing about the most practicable improvement in their areas. The limit of reasonable demands for noise control often depends on public attitudes, which may differ from one area to another.

Land Use Planning

In addition to noise abatement at source by design modification of vehicles and equipment, several Member nations have also adopted land-use planning policies in order to avoid the creation of new noisy situations. In the Netherlands, for instance, the development of land adjacent to roads is classified into three zones—"red", "orange" and "green"—depending on the degree of exposure to noise. The use of these zones differs according to the classification. A "red" zone indicates unsuitability for such uses as dwellings, for instance, though factories or warehouses might be permitted and encouraged. An "orange" zone indicates that noise-sensitive uses could be permitted, provided that the buildings are specially designed for protection against road noise. A "green" zone indicates suitability for any use otherwise acceptable.

Germany, France, Switzerland and the United Kingdom already practise or shortly envisage the practice of land-use zoning in areas surrounding airports in order to prevent additional noise-sensitive development in the most exposed areas. In France, planning the new town of Le Vaudreuil (near Rouen) from scratch so as to anticipate and prevent in advance noise nuisances is an example of the ideal planned approach in a highly sophisticated form. Here the layout of the new town, as originally envisaged, was modified when tests using a scale model showed that it would result in unacceptable noise exposure of dwellings when traffic flows were at a peak. However, even in this case it did not prove possible to segregate dwellings from main traffic arteries sufficiently to avoid a noise disturbance, so screening techniques had to be employed to produce satisfactory degrees of noise attenuation. Such systematic planning, however, is only possible in the rather small number of developments which start from a "green field" site.

The UK Land Compensation Act of 1973 contains provisions intended to tackle the problems which arise when major public works, particularly road works, are constructed in built-up areas. The Act, in the first place, empowers highway authorities to acquire land, by compulsory purchase if necessary, in addition to the minimum required for the execution of the road works themselves, in order to provide measures for reducing the noise-disturbance anticipated by the traffic. These measures might include earth barriers as well as planting and screening. Houses adjacent to new or reconstructed roads, according to the Act, may qualify for noise insulation, at public expense, of doors and windows of the exposed façades. This depends on whether a prescribed noise level—over 68 dBA, L_{10} (3)—registered at

(3) Noise level exceeded during 10 per cent of the time = frequent peaks of noise.

these façades, is exceeded, or will be exceeded within fifteen years. Monetary compensation is made to owners, if the value of their property declines, despite the provision of insulation, as a result of use of the new or reconstructed road.

There are additional forms of payment for owner occupants or tenants who lose their homes as a result of road construction. The Act also applies to disturbance caused by the use of new public facilities other than roads, such as airport facilities. Its main benefit, however, is seen as occurring in the area of road developments. Though compensation for noise nuisance is not in itself a noise abatement measure, the fact of compensation is expected to influence the selection of routes for new roads so there will be less outlay in compensation.

Under the UK Protection of the Environment Bill, the existing procedure provided by the Noise Abatement Act of 1960, enabling private citizens to invoke the assistance of the courts against noise-makers, would be simplified, so that a *single* individual could refer a nuisance to a magistrate without having to get the support of two other people, as formerly. This procedure is effective in practice, however, only against fixed sources within the private sector. It would be a defence for the noise-maker to show that he was employing the "best practical means" for reducing the noise. The right of the individual to initiate action in the way described supplements the existing right and procedure by which local authorities may serve formal notice on noise-makers.

Strategies for Noise Abatement

What has been done about noise control and reduction among Member countries, with European case studies selected as examples, suggests what can be done elsewhere. Exemplary principles of advance planning and application of the best available technology appear in each successful case. In addition, OECD's Urban Environment Sector Group examined the advisability of engaging the public in noise abatement through adequate education programmes and information campaigns, if only to make it more aware of the need to behave in such a manner as to avoid producing unnecessary noise. A practical code of compensation for the affected public (here the example of the United Kingdom is particularly pertinent) would further enlist popular support as well as ensure that those affected by public and private works are properly protected and recompensed.

Moreover, two specific strategies for reducing noise were studied by the OECD Group with an emphasis on economic incentives as a generally practicable approach to the problem :

● *Aircraft Noise Charges*

The use of noise charges could make a positive contribution to dealing with the environmental problem of aircraft noise: such charges, employed in *conjunction* with current and certain future noise control measures, might well become a productive and effective complement to those measures. Further, if used as an *element* of a *comprehensive* programme of regulation, rather than as an alternative to regulation, noise charges could perform two useful functions:

- serve as a primary financing mechanism for airport-region noise abatement measures; and
- serve as an additional incentive to aircraft operators—and in turn to aircraft and engine manufacturers—to allocate aviation resources toward production of quieter aircraft than the minimum standard demanded by any current source-noise regulation.

However, since this is a new concept for many Member countries and raises interesting issues of principle and implementation—such as effective level of charges, etc.—careful and detailed studies will be needed before it is generally applied.

Any given standard could best be achieved in the case of airport/community noise if a *combination* of possible actions is utilised.

The same principle would apply equally well to motor vehicles and fixed sources of noise, such as industrial plants.

● *Product Labelling Requirements*

A large number of products currently on the market have noise emission characteristics which are disturbingly high, if not excessive for users and neighbours. They include many household appliances—e.g. vacuum cleaners, washing machines, lawn mowers, power tools—and such things as heating and ventilation equipment, portable air compressors, construction equipment and recreational vehicles—motor boats, snow-mobiles, etc. Most of these products are sold in international trade. Public interest could be served by requiring such products to carry a label or notice stating the level of noise emitted. Such a requirement could :

- identify in the minds of the public those products which emit noise capable of adversely affecting public comfort and perhaps even public health;
- provide information to potential buyers about the comparative noise emission characteristics of different makes or models of the same product;
- act as a market incentive to manufacturers for development of products with acceptable noise characteristics;
- help to provide an effective data base for identifying and setting standards for different sources of noise.

However, before establishing the noise labelling requirement, several questions remain to be resolved, such as :

1. What units of measure and what measurement techniques should be used to describe the noise characteristics of the labelled product?
2. To what extent should noise labelling requirements be made internationally uniform?

There are other practical problems, but past experience with labelling suggests that such requirements for noise would not pose special hardships on industry or create special enforcement problems for regulatory agencies. A number of hazardous products, such as radiation devices, have been so labelled for many years. However, because of the lack of apparent cause and effect in the case of most noise nuisance—witness the long time required to produce a loss of hearing—the labelling programme alone might not be as beneficial as intended, unless supported by public information programmes.

What is required is a carefully constituted campaign in which the labelling effort is recognised as an educational measure, part of a *larger* programme of public awareness of the importance of controlling noise, whether from washing machines or supersonic jets. Again, this a principle of general applicability in noise abatement.

Having assessed these strategies for the reduction of noise, OECD's Urban Environment Sector Group is now undertaking an examination of the practical problem of their implementation—with an emphasis on economic incentives.

Highlights from

OECD ECONOMIC OUTLOOK

JULY 1974

15

STABILISATION POLICIES - AIMS AND PROSPECTS

The economic situation facing OECD countries today is more difficult than for many years past. Inflation has recently accelerated further and is now running at an unprecedented and alarming rate. The OECD area's balance of payments on current account has swung from its normal surplus to a position of very substantial deficit which may continue for several years and which at present is very unevenly distributed among the Member countries. The rate of expansion of real demand and output has been checked in the first half of this year as indeed was necessary after the very rapid growth of the preceding period but this development entails some dangers of the slowdown going too far. Co-operation and consultation between governments have never been more necessary than they are today, given the unaccustomed and troubled waters on which the world economy is now embarked.

The Economic Prospects

The forecasts presented in the current Economic Outlook suggest a continuation of inflation at very high rates as the price rises for oil and other commodities continue to permeate through OECD economies. Some reduction through the period can be hoped for as the stimulus from these sources declines. There is a danger, however, that high rates of inflation will be kept going by a wage-price spiral, as different groups within the community struggle to offset the large changes in relative prices that have occurred and to maintain their real incomes. Growth prospects are, for the moment uncertain. After the decline in output in the first half

of this year, a moderate recovery of 3 to 3½ per cent is forecast over the next 12 months. The decline in total OECD output in the first half of this year was largely due to the marked fall in output in the United States, Japan and the United Kingdom, and the recovery projected for the second half of this year reflects to a great extent the reversal of these exceptional movements. Prospects for the first half of 1975 can only be indicated in a tentative way and there is a risk that the outcome could be below the forecasts set out in this report.

The sudden swing in the balance of payments will put the OECD countries as a group into a deficit on current account of as much as \$40 billion in 1974. The total deficit is distributed in a very lop-sided way between countries, partly as a result of contrasting domestic demand pressures at the start of the year. Germany is expected to increase its surplus substantially in spite of higher oil prices, and the United States is expected to have only a small deficit; other OECD countries may thus have to share a deficit of about \$45 billion, or on average nearly 3 per cent of GNP. For some countries, the prospects are particularly striking. Projected deficits on current account for the United Kingdom and Italy in 1974 are of the order of 6 per cent of their GNP and several smaller countries also fall into this category. Some progress in redistributing the deficits between countries can be expected by the first half of 1975, but it is not a problem than can be solved quickly.

Demand Management

Virtually all governments may be faced with difficulties in combining employment and price-stabilisation objectives. Most are also faced with the need to determine how much of their current payments deficits they can reasonably expect to eliminate quickly, and how much they must—jointly—accept until structural changes eliminate the present imbalance between oil producers and consumers. For the countries which already had large payments deficits before oil prices rose, a decision to favour the introduction of slack in pursuit of the aim of price stabilisation would also work in favour of better external equilibrium. But there are some countries where the needs of internal and external equilibrium pull in opposite directions. Under these circumstances there is, to a greater extent than ever before, a need for clear understanding as to the nature and strength of the forces at present at work, and as to the relative weights to be attached in the immediate future, by each government, to the aims of employment, price stability, sustainable payments balance—and help for the poorer countries of the world. The OECD was set up to help countries to pursue all these medium-term aims with as little conflict as possible. But in difficult periods temporary choices have sometimes to be made between degrees of priority, and if these choices are worked out in common, there is less risk of incompatibility. This is especially important in the present situation given the possibility that inflation could get worse or that economic slack could develop more quickly and to a greater extent than forecast.

With inflation running well into double figures, the struggle to reduce it takes first place among the aims of most OECD governments. Last year, excessive demand pressures built up rather generally throughout the area. It is only now that it is becoming clear that the recent sharp slowdown in growth, together with the trends forecast over the next twelve months, indicate a substantial reduction of aggregate demand in relation to supply capacity, both for internationally traded commodities and within countries. In most countries supply problems are disappearing and it is probable that excess demand as such is no longer a general problem. There may be some countries where further contrac-

tionary action is desirable, but in others the reduction of demand could go too far.

The reduction in demand pressures that has already occurred constitutes a necessary condition for control of the inflation at present built into Member economies. By itself, however, it may not be sufficient, even though spot commodity prices are likely to continue to fall. One response is to rely on a trade-off between inflation and the degree of slack in the economy. Experience of this during 1970-1971 was unfavourable in many countries, some of which came to rely more and more on prices and wages policies of various kinds. But here, again, recent experience was in many cases unfavourable—as is perhaps inevitable in a period of excess demand and adverse movements in the terms of trade. A fundamental question concerns the intensity with which the demand-management weapon should be used in the period immediately ahead. In some countries a high degree of slack should help to moderate price and wage rises; in others a large slowdown in real income growth might make the situation worse.

Some of the rise in commodity prices may be irreversible. But to the extent that commodity prices can be expected to fall back, a possible strategy would be to use fiscal policy to support real personal incomes and to moderate expectations of price rises. Some smaller countries have followed this course, and have obtained a certain moderation of wage increases as part of the bargain. Though there has been a retreat from the use of incomes policies, particularly in some large countries where they have not produced lasting good results, it may be that they will be tried again in more favourable conditions. In some countries various types of indexation, of tax brackets, pensions, and social security benefits, may be a useful adjunct to other policies in lowering inflationary pressures, and offsetting the effects of inflation on the hardest hit sections of the community. Wage indexation has dangers in a time of rising commodity prices; but when these are declining, such indexation could, in certain cases, be helpful in reducing money wage pressure.

Besides the general balance-of-payments problem created by the rise in oil prices there are some specific imbalances between Member countries which have assumed such dimensions as to require urgent corrective measures. These imbalances developed last year before the rise in oil prices, with the United Kingdom, Italy and some other countries moving into heavy deficit on current account and others—Germany and the Netherlands especially—into surplus. There is little sign up to the present that the changes in exchange rates which have taken place will succeed in correcting the position quickly. Exchange-rate changes normally take a considerable time to have positive effects; but in the present case a large part of the explanation for the imbalances would seem to be the low level of domestic demand in the surplus countries and the high level, at least until recently, in the deficit countries. Thus the deficit countries have not had spare resources on anything like the scale of their current account deficits and the industries of the surplus countries have had to depend on the growth of foreign demand for their expansion.

To correct this situation, either a faster growth of home demand should take place in the countries with strong payments positions or a slower growth in the countries with weak payments positions, or some combination of the two. There is scope for discussion as to respective responsibilities, especially since moves in either direction may conflict with domestic policy objectives. The countries in a relatively strong position are greatly concerned to slow down inflation by restraint of demand. Some of the deficit countries have already taken action to restrain demand, and this—in combination with relatively competitive exchange rates—should

serve in time to correct at least the non oil-deficits. The adjustment process could be speeded up to the extent that stronger countries can induce a moderate growth of home demand without prejudice to their firm stand against inflation, and the deficit countries can restrain their home demand with reasonable expectations of substituting increased exports and so avoiding too sharp a conflict with domestic objectives. In deciding the appropriate nature of corrective action, in both deficit and surplus countries, the timing of policy measures is of even greater importance than in previous periods of difficulty.

By normal standards the prospects for demand and output presented in this *Economic Outlook* would be regarded as a cause for concern, and some Member countries would be considering steps to avoid unemployment. But the rate of inflation is so bad that a fairly prolonged cooling-off period is widely recognised to be necessary after last year's excessive demand pressure. Though the forecasts suggest growth from now on at less than the normal potential rate for the OECD area, their achievement may be regarded as acceptable in view of the urgency of tackling the inflation problem. If demand moved in line with the forecasts, it is probable that some relief from inflationary trends would appear in all countries because of weaker commodity prices and more stable oil prices; and in many countries, the envisaged slack should help in slowing down the wage/price spiral as well. Some progress towards a less uneven balance-of-payments picture is forecast; though slow, this could be considered satisfactory in view of the difficulties of the present situation. An overall picture of this nature would be tolerable.

The Need for Co-operation

No short-term forecast can be accepted at the moment without a high degree of reserve. The assumption of a continuation of present economic policies which underlies the forecasts is, in itself, hazardous when many countries are facing situations of a kind they have never met before, with large and unevenly distributed balance-of-payments deficits. Initial fears of a scramble for current-balance positions have so far proved unfounded. At the recent OECD Ministerial meeting, all governments, conscious of the danger of conflicting attempts to improve national competitive positions, agreed upon a declaration stating their determination to avoid recourse for a period of a year to new restrictions on trade or other current transactions. The importance of this lies in the fact that a series of competitive reactions of a trade-restricting, or deflationary kind could markedly increase the risk of world recession without, in all probability, having much effect in redistributing the deficits.

DOMESTIC PROSPECTS

Demand and Output

The OECD area has just gone through the most exceptional deceleration of growth ever experienced. For the seven major countries combined (see Table 1), growth of real GNP in the first half of 1973 was at about 8 per cent per annum; the latest available indicators suggest that output fell in the first half of 1974, probably at an annual rate of $1\frac{1}{2}$ per cent, with most countries participating in the deceleration. Thereafter, a resumption of growth is expected at about 3 to $3\frac{1}{2}$ per cent per annum through to mid-1975, substantially below the longer run trend rate of the OECD

The current-account deficits will only prove acceptable if they can be financed. So far, the strains connected with financing have been limited, but the problem is a cumulative one. Much of the oil money to date has gone into very short-term money market instruments. But the demand for funds by countries needing to finance current-account deficits is relatively long-term, thus posing a problem of intermediation. Though changes in the structure of interest rates may go some way towards solving the problems, official recycling arrangements are also desirable as a safety net. Special financing arrangements may be needed, at short notice, for some of the harder-hit poor countries. The declaration of OECD Ministers included agreement that the financing of international payments deficits would constitute a difficult problem for certain countries, and that Member governments would co-operate fully to facilitate such financing.

A failure to finance the deficits could have widespread repercussions, not only in its likely effects on policy action. There is an implicit assumption in the forecasts that confidence factors will be reasonably favourable. If confidence among consumers and investors were to collapse, because of difficulties arising from national or international monetary developments, cumulative contractionary forces could be set loose which would be difficult to arrest.

Careful policy adjustments are likely to be necessary if the aim of most OECD governments to maintain, in the interests of better price stability, a certain but limited margin of slack in their economies for a sufficient time is to be achieved. The delays before policies can take effect must be given due weight if instability is to be avoided. No governments are prepared to accept a major recession and heavy unemployment, and it is reasonable to assume that they will follow policies to avoid this. The problem is to achieve the appropriate timing of demand management measures. The required stabilisation policy needs to guard against two particular dangers. If world demand grows more strongly than foreseen, there will be little chance of reducing the extremely high rate of inflation; if, on the other hand, demand grows less than foreseen, there is a danger of a recession which would no doubt have an impact on inflation but which might soon lead to an excessive reversal of policy, thus preparing the way for a new burst of inflation later.

When government policies or business decisions move simultaneously in the same direction in many countries, their cumulative effects can easily be underestimated. This, indeed, was the case in the generalised boom of 1972-1973. It is essential that in the coming year excessive and mutually reinforcing impulses, either deflationary or inflationary, be avoided. It is, therefore, of the greatest importance that governments consult closely and frequently about developments in each other's countries.

area, and almost certainly entailing a continuing increase in unemployment in a number of OECD countries. The slow growth situation is expected to be accompanied by rapid price inflation, with the GNP deflator for the area forecast to rise by 11.5 per cent in 1974, and consumer prices by about 13 per cent (see Table 3 for seven major countries). By the first half of 1975, however, some reduction in the rate of inflation can be expected, as most of the oil price rise will have worked itself through and the general price level should respond to the fall in spot commodity prices.

The marked deceleration and subsequent recovery is largely the result of developments in certain major countries. *Germany* was

Table 1

Growth of real GNP in seven major countries

Percentage changes
Seasonally adjusted
at annual rates
Estimates and
forecasts

	Average 1959-60 to 1970-71	From previous year			From previous half-year				
		1972	1973	1974	1973 I	1973 II	1974 I	1974 II	1975 I
Canada	4.9	5.8	7.1	5	9.2	4.8	6	3½	5¼
United States	3.9	6.1	5.9	-½	6.9	2.7	-2¾	1½	3
Japan	11.1	9.4	10.3	-1½	12.9	3.1	-6½	4½	7¼
France ^a	5.8	5.5	6.1	4¾	6.6	5.5	4¾	4½	4¼
Germany	4.9	3.0	5.3	1¾	9.1	0.3	2	3½	4¼
Italy	5.5	3.4	5.4	3½	4.2	9.8	2½	0	1½
United Kingdom ^a	2.9	3.5	5.4	-2	8.4	0.4	-6	4½	1¼
Total of above countries ^b	5.3	5.8	6.5	½	8.1	3.0	-1½	2¾	3¾

a) GDP.

b) 1973 weights and exchange rates.

expected, even before the oil crisis, to decelerate sharply from the rapid growth of the first half of 1973, reflecting a tight policy stance. In the event, domestic demand in the second half of last year was even weaker than expected, and the recovery through the forecast period reflects, in part, the surprising buoyancy of demand for German exports. In the *United States* the slowdown occurred in the second half of last year, but developments this year, reflecting in part the energy crisis, suggest a considerable fall in output in the first half followed by only a weak recovery over the next twelve months. *Japan* was especially vulnerable to the oil crisis, and the direct effects of the shortage, together with policy measures, first to conserve energy and then to fight inflation, led to lower than expected growth at the end of last year and a sharp decline in output at the beginning of 1974. The *United Kingdom* also experienced very low growth in the second half of last year but the decline in 1974 and subsequent recovery reflect the introduction of the three-day work-week following the energy crisis and the miners' dispute.

The picture for most other countries is one of much more moderate deceleration from last year's generally high growth situation (see Table 2), implying in some cases—*Austria* for example—a continuation of high demand pressure. In *Italy*, however, where the expansion lagged behind that of other major countries in the recent coincident boom, and in which fast growth was expected to continue in 1974, the advance is now likely to flatten out, following recent moves to tighten monetary and fiscal policy. Exceptions to the general picture of slower growth are *Norway* and *Sweden*, both of which are expected to grow faster this year than last. Some rebound from the negative growth rates in the first part of the year is likely in the *United States*, *Japan* and the *United Kingdom*. The continuation of the recovery into 1975 is of course subject to great uncertainty.

Whatever weight is given to supply problems and sectoral aspects (such as the decline in automobile purchases) in explaining both the slowdown in activity and the increase in inflationary pressures, there is now evidence that the pressure of demand has weakened over the last four quarters in all major countries other than *Canada* and *France* (Chart A).

The last major economic slowdown in the OECD area was in 1958, but there were some important differences. Developments were led almost entirely by the *United States*, where real national income declined sharply in the last quarter of 1957 and the first quarter of 1958. Expansionary fiscal action had been taken in the *United States* in the middle of 1957, however, and the economy experienced a sharp turn-around in the second half of 1958. Although the course of world trade experienced a temporary setback, and certain commodity prices fell abruptly, other Member countries, were affected to only a moderate extent, because a

Table 2
Growth of real GNP in other Member countries
Percentage changes; estimates and forecasts

	Average 1959-60 to 1970-71	From previous year		
		1972	1973	1974
Major seven countries ^a	5.3	5.8	6.5	½
Australia ^b	5.0	2.6	5.8	4
New Zealand	5.2	4
Belgium	4.9	5.4	5.7	4
Netherlands ^b	5.3	4.4	4.7	2¾
Denmark ^b	4.8	5.0	4.0	2½
Ireland	4.0	4.0	7.0	3½
Other OECD North ^{a c}	4.7	4.9	3.7	3¾
Austria	4.9	7.1	5.5	4½
Finland ^b	5.2	7.1	5.4	3½
Norway ^b	5.0	4.5	3.7	5
Sweden ^b	4.3	2.5	1.7	4¼
Switzerland ^b	4.6	5.8	4.5	2¼
Other OECD South ^a	6.9	8.3	8.1	5
Of which:				
Spain	7.2	8.2	7.9	5
Total OECD ^a	5.3	5.7	6.3	1
Of which:				
Europe ^a	4.9	4.3	5.3	2¾
EEC ^{a d}	4.9	4.0	5.5	2½

a) 1973 weights and exchange rates.

b) GDP.

c) Including Iceland and Luxembourg.

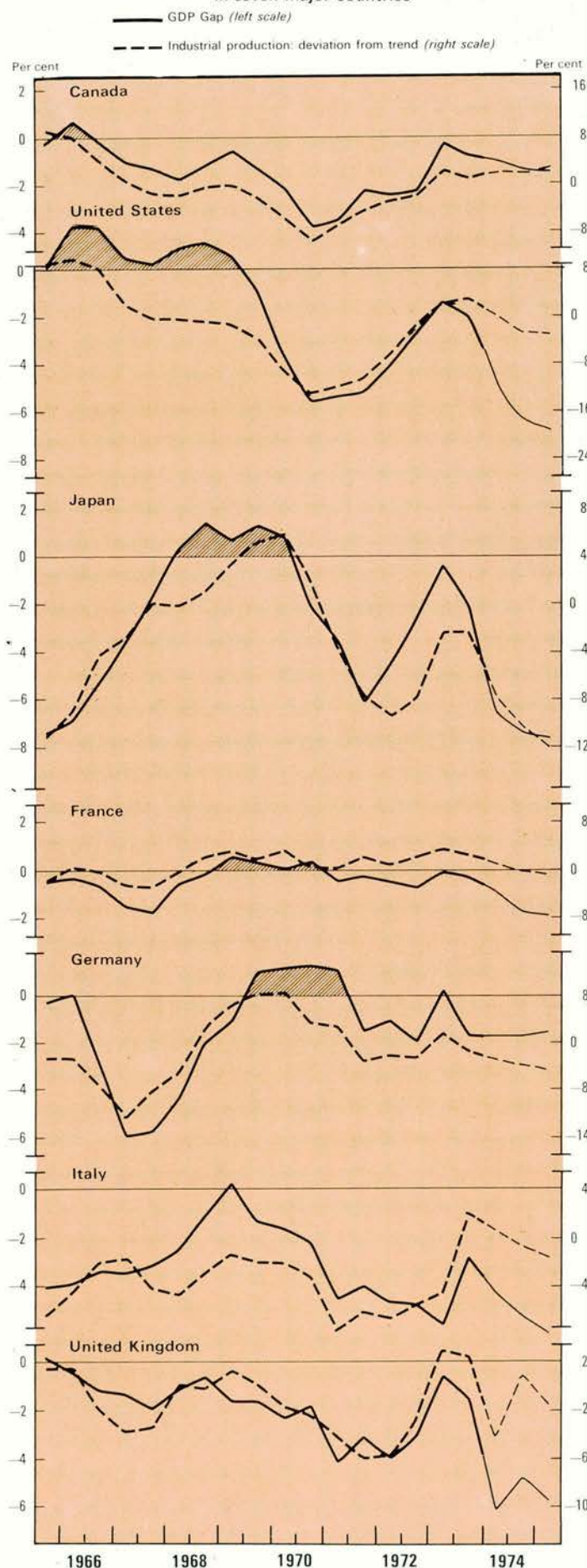
d) Enlarged Common Market.

number had already taken expansionary action, and no major restrictive action was taken. In the present situation, however, three large economies, the *United States*, *Japan* and the *United Kingdom*, are expected to show declines for the first half of this year, and in addition, a number of countries have taken measures which will reinforce the restrictive policies adopted throughout 1973 and the deflationary impact of the oil price rise.

• The Policy Position

Monetary policy has converged internationally in recent months towards a more general position of restraint, with record or near-

CHART A
PRESSURE OF DEMAND
in seven major countries



record market rates of interest prevailing in most countries, the most notable tightening of monetary policies having occurred in the *United States* and *Italy*.

Recent *fiscal action* has exhibited more variation. In *Germany*, which was conjuncturally weak in the latter part of last year, the restrictive tax measures of May 1973 were abolished in December. This action, expected to result in a reduction of the financial surplus of the public authorities from DM 13 billion in 1973 to DM 1 billion in 1974, may help to counteract the weak cyclical development of domestic private demand. In some other countries fiscal policy has moved to counteract the oil impact—especially in *Sweden* where the offset is more or less complete and an increase in growth is expected from the low rate experienced in recent years, and in the *Netherlands*. Tax cuts or real expenditure increases have occurred, however, in rather few countries, and the overall impact of the area's external current account deficit has not been offset. In the *United States*, budget revisions imply a continuation of the policy restraint of last year, with some increase in the Federal Government deficit due to the low growth situation. In *Japan* and the *United Kingdom* the present fiscal policy stance is very contractionary, and recent moves in some countries, notably *Denmark*, *Belgium*, *France*, *Italy* and *Japan* have further tightened the stance of fiscal policy.

• Unemployment

Unemployment in most Member countries has been relatively steady over the last two years of above-average growth (Table 4). However, with GNP in all the seven major countries forecast to decelerate in 1974, and with falls forecast for the *United States*, *Japan* and the *United Kingdom*, unemployment can be expected to show substantial increases in most of these countries. Unemployment can also be expected to rise in the majority of the smaller countries, although the rise may be less severe. Furthermore, the unemployment rate at the peak of the last boom was higher, for all the major countries other than *Italy*, than at earlier peaks, so that the absolute level of unemployment associated with a given increase in slack can be expected to be higher than in previous precessions (see Table 5).

The precise extent to which registered unemployment can be expected to respond to the change in the pressure of demand varies, however, from country to country. In the *United States*, GNP decelerated in the second half of 1973, and fell in the first quarter of this year. Movements in unemployment characteristically lag behind changes in output by about six months in the *United States*, so that unemployment can be expected to rise in the second half of this year to about 5½ million (6 per cent) and to 5½ million (6¾ per cent) in the first half of 1975. In the *United Kingdom* too, the unemployment lag is about six months, and so unemployment can be expected to rise sharply in the second half of this year. In *France* and *Germany*, where a substantial proportion of the labour force is made up of immigrant workers, a fall in demand that would otherwise result in rising unemployment can be avoided at least in part, but a corollary is an increase in problems in the countries of origin of the immigrant workers. In *Germany*, the ban on recruitment of foreign workers is a major reason for an expected reduction in productive potential in 1974. Nevertheless, following the slowdown in the second half of 1973, the unemployment rate in *Germany* has increased continuously from 0.8 per cent in the first quarter of 1973 to about 2½ per cent in April of this year.

The sharp deceleration in *Italy* in the first half of 1974 can be expected to lead to rising unemployment through the second half

Table 3

**Consumer prices
in seven major countries^a**

Percentage changes
Seasonally adjusted
at annual rates
Estimates and forecasts

		Average 1959-60 to 1970-71	From previous year			From previous half-year				
			1972	1973	1974	1973 I	1973 II	1974 I	1974 II	1975 I
	Canada	2.2	3.5	5.6	10	4.9	8.7	11½	8	7¼
	United States	2.4	2.6	5.3	10	5.4	7.9	11½	9¼	7½
	Japan	5.6	4.9	11.8	24¾	10.3	19.2	29¾	20¼	15
	France ^b	4.1	6.2	7.3	14	6.2	9.8	15	16	14
	Germany	2.8	5.6	7.2	8½	6.8	7.7	7¾	11¼	9¼
	Italy ^b	3.9	5.7	10.8	19	12.1	11.0	19½	25	18
	United Kingdom	3.5	6.7	8.6	15	8.5	9.3	16½	18½	12
	Total of above countries ^c	3.2	4.1	7.2	13¼	6.9	10.0	14¾	13	10¼

^a National accounts implicit price deflator.

^b Consumer price index.

^c 1973 weights and exchange rates.

Table 4

**Unemployment
indicators in
selected OECD
countries**

Per cent of civilian
labour force,
seasonally adjusted

Unemployment Rates

	1971	1972	1973	1972 Q4	Q1	Q2	Q3	Q4	1974 Q1	Average of latest three months ending in :
Canada	6.4	6.3	5.6	6.7	5.9	5.3	5.6	5.6	5.5	5.4 May
United States	6.0	5.6	4.9	5.3	5.0	4.9	4.7	4.7	5.2	5.1 May
Japan	1.2	1.4	1.3	1.4	1.3	1.4	1.2	1.2	1.3	..
Australia	1.3	1.9	1.5	1.9	1.5	1.6	1.5	1.5	1.5	1.5 Apr.
France ^a	2.1	2.3	2.2	2.3	2.1	2.1	2.4	2.4	2.3	2.3 May
Germany	0.7	1.0	1.1	1.0	0.8	1.0	1.1	1.4	1.6	2.0 May
Italy	3.1	3.6	3.5	3.8	3.4	4.3	3.2	3.0	2.8	2.8 June
United Kingdom ^b	3.0	3.4	2.3	3.1	2.7	2.4	2.3	2.0	2.2	2.2 June
Belgium	1.8	2.3	2.3	2.4	2.3	2.3	2.4	2.4	2.3	..
Netherlands ^c	1.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.6	2.6 Apr.
Finland	2.2	2.6	2.3	2.7	2.5	2.3	2.3	2.2	1.7	..
Sweden ^d	1.5	1.7	1.7	1.8	1.7	1.6	1.7	1.6	1.5	..

**Ratio: unemployed-
unfilled vacancies**

Japan	0.9	0.9	0.8	0.7	0.7	0.6	0.5	0.5	0.7	..
France	3.7	3.0	2.0	2.3	2.0	1.8	1.9	2.1	2.3	2.1 May
Germany	0.3	0.5	0.5	0.5	0.4	0.4	0.5	0.8	1.1	1.5 May
United Kingdom	4.2	4.3	1.5	3.2	2.3	1.7	1.3	1.0	1.5	1.5 Apr.

**Numbers Unemployed
(thousands)**

Total OECD ^e	8 664	8 960	7 904	8 681	8 070	8 027	7 806	7 712	8 179	8 200 Apr.
OECD Europe ^e	2 498	2 860	1 815	2 792	2 507	2 558	2 396	2 355	2 344	2 433 Apr.

^a Adjusted to take into account the extension of the National Employment Agencies.

^b Great Britain.

^c Including employed on special Government schemes, as a percentage of total labour force.

^d Insured unemployed as a percentage of insured labour force.

^e Excluding Iceland, Luxembourg, Switzerland, Portugal and Turkey.

Sources: For sources and methods, see Technical Annex.

Table 5

**Unemployment rates at peaks
in seven major countries**

Per cent of civilian labour force,
seasonally adjusted

Canada	1956 II : 3.3	1966 I : 3.3	1969 I : 4.5	1973 I : 5.6
United States	1955 II : 4.2	1966 I : 3.8	1968 II : 3.4	1973 I : 5.0
Japan	1961 I : 1.4	1964 I : 1.2	1969 II : 1.1	1973 I : 1.3
France	1964 I : 0.9	1966 I : 1.3	1969 I : 1.7	1973 I : 2.1
Germany	1961 I : 0.7	1965 I : 0.6	1970 II : 0.5	1973 I : 0.9
Italy	—	1962 I : 3.1	1969 I : 3.4	1973 II : 3.1
United Kingdom	1961 I : 1.3	1964 II : 1.4	1968 II : 2.2	1973 I : 2.5

of this year, although the length of the lag is not as clearly determined as in some countries. *Canada* is the one major country in which no deceleration in GNP is envisaged through the forecast period, and hence is the one country in which serious unemployment problems are not expected. In *Japan* manpower policy, particularly of large firms, is restrained, so that unemployment as measured by insurance beneficiaries fluctuates relatively little with respect to business activity in comparison with other countries. Taken together, the forecasts for unemployment amount to a

substantial increase from the second half of this year on, with possibly an additional 3 to 4 million people being registered as unemployed in the major seven countries over the next twelve months.

Prices and Wage Trends

Inflation in all Member countries continues at rates that are very high by historical standards. Consumer prices in the region as a

whole grew at $12\frac{1}{2}$ per cent over the twelve months ending in April; over three times as fast as the annual average between 1961 and 1971, and representing a considerable acceleration over the $7\frac{3}{4}$ per cent rate experienced in 1973. The rate of inflation has differed considerably from country to country. Countries which experience lower than average growth in the domestic component of their costs are able to revalue their currencies without loss of international competitiveness, thereby experiencing relatively moderate price increases not only for domestically-produced goods but for imported goods as well. Furthermore, exchange rates over the last five years have tended to move by more than the amount needed to keep relative competitiveness constant, so that countries with below-average growth in domestic costs have experienced markedly below-average growth in import prices. In *Germany*, for example, the successive revaluations made possible by relatively moderate wage increases led to no rise at all in import prices (measured in Deutschmarks) between 1963 and 1973; consumer prices therefore grew very slowly. In the *United Kingdom*, by contrast, wages grew much faster in relation to productivity, so that not only did the domestic component of prices rise rapidly, but the large devaluations which have taken place, and which have more than offset the adverse movement of domestic costs on international competitiveness have led to import prices (in Sterling) rising over the same period by no less than 75 per cent. Consumer prices, as a consequence, have risen rapidly.

It would seem that a downturn in the level of spot commodity

prices has now occurred, albeit somewhat belatedly, but because of the usual lags, the transactions prices of non-oil commodities are likely to increase this year by about as much as the 30 per cent recorded in 1973, with little or no downturn occurring before the end of the year. In the case of oil, the direct effects of the December price increase have now probably worked through, although some indirect effects, and price-rises for other fuels, are likely still to come.

While a marked improvement can be foreseen in the rate of exogenous, commodity-price inflation by the end of the year, labour costs in many Member countries will almost certainly cause increasing pressure on the price level as wage earners seek to re-establish former living standards and strive for at least some growth in real earnings. It is expected that in most Member countries wage pressure will produce a substantially higher rise in unit labour costs in this year than in 1973.

Some countries have operated directly to reduce wage pressure. In the *United Kingdom*, for example, a few basic food items have been subsidised and some rents have been frozen; in *Sweden* food prices have been frozen, and a subsidy has been paid to farmers. The Value Added Tax rate has also been temporarily reduced. Once transactions prices have started to fall, possibly at the end of this year, wage pressure may be expected to abate somewhat, and for this reason a slightly more moderate picture is forecast for the first half of 1975. (For more detailed analysis of inflation and its prospects see page 25.)

INTERNATIONAL TRENDS AND PROSPECTS

Foreign Trade and Invisibles

The most striking feature of the OECD trade picture this year is of course the turn-around from over-all trade surplus to substantial deficit (see Table 6). The main factors which will determine the size of the area's total deficit are:

- The price paid for oil; a change of only 10 cents per barrel on oil prices translates into a difference of about \$ $\frac{3}{4}$ billion in the area's trade balance. The volume (see Table 7) and price (\$10.50 c.i.f. per barrel) assumptions used in the Outlook imply an increase in the OECD oil import bill of almost \$55 billion this year. On the other side of the trade account, it is assumed that OECD exports to OPEC countries might increase this year by about \$12 billion. Looking a little further ahead, continuing buoyant demand by OPEC countries for OECD goods might outweigh the increase in the area's oil import bill, giving some improvement in the first half of next year in the OECD's trade balance with OPEC.

- The non-oil developing countries' trade balance with OPEC: it would appear that the trade balance of these countries with OECD will have to improve if they are to pay their oil bill; this improvement has been put at \$2 $\frac{1}{2}$ -\$3 billion for 1974, but the timing of the developing countries' response is very uncertain. It is probable that they will continue to be squeezed and a further forced improvement in their trade balance with the OECD may be necessary (possibly about \$3 billion at an annual rate in the first half of 1975).

Bringing these assumptions together with those for foreign trade prices would suggest a deterioration on OECD trade account of more than \$40 billion this year giving a trade deficit of \$30-35 bil-

lion. In the first half of next year the total deficit might be slightly reduced.

The OECD area's deficit on invisible transactions (services, private and official transfers) is expected to widen this year by about \$3 billion (Table 8), the main factor being the servicing payments on foreign liabilities built up as the counterpart of the area's current deficit. This will also be an important factor within the area, with the United Kingdom and Italy particularly adversely affected and Germany benefiting on this score.

But the United Kingdom and other entrepot countries such as the United States and Switzerland can be presumed also to reap some benefit from the vast movements of capital likely this year. Another important factor affecting investment income accounts could be the behaviour of oil company profits—with the United States in particular, as was the case last year, standing to gain—but how these may show up in the figures is difficult to foresee.

Stagnant personal incomes and the greatly increased cost of petroleum products may make for a depressed year for tourism. Workers' remittances may also not increase as much as usual, in view of slack demand and the limitations in Germany on foreign workers. Both these factors would point to a slower rate of deterioration of the accounts of Northern European countries, particularly Germany and France, and to a slower rate of improvement than usual in Spain, Greece, Portugal and Turkey.

Current Balances

The assumptions regarding the evolution of trade and invisibles imply a deterioration of some \$45 billion this year in the OECD area's current account position, from a surplus of \$5 billion to a

Table 6

Foreign trade of the OECD area^a

Per cent changes
Seasonally adjusted
at annual rates
Estimates and forecasts

	1972 \$ bill.	From previous year			From previous half-year					
		1972	1973	1974	1972 II	1973 I	1973 II	1974 I	1974 II	1975 I
VOLUME										
Imports	..	11	12½	4½	11½	16	7½	3½	4½	7½
Exports	..	9	14½	8	11	18½	8	10	5½	8
AVERAGE VALUES IN TERMS OF LOCAL CURRENCIES										
Imports	..	1	12½	37	4½	12	21	64½	8	6
Exports	..	2	10½	22	5	9½	18	31½	8½	7½
VALUES IN TERMS OF LOCAL CURRENCIES										
Total trade ^b										
Imports	237.2	12½	27	43	17½	30	30	70	13	14
Exports	241.8	11	26	32	17	29½	27½	44	14½	15½
Intra-OECD										
Exports	182.7	11½	24½	30	17	29½	23	43	12½	15
Extra-OECD										
Imports	54.6	9	35	85	20	31½	56½	160	14½	10½
Exports	59.2	5½	31	39	18	30½	43	51	18½	16½
Memorandum item:										
Total trade in US dollars ^{b c}	..	18½	37½	36	17	46	43	45	18½	14½

a) Adjusted for discrepancy in recording of intra-OECD trade. Imports are adjusted to a f.o.b. basis.

b) Including trade with unspecified origins/destinations.

c) Average of imports and exports.

Table 7

Oil imports^a

Millions of tons, at annual rates
Estimates and forecasts

	1973	1974	1974		1975 I	Percentage changes on 1973			
			I	II		1974	1974 I	1974 II	1975 I
Canada ^b	-53	-54	-55	-50	-45	1.9	3.8	-5.7	-15.1
United States	319	288	273	302	337	-9.7	-14.4	-5.3	5.6
Japan	250	243	237	249	262	-2.8	-5.2	-0.4	4.8
France	130	128	126	130	135	-1.5	-3.1	0	3.8
Germany	138	130	128	132	137	-5.8	-7.2	-4.3	-0.7
Italy	107	109	107	112	118	1.9	0	4.7	10.3
United Kingdom	113	112	115	109	101	-0.9	1.8	-3.5	-10.6
Total of above countries	1 004	956	931	984	1 045	-4.8	-7.3	-2.0	4.1
Other OECD	245	247	241	253	263	0.8	-1.6	3.3	7.3
Total OECD	1 249	1 203	1 172	1 237	1 308	-3.7	-6.2	-1.0	4.7

a) Excluding stockbuilding.

b) Because Canada is a net exporter, the percentage change figures represent the change in net exports.

deficit of almost \$40 billion. The deficit may already have been running at an annual rate of about \$30 billion in the first quarter. The assumption here is that it may increase to a peak rate of some \$45 billion around the middle of the year as oil imports are paid for at the full new rate and non-oil developing countries begin to retrench. Thereafter there may be some reduction in the combined OECD deficit, as OPEC countries increasingly spend their export proceeds; even so, the deficit may still be in the \$40 billion range in the first half of next year. Looking further ahead, it seems reasonable to expect that the OECD area will have a large, though declining current deficit for some years to come.

For the area as a whole there should be no financing problem, but, until satisfactory recycling arrangements have been worked out, this may seem a somewhat academic point to an individual country with a large current deficit. For the most striking feature of the OECD current account position this year is that it is very unevenly distributed among individual countries (Tables 9 and 10); some countries indeed are already experiencing difficulty in obtain-

ing financing and may be subject to severe strains unless some redistribution of the total OECD deficit can be effected.

Germany and the Benelux, will probably be in current surplus this year, the United States may be close to balance, and the Canadian deficit is likely to be less than 1 per cent of GNP. These countries account for some 60 per cent of the area's GNP. The remaining countries, i.e. those accounting for 40 per cent of total GNP, will thus be sharing a total deficit of almost \$45 billion. On average, expected deficits in this group are equivalent to some 3 per cent of GNP. For some countries, of course, they may be considerably larger, notably Italy, the United Kingdom, Greece, Ireland, Norway, Denmark and Finland.

Financing the Current Deficits

By the first half of 1975 the distribution of the global deficit is expected to be somewhat less uneven, but the speed of improvement appears unlikely, on present policies, to be sufficiently rapid

Table 8
Current invisible transactions^a
1972 to 1975 I and medium-term trends
 US \$ billion. Estimates and forecasts

	Annual average 1960-1964	1965-1971	1972	1973	1974	1975 I ^c
Canada	-1.32	-1.67	-2.45	-2.74	-2.95	-3.10
United States ^d	-2.13	-1.19	-1.44	2.35	1.65	0.40
Japan	-0.49	-1.48	-2.35	-3.82	-5.05	-5.90
Australia	-0.61	-1.12	-1.64	-2.40	-2.60	-2.70
France ^b	-0.57	-0.45	-0.99	-1.65	-2.15	-2.50
Germany	-1.76	-3.58	-7.20	-10.70	-13.25	-15.50
Italy	1.11	1.61	1.99	1.43	1.30	1.20
United Kingdom	0.30	1.05	1.87	2.07	2.45	2.00
Belgium- Luxembourg	0.04	0.01	0.11	-0.02	-0.10	-0.20
Netherlands	0.51	0.47	0.68	1.06	0.80	0.70
Other EEC	0.30	0.43	0.55	0.85	1.20	1.40
Other OECD North	0.97	1.52	2.14	2.20	2.75	3.00
Other OECD South	1.09	2.61	5.58	7.65	9.00	10.30
Total OECD	-2.56	-1.79	-3.15	-3.73	-6.95	-10.90

a) Services (including factor incomes), private and official transfers.

b) Transactions with all countries.

c) Seasonally adjusted at annual rates.

d) Substantial revisions of the services account, released after this document was prepared, have reduced the 1973 current account surplus from \$ 3 billion to \$ 3/4 billion. The forecasts and numbers presented here are based on the original figures.

to prevent a number of countries running the risk of having financing problems.

The projections above suggest that the OECD area might have a current deficit of some \$40 billion this year, or rather more than \$30 billion excluding official transfers. The latter would be equivalent to a deficit of roughly 1 per cent of the area's GNP, compared with a normal surplus of about ½ per cent of GNP

over the last few years. This "normal" surplus has in the past been financed essentially by aid and private capital flows to the LDC's. If it is assumed that this element continues (with the non-oil LDC's) on about the same scale, there will be need, on a gross basis, for financing amounting to 1 ½ per cent of the area's GNP from the OPEC countries. The net foreign asset position of the OECD area would worsen broadly by the amount of its current deficit, perhaps \$40 billion; gross indebtedness of the area to OPEC countries might increase by virtually the full amount of that group's current surplus, put roughly at \$60 billion, but the foreign asset position of the area vis-à-vis non-oil LDC's might improve by around \$20 billion.

Though there is good reason to expect the OECD's current deficit to decline from 1975 onwards, it is only too clear that in 1974-75 the pattern of current accounts is going to be extremely uneven. A number of countries have, as a matter of urgency, been concerning themselves with the problem of how to bring about a financial inflow which will approximately offset (i.e. within the limits of acceptable exchange rate and reserve changes) expected current account deficits.

The problem is then to ensure that the financial inflow is channelled

Table 10
Current balances of other selected OECD countries
 In millions of US dollars

	1972	1973	1974	1975 I ^a
Denmark	-67	-490	-1 000	-800
Ireland	-144	-200	-350	-400
Austria	-169	-325	-900	-1 000
Finland	-118	-415	-825	-550
Norway	-117	-350	-1 150	-800
Sweden	247	1 150	-250	-200
Switzerland	220	375	-350	-300
Spain	664	300	-1 700	-1 800

a) Seasonally adjusted at annual rate.

Table 9
Current balances

		1972	1973	1974	1972		1973		1974		1975
					I	II	I	II	I	II	I
Seasonally adjusted											
In billions of US dollars	Canada	-0.62	-0.34	-1.25	-0.34	-0.28	-0.12	-0.21	-0.45	-0.80	-0.85
	United States ^a	-8.35	3.04	-1.00	-4.71	-3.64	-1.00	4.04	1.00	-2.00	-2.50
	Japan	6.62	-0.14	-7.75	2.98	3.65	1.19	-1.33	-4.25	-3.50	-2.75
	Australia	0.33	0.55	-1.75	-0.05	0.39	0.51	0.05	-0.80	-0.95	-1.15
	France ^b	0.29	-0.15	-6.20	0.13	0.17	0.20	-0.35	-3.00	-3.20	-2.70
	Germany	1.04	4.73	7.00	0.31	0.73	1.92	2.81	5.00	2.00	0.75
	Italy	2.04	-2.53	-8.75	1.60	0.45	-0.83	-1.71	-5.00	-3.75	-2.75
	United Kingdom	0.19	-3.71	-9.75	0.47	-0.29	-1.09	-2.62	-4.80	-4.95	-4.20
	Belgium-Luxembourg ^c	1.35	1.50	-0.10	0.45	0.91	0.46	1.04	-0.10	0	0.10
	Netherlands	1.05	1.79	0.85	0.58	0.47	1.33	0.45	0.20	0.65	1.00
	Other EEC	-0.21	-0.75	-1.35	0.18	-0.39	-0.36	-0.40	-0.70	-0.65	-0.75
	Other OECD North	0.03	0.45	-3.75	0.05	-0.01	0.58	-0.15	-1.75	-2.00	-1.70
	Other OECD South	0.82	0.20	-4.75	0.55	0.27	0.73	-0.55	-2.35	-2.40	-2.40
	Total OECD	4½	4½	-38½	2	2½	3½	1	-17	-21½	-20
Memorandum item:											
	Enlarged EEC	5½	1	-18½	3½	2	1½	-½	-8½	-10	-8½

a) Substantial revisions to the current balance, released after this document was prepared, have significantly reduced the 1973 current account surplus.

b) Transactions with all countries.

c) Secretariat estimate on a transaction basis.

Note: Detail may not add, due to rounding.

The "Balance on Official Settlements" in the Current Situation

The analytical significance of the *balance on official settlements* (BOS) —the most widely used measure of a country's overall balance of payments position has been considerably affected by recent developments in international finance resulting from the generalisation of floating exchange rates and the sharp oil-price rises.

In the Bretton Woods system of fixed exchange rates a country's BOS, conventionally defined as the sum of changes in official reserves and related liabilities (i.e. liabilities representing official reserves of foreign countries), was an indicator of the exchange market position of its currency, since exchange market pressures were reflected mainly in such changes. Since the generalised floating of exchange rates the BOS has become a less meaningful indicator of exchange market pressures because official intervention in exchange markets is, with limited exceptions, now discretionary. As a consequence, such pressures are

now reflected, at least in part, in exchange rate changes; in the extreme case of a "clean" float the BOS, tending to be zero, becomes irrelevant.

The new oil situation, the emerging structural current deficit of OECD countries and their financing need have further limited the validity of the BOS as a clear-cut economic indicator. First, many oil-importing countries have arranged massive foreign currency borrowing and treat the proceeds as capital inflows rather than financing items below the line, even when the borrowing is done by the central authorities themselves. As a result, when actual borrowing temporarily exceeds financing needs, net reserves may even rise and the BOS show a surplus. Second, oil-exporting countries have no choice, in practice, but to keep the near totality of their surplus revenues in OECD currencies. Since these countries have, thus far, shown a preference for liquidity, their investments have generally been taking

the form of acquisition of short-term claims on the major OECD countries. These claims, whenever identified, must be treated on the OECD side as financing items below the BOS line rather than capital inflows, and a few countries—notably the United States—in fact follow this approach in their balance of payments presentations. But when one of these countries, for example the United States, lends to other oil-importing countries the transaction is recorded as a capital outflow, and the net result of this circular flow, or recycling, of oil funds is an external deficit. Thus, a deficit in the U.S. balance on official settlements, rather than reflecting pressure on the dollar and official support operations, may now simply represent the recycling role played by this country and the preference of oil-exporting countries for U.S. short-term assets and Treasury securities rather than other forms of investment in the United States which would be treated as capital inflows.

to countries in relation to their need. Most commentators seem agreed that the primary inflow is very largely into relatively liquid assets, the largest part flowing into the Euro-dollar market, and New York and relatively little directly into other national markets. If so, the OECD financing problem is largely a question of attracting funds from the Euro-market and New York into countries which require them.

A spectrum of approaches to this problem is in principle possible, ranging from complete reliance on market forces to a heavy degree of involvement by official institutions. It can in any case be assumed that market forces will operate in the required direction to some degree. When payments are made by OECD countries to OPEC countries, and the funds transferred to the Euro-dollar or New York markets, interest rates will tend to fall in the latter and rise in the countries making the initial payments, tending to induce capital flows in the desired direction. In practice, however, this "pure market forces" approach can only provide a partial solution since monetary authorities are not prepared to have monetary policy set solely in relation to external requirements, ignoring the effects on the domestic economy.

This has been recognised by a number of countries which may need to borrow significant quantities of funds this year. While relying on the market to provide the lending function, the monetary authorities of these countries have either done the borrowing themselves or induced—sometimes with the offer of an exchange guarantee—public bodies (nationalised industries and local authorities) to do so. This solution, which permits a fuller use of monetary policy for domestic purposes (1), has worked satisfactorily up to a point, but it clearly can run up against limits. The

most important factors which could militate against a substantial further reliance on this "modified market forces" approach would seem to be:

- Countries with a persistent financing need will inevitably see their credit rating deteriorate and eventually may find it difficult to raise the necessary funds in the international financial market.
- The huge size of the oil financing problem may soon require banks to start increasing their equity capital along with new engagements, but market conditions may be inappropriate for such an operation.
- There is a danger inherent in the intermediation process recently undertaken on an unprecedented scale by the Euro-dollar market, which is lending long or medium-term the funds it receives on short or very short-term deposits.

The last two points suggest that even if lender-willingness did not turn out to be a limiting factor, it would be difficult to assume that the Euro-dollar market could continue playing the intermediary role to the extent required by the financing need and the present dichotomy in the maturity-preference of lenders and borrowers. Market forces should help to resolve this problem. Recently a positive yield curve favouring longer term investments has emerged in certain markets—but it will take time for the necessary adaptations and this will continue to be a serious problem. It is not clear for the moment how the financing side is working out in practice, partly because payments to oil producers were

(1) Though necessitating some controls on capital flows.

Table 11
Summary balances of payments
US \$ billion, not seasonally adjusted; estimates

	1973									1974		
	1st half			2nd half			Year			1st quarter		
	Current account ^a	Total capital ^b	B.O.S. ^c	Current account ^a	Total capital ^b	B.O.S. ^c	Current account ^a	Total capital ^b	B.O.S. ^c	Current account ^a	Total capital ^b	B.O.S. ^c
United States	-1.13	-8.37	-9.50	1.80	2.13	3.93	0.67	-6.24	-5.57	1.09	0.40	1.49
Japan	0.08	-3.08	-3.00	-0.21	-2.84	-3.05	-0.14	-5.91	-6.05	-3.26	3.50	0.24
Canada	-0.48	0.30	-0.18	0.05	-0.36	-0.31	-0.43	-0.06	-0.49	-0.68	1.09	0.41
Germany	1.81	5.55	7.36	2.85	-1.21	1.64	4.66	4.34	9.00	2.52	-2.65	-0.13
France	0.23	0.70	0.93	-0.38	-2.29	-2.67	-0.15	-1.59	-1.74	-1 $\frac{1}{4}$	$\frac{1}{2}$	- $\frac{3}{4}$
Netherlands	1.00	-1.07	-0.07	0.79	0.07	0.86	1.79	-1.00	0.79	$\frac{1}{4}$	- $\frac{1}{4}$	0
Belgium-Luxembourg	0.61	0.15	0.76	0.89	-0.79	0.10	1.50	-0.64	0.86	- $\frac{1}{4}$	0	- $\frac{1}{4}$
Italy ^d	-1.47	0.66	-0.81	-0.94	1.44	0.50	-2.41	2.11	-0.30	-2	$\frac{1}{2}$	-1 $\frac{1}{2}$
Switzerland	0.18	1.11	1.29	0.20	-0.52	-0.32	0.38	0.59	0.97	- $\frac{1}{2}$	0	- $\frac{1}{2}$
United Kingdom ^e	-1.50	1.95	0.45	-1.76	1.73	-0.03	-3.30	3.72	0.42	-2.50	1 $\frac{3}{4}$	- $\frac{3}{4}$
Other OECD	0.91	1.64	2.55	-0.77	2.72	1.95	0.14	4.36	4.50	-2 $\frac{1}{2}$	1 $\frac{1}{2}$	-1
Total OECD	0.24	-0.46	-0.22	2.52	0.08	2.60	2.71	-0.32	2.39	-9 $\frac{1}{4}$	6 $\frac{1}{2}$	-2 $\frac{3}{4}$
<i>Memorandum items:</i>												
Joint Float Countries ^f	4.02	6.60	10.62	4.07	-4.28	-0.21	7.06	3.35	10.41	2 $\frac{1}{4}$	-2 $\frac{3}{4}$	- $\frac{1}{2}$
Total OECD excl. U.S.A.	1.37	7.91	9.28	0.72	-2.05	-1.33	2.04	5.92	7.96	-10 $\frac{1}{4}$	6	-4 $\frac{1}{4}$

a) Including official transfers.
b) Including banking funds and unrecorded transactions.
c) Balance on official settlements.
d) Capital movements include government-controlled institutional borrowing in foreign currencies: \$ 4 $\frac{1}{2}$ billion in 1973 and \$ 1 $\frac{1}{2}$ billion in 1974 Q1.

e) Capital movements include public sector borrowing in foreign currencies under the exchange cover scheme announced in the budget: \$ 2 $\frac{1}{2}$ billion in 1973 and \$ $\frac{3}{4}$ billion in 1974 Q1.
f) Excludes France from 1974 Q1.
Note: Detail may not add due to rounding.

not taking place at their full new rate until April-May. Preliminary figures suggest however that OECD countries had an apparent net capital inflow of just over \$6 billion in the first quarter (see Table 11), nearly half of which was accounted for by public sector borrowing by the United Kingdom and Italy. With the exception of Italy, which had a substantial overall deficit, and the United States, which had a surplus, official settlements balances were in general small, strength or weakness of countries'

positions being reflected more in exchange rate movements. The most pronounced changes since the beginning of the year have been effective appreciations of the Deutschmark and Swiss franc and downward movements in the lira, French franc and, to a lesser extent, the dollar. In the more recent period, the official settlements position of the United States seems to have turned into deficit, apparently reflecting the increasing role played by New York in providing funds to oil-importing countries.

THE ANATOMY OF INFLATION

A special chapter of the current Economic Outlook is devoted to an analysis of the recent inflationary push. The following is taken from this analysis.

The renewed acceleration of inflation in the OECD area since mid-1972 can be seen as having three conceptually distinct stages. **FIRST:** Mid-1972 until about October 1973. This phase was characterised by a sharp rise in the price of most primary commodities relative to the general price level (see Table 12). In the case of food, the imbalance between demand and supply arose

mainly because of shortfalls on the supply side, whereas in the case of industrial materials a rapid and coincident upsurge of output and final demand in the majority of OECD countries played the crucial role. In a number of instances the prevalence of generally low producers' stocks accentuated the price rise. Over this period the *Economist* dollar index of the spot price of food rose by about 60 per cent, and the industrial materials index virtually doubled.

SECOND: Beginning about October 1973. It appeared at that time that demand pressure, relative to the potential supply of

Table 12

Spot price indices of selected commodities

Based on \$ prices

1970 = 100

	1971	1972	1973	Low ^a	1973 High ^a	1974 May ^a
Beef (Eire, London)	118	142	179	161 Feb.	199 July	(145)
Wheat (U.S., Kansas City)	107	124	242	157 Mar.	359 Dec. (393 Feb. 74)	(260)
Maize (U.S.)	102	96	150	115 Mar.	248 Aug.	(195)
Sugar (Caribbean, New York, export)	120	200	257	240 Feb.	269 Nov.	645
Coffee (Brazilian, New York)	84	94	123	106 Jan.	132 Nov.	139
Cocoa (Ghana, New York)	78	94	187	109 Jan.	253 July	335
Vegetable oilseeds and oils	105	92	162	104 Jan.	256 Dec.	301 ^b
Soya beans (U.S.)	113	127	240	155 Jan.	427 June	(200)
Wool (Australian, Sydney)	84	152	344	317 Q2	372 Q1	(300)
Cotton (U.S., 12 markets)	110	137	224	138 Jan.	324 Sept.	(230)
Rubber (Malaysian, London)	81	86	178	113 Jan.	250 Dec.	(205)
Copper (U.K., London)	76	76	126	79 Jan.	161 Nov.	223
Lead (U.K., London)	83	99	141	105 Jan.	195 Dec.	243
Tin (Malaysian, London)	95	103	131	103 Jan.	177 Dec.	262
Zinc (U.K., London)	104	128	287	131 Jan.	547 Nov.	675

^a Monthly averages.^b April 1974.Sources: IMF, *International Financial Statistics*; UNCTAD, *Monthly Commodity Price Bulletin* and Secretariat estimates.

Table 13
Contributions of c.i.f. import price of oil^a
and non-oil primary products^b
to the rise of the deflator of total domestic expenditure
in 1973 and 1974
Percentages

	Non-oil		Oil	
	1973	1974	1973	1974
Canada	0.7	0.7	—	—
United States	0.3	0.3	0.1	0.4
Japan	1.2	1.3	0.4	2.6
France	0.9	1.1	0.4	2.7
Germany	1.3	1.5	0.2	1.5
Italy	1.9	2.1	0.6	3.8
United Kingdom	2.0	2.1	0.5	2.9
Belgium-Luxembourg	3.1	3.7	0.6	4.3
Netherlands	2.4	2.7	0.2	1.4
Denmark	1.2	1.5	0.3	1.8
Ireland	2.3	2.4	0.3	1.7
Austria	1.2	1.5	0.1	1.1
Finland	1.2	1.2	0.4	2.7
Norway	1.8	2.2	0.3	1.5
Sweden	1.0	1.1	0.2	1.0
Switzerland	1.4	1.8	0.2	0.7
Spain	1.4	1.4	0.5	3.2
OECD total ^c	0.9	1.0	0.3	1.5
OECD Europe ^c	1.5	1.7	0.4	2.3

^a Based on net imports in terms of crude oil.^b SITC 0, 1, 2, 4 and 68.^c Based on import figures including intra-area trade.

Source: Secretariat estimates.

fell, relative to trend. In many markets forward prices, although very high by past standards, were well below spot prices. By April or May, food and industrial materials spot prices reached a peak, having risen to about 20 per cent above their October 1973 levels. The continuing increase in commodity spot prices led, with a lag of something between six and nine months, to consequent increases in import unit values, wholesale prices, and finally consumer prices.

THIRD: Date differing from country to country. Inevitably, this situation led to wage earners in virtually all Member countries pressing for higher money wages in an attempt to restore their previous levels of real income, and at this point the inflation switched from being an essentially exogenous phenomenon, at least as far as any one country is concerned, to a basically endogenous phenomenon. Throughout 1973 a general acceleration in the rate of growth of wages took place in most Member countries and currently wages are growing extremely rapidly, although often not as rapidly as prices.

The fact that there is a six to nine month lag between spot price movements and the consequent changes in transactions prices means that in all probability transactions prices will continue to rise until about the end of this year. Thus, regardless of how fast and how far spot prices fall, wage earners will find their real incomes continuously falling throughout 1974 unless money incomes rise in sympathy with the general price level. This will happen in the cases where wages have been indexed; as the rate of growth of transactions prices slows down into 1975, money wage rates too would show the appropriate slow-down. An alternative would be to moderate the rise in transactions prices through subsidies over the rest of the year, up until the time when transactions prices begin to fall. Subsidies have not, however, been adopted on a wide scale, so that continued rapid inflation throughout 1974 seems likely.

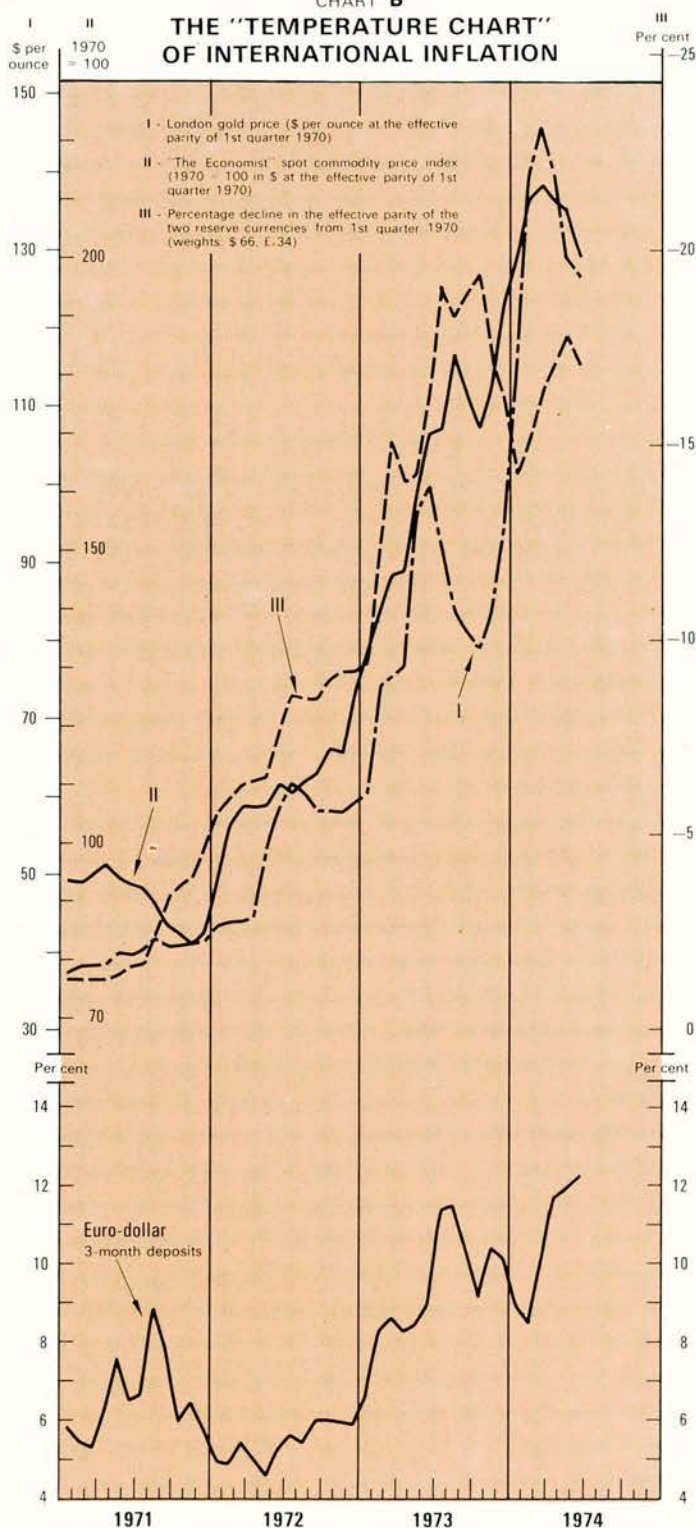
Imported Inflation

In 1974 the level of c.i.f. import unit values (or "transactions prices") of non-oil commodities, including non-ferrous metals, is forecast to increase by approximately 30 per cent. This rise in price would add another 1 per cent to the Total Domestic Expenditure price deflator of the OECD area as a whole (see Table 13).

The 1974 level of transaction prices used for these estimates is a

commodities, had already eased and would continue to do so. The October war in the Middle East, however, changed matters. The physical shortages of oil, arising from the embargo and from hoarding were followed by substantial increases in the oil price. Expectations of inflation resulted in a sharp speculative boom in commodity prices which was unsupported by the underlying level of real final demand: historically, prices of industrial materials have moved in a fairly synchronous manner with OECD final demand, yet in this instance prices rose while industrial production

CHART B
THE "TEMPERATURE CHART"
OF INTERNATIONAL INFLATION



In the climate prevailing since the end of 1972, international inflation has acquired a strong anticipatory dimension. Confidence in the two main trading and reserve currencies, spot prices of gold and commodities and real interest rates were acting both as concurrent symptoms and as interrelated factors. To illustrate this point, the "temperature chart of international inflation" shows indices of gold and commodity prices, together with an index of the effective parity of the two reserve currencies; at the bottom of the Chart, Euro-dollar interest rates on three-month deposits are given. The Chart also shows that the rise in interest rates throughout the first half of 1973 was followed by a temporary decline of gold and spot commodity prices in the autumn of 1973, which coincided with some strengthening of the reserve currencies. Conversely, the downturn in interest rates was followed by the upsurge in prices since late 1973 and was associated with a sharp weakening of the reserve currencies in early 1974. The recent weeks have witnessed a renewed downturn in prices in the wake of higher interest rates and there seems to have been a firming in the effective exchange rates of the reserve currencies.

relatively conservative one, to which must be added the impact of the oil price rise estimated at $1\frac{1}{2}$ per cent for 1974 for the OECD area as a whole, and $2\frac{1}{4}$ per cent for Europe. Another half percentage point could be added to the OECD total if crude oil produced in the United States and Canada were to be sold on the domestic market at world prices.

Agricultural Raw Materials

The upsurge in prices of industrial raw materials of agricultural origin which started from a very depressed level in early 1972, reflected an initial situation of abnormally low stocks. Supply difficulties from current output (jute) and buying sprees for stock-building purposes (wool), however, also played a role. With the ending of initial stockpiling and the weakening of industrial demand, prices were expected to recede in the autumn of 1973, but the sharp rise in the cost of production of synthetic substitutes put a fairly firm floor under the prices of natural products. *Pulp and paper* prices have risen very rapidly in the past two years, basically because of inadequate growth of potential supply following many years of low prices. This market is likely to remain tight for some time to come. In view of depressed residential construction, notably in North America and in Scandinavian countries, the tension on the lumber market has eased somewhat.

Ores and Metals

Remarkably stable through 1972 and in the early months of 1973, free market prices of metals rose sharply from mid-1973 onwards. The instability, considerably aggravated by speculation, was fed not only by short-term supply difficulties, but by fear of concerted producer action. By early May, spot quotations for nearly all non-ferrous metals were still at or near their all-time peaks, but there has been a marked decline since then.

More importantly, the much less volatile long-term contract and producer prices, at which the bulk of output is sold, moved up substantially, though still lagging behind the London Metal Exchange quotes of spot prices.

Market Structure for Commodities

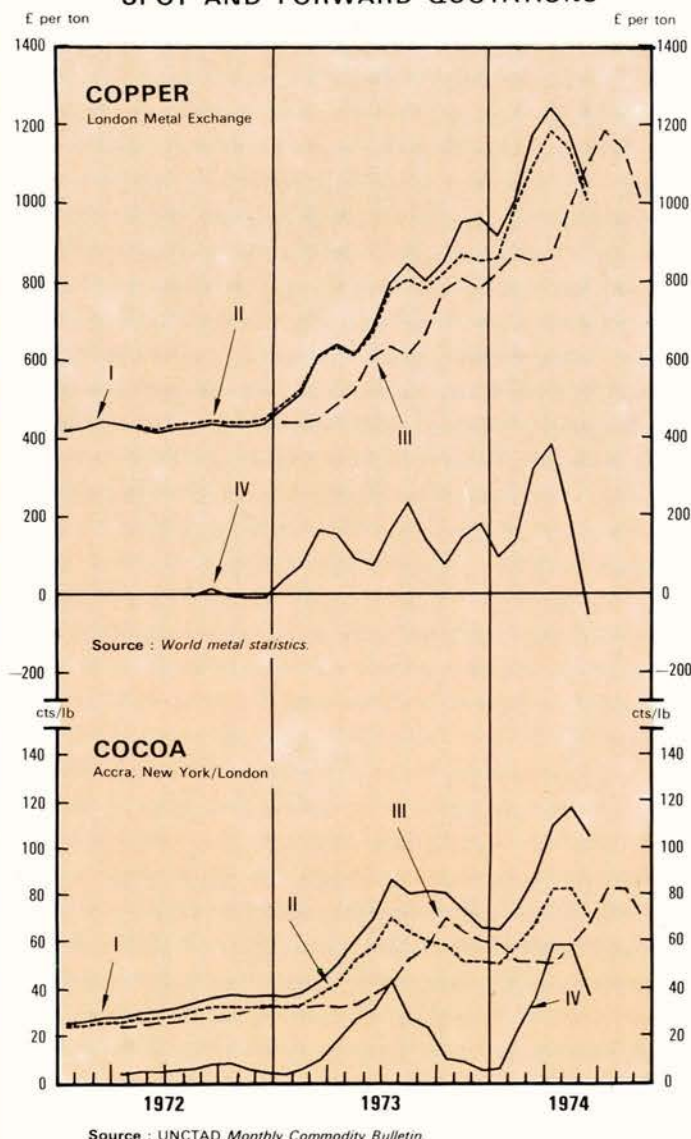
Marketing arrangements for primary commodities have been in a state of flux in recent months. In particular, there have been several recent attempts by commodity producers to improve their control over prices. Although *phosphate* production is not cartelised, Morocco has a dominant position in the industry and has increased the price four-fold within the last year. Other phosphate producers have followed suit. The leading producers of *bauxite* recently met in Guinea to discuss closer co-operation and common problems. No decisions are known to have been taken, but recently Jamaica increased its royalty payments, and plans an additional tax on bauxite.

Producers of *mercury*, *iron ore*, *rubber*, *copper* (excluding those from the United States, Canada and Australia) wool and tea have also met to discuss prices and/or marketing arrangements.

Hedging Against Inflation

An important feature of the present inflation is the movement out of financial assets into real assets. The stock market and gold have been traditional hedges against inflation. However, in the past 18 months equity prices have not only failed to keep up with inflation, but have been stagnant or falling in almost all countries.

CHART C
SPOT AND FORWARD QUOTATIONS



In the 1973-74 period commodity markets have been increasingly used, alongside the gold market, to hedge against inflation and currency uncertainties. Since in these markets forward contracts account for the bulk of the transactions and margin requirements are small in relation to potential fluctuations, they prove to be very attractive to pure speculators (i.e. outsiders with nothing to sell and no intention of buying). The invasion of commodity markets by pure speculators has tended to substantially amplify the upward pressure on spot prices.

This Chart illustrates the role of speculation in the case of cocoa and copper, but similar developments have occurred in the markets of sugar, silver and nearly all non-ferrous metals. The bottom line on the Chart (IV) indicates the difference between spot prices and prices under forward contracts arriving at maturity (I minus III). The "normal" difference, covering the cost of the contract and interest on the margin payment, would amount to perhaps 2-3 cents per pound in the case of cocoa and even less for copper. This line reflects therefore the profits and losses that could be made on a forward contract by pure speculation. During the two supply squeezes of July 1973 and March 1974 in the cocoa market when spot prices were driven up by the attempts of speculators to cover short positions, the profits made by those buying forward amounted to some 40 and 50 cents per pound on a contract with a margin requirement of 4 or 5 cents. But the most remarkable feature of the Chart is that from 1972 until very recently, speculators buying forward were systematically gaining and those selling short losing on forward transactions. Basically, the same situation was evident in the copper market with numerous short-term "technical" supply squeezes having a dramatic effect upon prices. Recently, however, this situation has been reversed with losses accruing to those who bought forward three months ago.

This was accompanied by a massive inflow of funds into commodity markets, where forward contracts have become an important instrument for hedging against inflation and for pure speculation (Chart C).

Monetary conditions have further encouraged this tendency. With ample short-term credit available, notably on the Euro-markets, real interest rates became negative in late 1973 and there has been every incentive not only to prefer speculation to financial investment, but also to use borrowed money for the purpose. The disrepute of the stock market as a hedge against inflation has been accompanied by a sharp rise of other forms of hedging, particularly the buying of property, notably land, as well as more esoteric real assets such as works of art, precious stones and stamps.

Income Transfers

The acceleration of inflation created substantial income transfers, both within and between countries. The commodity boom, up to about the middle of 1973, boosted particularly the prices of agricultural products (wheat, meat, soya beans, wool and cotton) of which some OECD countries are the major producers and suppliers. Hence, the corresponding income transfer took place mainly within the OECD area itself.

In the more recent phase, the large income transfer towards third

The Plight of Developing Countries

The increase in oil prices—which may add as much as \$10 billion to the import bill of developing countries other than the major oil producers—came at a time when the external position of non-oil developing countries as a group was stronger than usual. Prices of many other commodities were booming, and \$15 billion had been added to reserves in two years. Within the group, however, there is an extremely wide diversity of situations. Some countries which have done well out of the commodity boom and/or have relatively high *per capita* incomes seem able for the moment to cover their increased oil bills relatively easily—by exports, drawing on reserves and other official financing, or attracting additional capital inflows. Others, however, including some of the poorest countries, are placed in a critically difficult position which can be alleviated only by emergency assistance on soft terms.

The second category includes the Indian sub-continent, the Sahelian countries in Africa, and a number of Caribbean countries. These countries are suffering from dependence on exports of commodities which have not participated in the general boom, such as tea, jute or bananas; drought or other natural disasters; and the simultaneous rapid increases in the prices of imports of oil, food, fertilisers and finished manufactures. (In some countries the oil price rise is only a relatively minor factor, because they are too poor to be using much oil.) Countries in this category seem likely to have great difficulty in financing their balance of payments deficits. They have low reserves, and their credit-rating does not permit recourse to borrowing in the markets; even the new IMF facility may be too expensive a source of finance. Although it is difficult to quantify the special assistance required by these countries, preliminary studies in various international organisations suggest that some \$3-4 billion may be required up to the end of 1975, some of it immediately.

Although the immediate need is to ease the plight of the particularly hard-hit countries, over time a more generalised problem could emerge. The terms of trade of primary products relative to manufactures have probably reached a cyclical peak, and may well decline considerably. The cooling-off period in the OECD area will, therefore, adversely affect both the price and volume of developing countries' exports. As reserves are depleted, the number of countries which can be regarded as comfortably placed—or creditworthy—will decline, with a resulting need for further arrangements for providing finance and/or commodity price stabilisation.

countries was accompanied by a greatly increased flow of profits to companies engaged in this sector, whether their output was produced within or outside the OECD area.

As for corporate profits, the First National City Bank annual survey indicates a rise in the United States of 27 per cent between

1972 and 1973. For seven of the 43 sectors shown, profits rose by over 50 per cent. These seven sectors were: lumber and wood production; furniture and fixtures; paper and allied products; petroleum; iron and steel; non-ferrous metals; and metal mining. Similar developments were experienced in Canada.

IN BRIEF: THE OUTLOOK FOR THE SEVEN LARGEST OECD COUNTRIES

• *France*

As in most other countries, the oil crisis has had an immediate and significant impact on prices and the trade balance, but so far its overall effects on the real rate of growth of the French economy seem to have been negligible. According to INSEE surveys, the trend of industrial production, which had weakened somewhat towards the end of 1973, regained strength during the first half of this year. Despite a fall in demand for automobiles, total demand for industrial products remained rather buoyant, possibly reflecting anticipatory purchases induced by widespread expectations of higher prices. In March, the percentage of firms unable to expand output was still very high, mainly owing to equipment bottlenecks, but overall pressure on capacity had subsided slightly, due to widening margins in consumer goods industries, notably in the car manufacturing sector. The labour market situation has improved somewhat since the beginning of the year with registered unemployment declining moderately, and the number of unfilled vacancies tending to rise. Following the massive increase in the price of oil, inflationary pressures have been mounting with rapid advances of both wholesale and consumer prices in the first five months of the year. Wage increases have also accelerated sharply, reaching an annual rate of more than 20 per cent in the first quarter.

• *Germany*

Developments during the first quarter suggest that the economy absorbed the shock effect of the oil crisis relatively smoothly. Exports and foreign orders remained buoyant and real domestic orders picked up. Despite the sharp decline in automobile production, industrial output remained at the relatively high level attained in the final quarter of last year, and unemployment averaged less than 2 per cent. But since activity was favoured by mild weather, the underlying strength of demand may have been somewhat weaker than suggested by the first quarter figures. Activity weakened

in the spring; unemployment rose to 2½ per cent in April, the number of short-time workers has remained high and, for the first time since the 1966-67 recession, unfilled vacancies have fallen significantly below the number of unemployed. Forward-looking indicators point to a pick-up of private domestic demand in the second half of the year. But in view of the marked recessionary tendencies in the building industry, the automobile sector and parts of the consumer goods industry, the strength of the recovery is uncertain. The 7½ per cent year-on-year increase in consumer prices in the first half of this year—which is more moderate than in most other Member countries—was mainly attributable to a temporary weakening of the rise in food prices, the slow advance in rents and oil product prices and a squeeze on distribution margins. Judging from the recent sharp rises in unit labour costs and producer prices, the advance in the cost of living is likely to accelerate in the months ahead.

• *Italy*

The upswing of production in 1973, after a long period of slow growth, was accompanied by a strong increase of productive investment and led to a significant improvement in the employment situation. But the rate of inflation accelerated in the course of last year because of stronger domestic demand, substantial wage increases, the sharp rise of world market prices, and the considerable depreciation of the lira. Pressures on the exchange rate were considerable due to continued large capital outflows and a shift into deficit of the current account resulting largely from the deterioration of the terms of trade. In the early months of 1974 the impact of the oil crisis worsened both the rate of inflation and the external deficit, leading to an important shift of policy: the introduction of the Import Deposit Scheme and other restrictive monetary and fiscal measures designed to ease demand pressures and create room for higher exports. The measures include considerable increases of indirect taxes

and public tariffs, which in the short term will accelerate the rise in consumer prices; the latter may slow down only in the early months of 1975. The forecast of a substantial current balance-of-payments deficit for 1974 nevertheless implies a considerable improvement during the second half of the year and the first half of 1975. Moreover, the liquidity squeeze could arrest—and perhaps reverse—the outflow of private capital which contributed substantially to the overall deterioration of the balance of payments in recent years.

• *The United Kingdom*

It appears that activity was remarkably little affected by the period of three-day working from the turn of the year up to early March. Provisional estimates of output in the first quarter suggest that it may have been about 3 to 4 per cent below levels in the previous quarter. The unemployment rate rose from 2.1 per cent in mid-December to run at 2.4 per cent during the first quarter, and approximately 3 per cent of employees were temporarily laid off during the period of short-term working. The fall in personal incomes over this period seems to have been smaller than the fall of output, partly because of minimum wage guarantees, while on the expenditure side export volumes seem to have risen, consumers' expenditure (notably car purchases) fell, but by surprisingly little, and the brunt of the adjustment seems to have been borne by additional imports and falls in stocks of finished goods.

Although output recovered quickly from the period of three-day working, there were small increases in unemployment in both April and May, the strong rise in retail prices and the unwinding of pre-Budget buying probably being important in dampening consumer demand. The increase in the April and May price index, partly reflecting the Budget measures, has resulted in a wage increase of 4 to 5 per cent under Stage III of the price/income programme. In the first quarter, the current external deficit was running at an annual rate of about \$10 billion, compared with about \$5 billion in the

second half of last year. Despite the deterioration, and some downward movement in interest rates, sterling has remained fairly strong. This probably reflects inflows of oil funds, as may the increase in official reserves over the first half of the year.

On the basis of present policies, OECD's forecast sees output and employment moving further below full capacity levels. The balance-of-payments deficit, already large prior to the oil price increases, may amount to as much as 6 per cent of GNP in 1974 and a large deficit may remain in 1975 also. As noted, the financing of the deficit has posed no major problem to date, but it implies very heavy financing charges; the 1974 deficit could require debt servicing of the order of \$1 billion, or possibly more. Reflecting the sharp rise in import prices (notably higher oil prices) and the interaction between wages and prices as the threshold arrangements under Stage III are triggered, the rise in prices is likely to accelerate in the second half of the year. The problems facing most Member countries this year—deterioration of the current external account and accelerating inflation, at a time of rising unemployment—are thus acute in the United Kingdom.

Following the October increase in oil prices and the announced supply restrictions, the Government took a series of energy-conserving and demand-management measures, including cuts in public expenditure plans equivalent to about $1\frac{1}{2}$ per cent of GDP in 1974/75, a 10 per cent surtax surcharge and the reintroduction of hire purchase and credit controls. Monetary policy was tightened. The March budget introduced a series of measures with a broadly neutral impact over the remainder of 1974 but a sizeable contractionary impact thereafter. The Stage III price/income arrangements have been broadly maintained. In 1975, policy on pay is to rely on a "social contract", as yet not fully defined, between unions and Government, but considerable pressure has built up in recent months for very large pay increases after Stage III.

• *The United States*

Economic activity, influenced by a progressive tightening of fiscal and monetary policies, the oil embargo and a year-long decline in real wages, fell sharply in the first quarter of 1974, with real GNP decreasing at a seasonally adjusted annual rate of 6.3 per cent. The foreign sector has continued to be an important area of strength in contrast to the weakness of domestic demand. Indicators for April

and May, such as industrial production, total employment and durable goods orders, suggest that the decline in activity slowed down and may even have been reversed during the second quarter. Reflecting the lower level of output, capacity utilisation rates have in general declined from the extremely high levels reached in the third quarter of 1973 and the unemployment rate rose from a cyclical low of 4.6 per cent in October to 5.2 per cent in May. Despite the economic slowdown, the rise in prices has accelerated sharply, with the GNP deflator increasing at an annual rate of $11\frac{1}{2}$ per cent in the first quarter, the fastest rise in 23 years. From January to May, the wholesale price index rose at an annual rate of $18\frac{1}{4}$ per cent and the consumer price index at a record $12\frac{1}{2}$ per cent rate.

Assuming that a relatively tight policy stance is maintained throughout the forecast period, the Secretariat's forecast points to a modest recovery beginning in the second half of 1974—entailing a rise in unemployment to more than 6 per cent by mid-1975—accompanied by a progressive deceleration of inflation. For the year 1974, real GNP may be about $\frac{1}{2}$ per cent lower than in 1973 while the GNP deflator may be about 9 per cent higher. Influenced by higher oil prices and an expected decline in agricultural export prices, the trade balance and current account are likely to record deficits this year.

• *Canada*

Unlike the United States, the Canadian economy has continued to grow rapidly over the last twelve months with buoyant business investment and consumer demand. The world commodity boom and the energy crisis, on balance, served to stimulate the activity. In the first quarter of this year real GNP rose by 6.8 per cent at an annual rate and employment advanced at a high pace. The growth of output, although moderating somewhat during the remainder of this year, is likely to remain relatively strong over the forecast period. The rise in prices has accelerated over the past year, mainly reflecting sharp increases in food and energy prices. Farm product prices are expected to decline after mid-year and energy prices should level off, but the resulting stabilising influence on the general price level might be partly offset by higher wage costs. Influenced by the world commodity boom, the current external deficit fell in 1973; it may rise somewhat over the next twelve months but should remain moderate.

• *Japan*

The rapid acceleration of inflation over the last twelve months resulted from heavy demand pressures during the last cyclical upswing and the particularly strong impact on Japan of price rises in commodities and crude oil. With unprecedented rates of price increase in the early months of 1974, checking inflation became the most important objective of economic policy. Demand management had been progressively tightened since the summer of 1973; by the spring of 1974 monetary conditions had become extremely tight and significant falls were recorded in domestic demand and output. Real GNP has probably decreased in the first half of 1974 at an annual rate of 6 to 7 per cent and, despite a recovery forecast for the second half of the year, a small decline seems likely for the year as a whole. The emergence of considerable slack in the economy should keep wholesale price increases down to the comparatively moderate rates of recent months. But cost pressures are likely to maintain a fast rise of consumer prices in coming months; a significant deceleration is forecast only in early 1975 when, on the basis of the policy assumptions made, the growth of real GNP is expected to gain some momentum.

The oil crisis has aggravated the current balance-of-payments situation, which had already been deteriorating since the spring of 1973 as a result of strong demand pressures, the increase of world commodity prices and the impact of the yen appreciation. The current account showed a deficit at a seasonally adjusted annual rate of \$2.6 billion in the second half of last year. The deficit increased very sharply in the first quarter of 1974, but April and May saw a marked improvement as the trade deficit was reduced from a monthly rate of \$400 million in the first quarter to \$265 million and \$40 million respectively. With the net outflow of Japanese long-term capital reaching \$8.4 billion, the basic balance also moved into a large deficit in 1973 and the exchange rate was allowed to depreciate in November and again in January. Measures were taken in November and December to contain the capital outflow—which fell considerably in the first five months of 1974—and to encourage short-term bank borrowing abroad. The forecast for 1974, despite a recovery in exports and the restraining effect on imports of weak domestic demand, points to a large current account deficit which is expected, to decrease progressively in the second half of the year and the first half of 1975.



IMPACT ON SHIPPING OF A RE-OPENED SUEZ CANAL

The Overall Picture of Sea Transport

The development of world shipping up to 1973, by main commodity groups, is best shown in chart A. Oil, iron ore and coal account for about 80 per cent of world sea transport requirements in ton-miles. Imports of these commodities into the three major OECD regions (North America, Western Europe, Japan) represent more than *two-thirds* of total world shipping demand (Western Europe alone accounts for 41 per cent). Oil imports are of overriding importance, the three OECD regions themselves accounting for 56 per cent of total shipping demand (see Table 1).

Effects on Shipping Demand of a Re-Opened Suez Canal

In 1966, about 18.5 per cent of all international oil tonnage shipments and 8.1 per cent of dry cargo passed through the Suez Canal. Northbound oil made up 86 per cent of total movements through

The Suez Canal's expected re-opening in the near future has an impact on shipping, particularly of oil, but also of dry cargo.

Facts, figures and estimates are contained in the just-published Annual Report of the OECD Maritime Transport Committee (1).

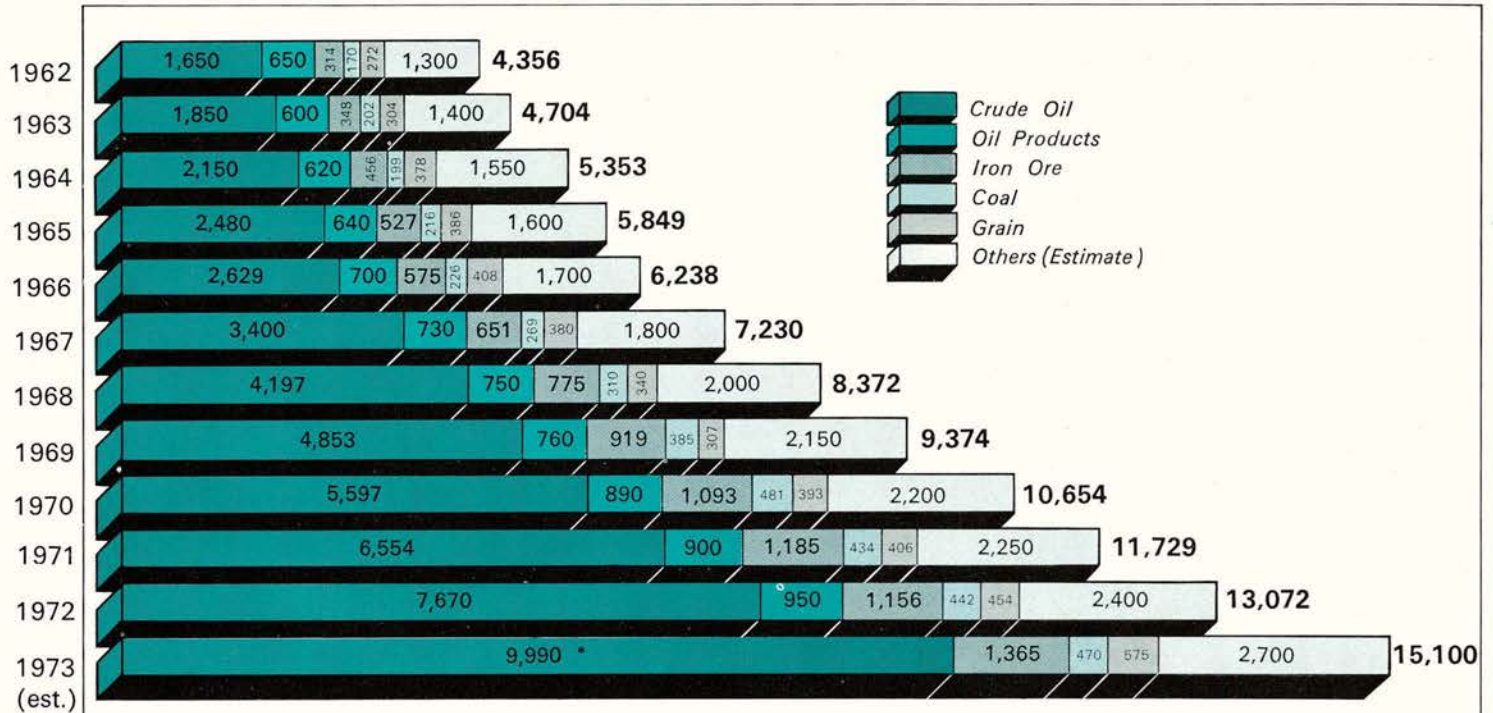
This report discusses international shipping policies and recent trends and prospects in shipping demand and supply, of which a re-opened Suez Canal is one factor.

the Canal (see chart B). In addition, among the ships passing through the Canal, there were 4,470 southbound tankers in ballast with a total tonnage of 211 million dwt (deadweight tonnage). In 1966, virtually all tankers operating westward out of the Persian Gulf could pass through the Canal in ballast on the return trip and the Canal Authority was preparing to receive 200,000 dwt vessels *in ballast* by the end of 1967, as well as *fully laden* tankers of up to 60,000 dwt. However, before this could take place the Suez Canal was closed.

Since the Canal's closure, the pattern of world oil movements has changed considerably and tanker sizes for westbound movements from the Persian Gulf have increased dramatically. In 1972, roughly 85 per cent of total crude oil movements from the Persian Gulf to North American, European and Mediterranean destinations moved in vessels over 60,000 dwt and 45 per cent in vessels over 200,000 dwt.

(1) *Maritime Transport 1973 : A Study by the Maritime Transport Committee, OECD, Paris.*

A. TOTAL TRADE ESTIMATE
(in thousand million laden ton-miles)



Source: Fearnley and Eger's Chartering Co. Ltd. Review 1973: 1973 estimates with additional information from Fearnley and Eger and BP Trading Ltd. * Crude Oil and Oil Products

1. THE IMPORTANCE FOR WORLD SHIPPING OF THE MAIN REGIONAL BULK COMMODITY IMPORTS, 1972
(in per cent of total shipping demand measured in ton-miles)

	OIL IMPORTS	IRON ORE IMPORTS	COAL IMPORTS	TOTAL OIL/ORE/COAL
JAPAN	11.8	5.2	2.3	19.3
WESTERN EUROPE	37.4	2.2	1.0	40.6
NORTH AMERICA	7.2	0.5	—	7.7
MAIN OECD REGIONS	56.4	7.9	3.3	67.6
ALL OTHERS	11.2	0.9	0.1	12.2
TOTAL OIL/ORE/COAL	67.6	8.8	3.4	79.8

Source: Derived mainly from Fearnley and Eger's Chartering Co. Ltd and BP Trading Ltd.

Re-opening the Suez Canal would reduce the length of three of the principal oil transport routes by as much as 30 to over 55 per cent, as shown in Table 2.

If, in 1972, all crude oil carriers up to 60,000 dwt on these three routes could have used the Canal in both directions and all ships under 200,000 dwt on the

ballast leg, the required transport performance for the round trip would have been about 3,000 instead of 4,800 million ton-miles. A saving of this magnitude would have corresponded to roughly 10 per cent of total inter-regional oil transport performance in 1972.

Thus the possible impact on oil shipping

demand of a re-opened Suez Canal, according to the OECD Maritime Transport Committee's report, cannot be neglected, despite the increase in vessel size which has taken place over the last seven

The first ship since 1967 to enter Port



years. The *actual* impact will depend on numerous factors apart from the capability of the Canal to accomodate laden vessels of 60,000 dwt and vessels in ballast of up to 200,000 dwt.

The future volume of oil shipping using the Suez Canal will not only be determined by capacity limitations, but will also depend, among other things, on the levels of Canal dues, freight rates and bunker (ship fuel) prices (2). Higher bunker costs, as compared with conditions prior to the Canal's closure, will in fact tend to make the Canal relatively more attractive.

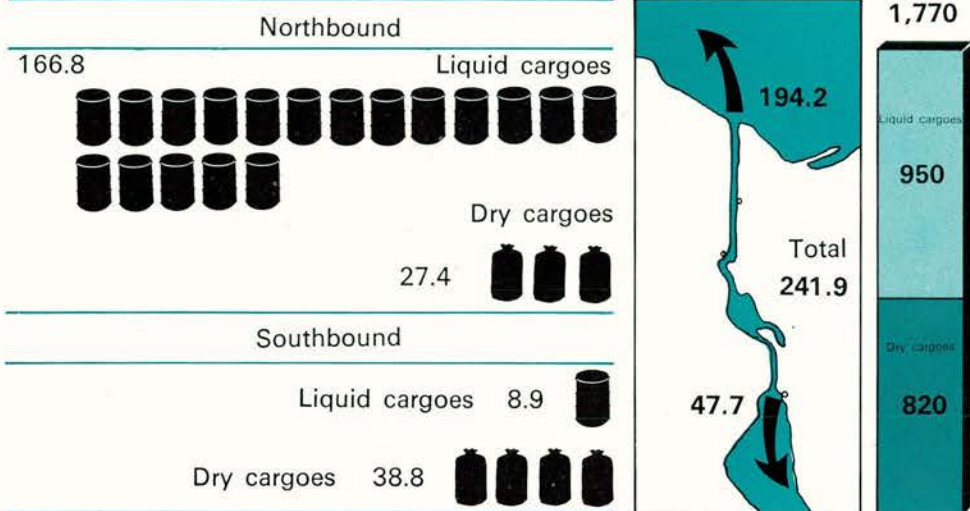
For dry cargo, in 1966 about 8 per cent of all world dry cargo tonnage movements passed through the Canal. *Potential* dry cargo movements for 1970 through a theoretically re-opened Canal have been estimated by UNCTAD at 8 per cent of total dry cargo tonnages, a figure confirmed by OECD's own estimate, based on detailed statistics involving some 70 per cent of international dry cargo movements for the same year.

Among the principal dry cargo commodities using the Canal in 1966 were fertilizers, particularly phosphates. Southbound movements included 2.5 million tons of phosphate rock, close to 10 per cent of the world phosphate rock trade, and total southbound fertilizer shipments through the Canal were 6.7 million tons or 17 per cent of southbound dry cargoes.

Said at the North end of the Suez Canal.



B. OIL AND DRY CARGOES MOVING THROUGH THE SUEZ CANAL AND WORLD INTERNATIONAL SEABORNE TRADE, 1966 (in million metric tons)



Source: U.N. Monthly Bulletin of Statistics and Suez Canal Authority.

2. APPROXIMATE SHIPPING DISTANCE VIA CAPE AND VIA SUEZ CANAL (in nautical miles)



Persian Gulf to :	Via Cape	Via Canal
• Mediterranean	10,800	4,700
• Northwest Europe	11,100	6,400
• US East Coast	12,000	8,300

Fertilizers could undoubtedly play an important role again if the Suez Canal were re-opened; eastbound phosphate shipments from Morocco and Tunisia would benefit especially. Other important bulk trades could benefit from a re-opening of the Suez Canal, for example, iron ore from Australia to Southern Europe. The Canal shortens this route by about 30 per cent.

If and when the Canal is actually re-opened—and Canal dues are fixed so as to make transit an economic proposition for *all* dry cargo ships which could save substantially on voyage distance and time—dry cargo shipping demand might well be reduced by about 5 per cent within a fairly short period.

The corresponding 10 per cent figure for oil shipping demand is merely illustrative of possible developments. It could probably be reached only after a certain time, but it might even be *exceeded*, if the facilities of the Canal were such as to give an incentive for again modifying the size pattern of vessels transporting oil between the Persian Gulf and Europe—this time in the direction of *smaller* ships, which could use the Canal fully loaded and/or in ballast.

(2) *It may be noted that bunker prices more than trebled between October 1972 and January 1974. The report of the Maritime Transport Committee contains a special section on the effects of these changes on future shipping supply.*

TOWARDS A MORE DESIRABLE ALLOCATION OF RESOURCES: THE CASE OF POLLUTION CONTROL

The energy crisis has recently diverted attention from the longer range objective governments have set themselves: to change the emphasis from the quantitative to the qualitative aspects of economic growth. It has not diminished the importance of this task, however. Instead of analysing well-being only in terms of GNP, the focus of a number of present OECD investigations is on how further increases in output can best be used to satisfy the whole range of society's needs.

This new orientation implies a concern with the acceptability of the present pattern of use of productive resources and the willingness to reallocate them. In this connection certain questions must be answered: what pattern of resource use would contribute most effectively to the welfare of society? What should be the role of the public sector in determining this pattern? How can an optimal supply of the goods and services normally provided by governments for the benefit of society as a whole be ensured? If satisfactory answers to these questions can be found this will have an important bearing on the design of future policies. Working Party Number Two of OECD's Economic Policy Committee has had its terms of reference enlarged to deal with these issues, and OECD has now published the first report of the Working Party under its new mandate in a series entitled "Studies in Resource Allocation". This report is devoted to the economic consequences of the sharp increase planned by a number of countries in the resources allocated to pollution control. The study is entitled "The Economic Implications of Pollution Control: A General Assessment".

The costs of pollution control are "manageable but need managing". This, the main conclusion of the report, is based on statistical information on the costs of planned pollution control programmes (1) for the 1970's in Germany, Italy, Japan, the Netherlands, Sweden, the United Kingdom and the United States. Estimated expenditures for these new programmes are related to the GNP expected over the same period (see Table 1), so as to give an indication of what additional proportion of available resources would have to be allocated to pollution control under these programmes.

The analysis shows that the total of such additional expenditures will tend to be about one per cent of GNP by the middle of the Seventies. Japan is an exception, with total projected costs possibly reaching more than four per cent. During the second half of the Seventies costs are expected to be somewhat higher—around 1.5 per cent in most countries—mainly due to a rise in operating rather than investment costs.

These figures of one to one-and-a-half per cent would appear to be manageable from a macro-economic point of view, and the high demand for environmental control implies that such a shift in resources would very likely lead to a greater satisfaction of society's needs and higher overall levels of well-being. Nevertheless, pollution control costs will vary considerably between countries, first because there are differences in societies' tolerance for

pollution and hence in the standards established for environmental cleanliness, and, second, because pollution is more severe in some countries than in others. Nor will pollution control costs be evenly spread over industries or among regions: the impact will be relatively greater for the sectors most affected than is indicated by the costs in terms of GNP. This may cause transitional problems during the period of adjustment.

If the "polluter pays" principle is adopted as recommended by OECD's Council in May of 1972, the increased costs to industry to which pollution control gives rise are likely to be passed on to the consumer in the form of higher prices. The more polluting the industry or firm, the higher will be its pollution control costs and hence the tendency for its prices to rise. Thus, such firms will tend to lose out in competition with the less polluting, hence lower priced goods. While the corresponding transfer of resources takes place, there may have to be some government aid for the transition.

Whether the "polluter pays" approach is adopted or pollution control expenditures are financed wholly out of the public budget

(1) The programmes are those planned at the time the report was prepared in mid-1973. The estimated costs cover programmes to combat air and water pollution, and the collection and treatment of solid wastes.

1. THE COST OF POLLUTION CONTROL

Total Expenditure on New Programmes of Pollution Control after Adjustments as a Percentage of Total GNP over the Programme Period

	1971-75	1976-80	1971-80
Germany	0.8		
Italy	0.4	1.3	0.9
Japan	3.0-5.5		
Netherlands	0.42	1.3	0.9
Sweden	0.5-0.9		
United Kingdom (a)			0.3-0.5
United States	0.8	1.7	1.4

(a) These numbers have been adjusted upwards to allow for operating costs on the basis of the relation between operating costs and investment in other countries.

Also adjusted upwards by 15 per cent to allow for solid waste disposal.

(the report itself is not limited to any one approach) the impact will be to reduce the real disposable incomes of the private sector. The most important macro-economic impact from this resource shift will be some inflationary pressure either as a result of demand pressure or from higher costs. Initially, a rapid increase in demand

for investment in pollution control equipment may put pressure on the economy if it is already at full employment. Under such circumstances, sensible timing of the implementation of pollution control measures becomes particularly important.

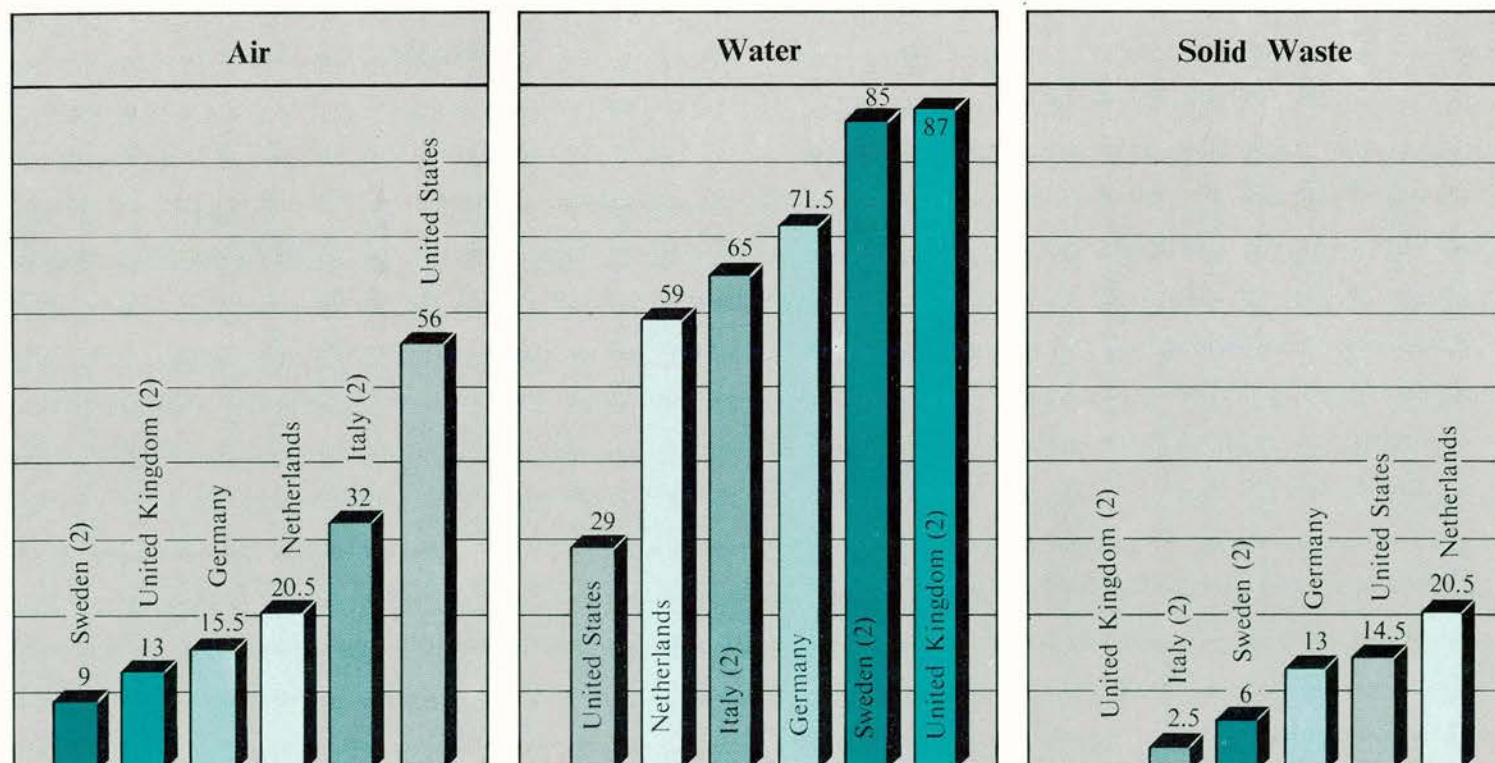
But these programmes may have an additional inflationary impact: whether financed by increased taxes or higher prices, pollution control will increase the supply of "community goods" and reduce the possibilities for private consumption. This in turn may set off compensatory wage claims as individuals attempt to retain their real after-tax incomes in terms of the conventional package of privately consumed goods and services, without taking account of the benefits resulting from pollution control. This may be particularly true for countries where the supply of public goods is already high.

In contrast, employment would not appear to be greatly affected by anti-pollution measures. There may be some decline in demand for the products of high polluting industries as a result of price increases, but the labour released will probably be absorbed in sectors producing anti-pollution devices or directly cleaning up the environment.

The impact on longer term growth of GNP, as traditionally measured, is more difficult to assess as the pace of technological change and the effect of a cleaner environment on the efficiency of the labour and capital used in the production process are unknown. As for trade, the overall impact is not expected to be large although it could be more important for those countries which mainly export goods from high-polluting industries.

A. EXPENDITURE ON AIR AND WATER POLLUTION AND SOLID WASTE DISPOSAL (1)

% of country's total projected additional expenditure on pollution control



(1) Programme periods are 1971-1975 for Germany and 1971-1980 for the remainder.

(2) Investment only.

Judging from the relative size of expenditure on various pollution control programmes, the type of pollution problem considered most urgent varies from country to country: in Europe water pollution receives the most attention, while in the United States (and probably Japan) air pollution is at least equally important. These differences, too, show that pollution is not a uniform but a sectoral problem.

NATIONAL SCIENCE POLICY IN IRELAND

OECD has just completed a study on National Science Policy in Ireland, the result of an 18-month enquiry requested by the Irish government, and carried out by a four-nation examining team, made up of high officials in the scientific and economic fields, from the Netherlands, Norway, France and Canada (1). In March of last year, "confrontation" meetings were held in Dublin. The final report is shortly to be released.

This is not the first OECD involvement in Irish science. In 1966, Ireland produced, in collaboration with OECD, its first overall analysis of the problems posed by the development of science and technology in relation to the achievement of economic and social goals. The publication of this report led to a number of decisions, in particular the creation of the National Science Council in 1967, which represented a first step toward the development of a national science policy in Ireland.

Ireland's decision to join the European Economic Community in January of 1973 has accelerated economic growth and made more acute the need for long-range economic and science planning, according to an OECD report on National Science Policy in Ireland.

The study not only makes recommendations for structural changes in the administration and financing of Irish science and technology and R and D, but also suggests that the purchase of local firms by foreign groups, particularly in the area of food processing, may be harmful to the development of a local production base and Irish skills.

A Troubled History

Some fifty years of Irish independence have been marked by war, depressions, shortages of capital and entrepreneurial skills as well as key raw materials, and by heavy emigration of many of its most vigorous and brainy workers. In the wake of the stagnation of the early Fifties, Ireland gave priority to export-oriented growth, and instituted a capital formation programme with a series of medium-term plans, whose central element has been the provision of considerable incentives to private industry for modernisation and diversification. Through such moves, the country began to throw off its quasi "colonial" status as a provider of raw agricultural material for later processing in Great Britain.

The report indicates that entry into the EEC was a "leap into the unknown" for Ireland, since, unlike its earlier free-trade agreement with the United Kingdom, it involved a wide and pervasive effect on the Irish economy. New markets for its agriculture were created, but a fledgling industrial sector had to become competitive during the transitional period or "breathing space" accorded the new member. Of particular significance is the importance of foreign trade to the Irish economy. Science and technology must now be directed, says the OECD report, "to master all available national resources to improve the productivity of her economy".

"Ireland especially needs a comprehensive long-range strategy",

the report continues. In particular, this calls for an increased rate of industrial employment, as manpower employed in farm production continues to decline. While a much-needed increase in R & D may eventually be supported by the business sector, the report recommends, as part of current strategy for full integration into EEC, that the government should increase the level of its support for R & D, particularly within the manufacturing industry. It also suggests that the government sponsor an advisory service to provide technological, management, and other information to small and medium-sized firms.

Incentives Questioned

The OECD team recommends that the Irish government exercise caution in approving the purchase of Irish firms by foreign groups. "Experience has shown that loss of control has led to a loss in the value added gained through production within the country. It would thus be regrettable if the few remaining Irish groups were to come under foreign control just when their development prospects within the Common Market become promising."

The report notes that investment incentives developed by the Industrial Development Authority (IDA) had run the danger of encouraging foreign firms only to make "relatively small commitments of capital to rather shallow final phase processes", involving imported rather than local machines and materials. Warning against Ireland becoming the "Hong Kong" of the Common Market, the examiners said that such industry, while

(1) The study on Ireland marks the 14th of a series of studies on national science policies, which OECD has completed for Austria, Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Norway, Spain, Sweden, the United Kingdom and the United States. (A study on the USSR has also been carried out.)

The examining team included Professor C.J.F. Bottcher, Chairman of the Science Policy Council, the Netherlands; Dr. R. Major, Director of the Norwegian Council for Science and Industrial Research; Mr. M.L. Stoleru, special advisor on industrial policy in the French Finance Ministry and Dr. J.W. Morrison, Canadian Department of Agriculture.

Studies on Greece, Yugoslavia, and Australia will be published shortly.

providing employment, generated less income than might be supposed. The so-called "linkage effect" of investment by grant-aided firms has been weak, and secondary investment has not always followed. Technology transfer, moreover, with subsequent acquisition of skills by local labour, is minimal when final stage or assembly production facilities rather than earlier stages of production are set up.

Priorities for Industrial R & D

Following on this, the report suggests that certain development areas which employ local raw materials should be reserved for Irish-owned industry. More R & D should be oriented towards the identification of such enterprises as for example, the food processing industry, of which a "substantial part" should be reserved for development by Irish industry. Consequently, it says that government aid should go only to Irish firms in the meat and fish sector. It also suggests that Ireland should build up know-how in mineral extracting and processing and that it should play an active role in an investigation of its own Continental Shelf for oil and gas deposits.

However, it recommends emphasis on government aid to firms rather than branches of industry, since giving "equal" treatment to inefficient as well as efficient firms can obstruct market efficiency.

In this connection, it cites with approval experiments carried out in other countries with "R & D grants repayable in the case of success" in which industrialists are reimbursed for 50 per cent of the cost of the research if the good is put into production and sold on the market.

The OECD report supports the case made by the National Council and the Institute for Industrial Research and Standards for a science-based fine chemicals industry, calling it "an excellent example of priority area for the development of an Irish-owned industry with both a local raw material and indigenous R & D base".

Institutional Changes

The examiners found that Ireland, in common with many other countries, has neither a centralised science policy, nor a coordinated policy for STI (Scientific and Technical Information). This lack is largely due to the strictly advisory role given to the National Science Council (NSC), which could not effectively coordinate the activities of the various government departments. Given this structural impediment, they nevertheless praised the NSC: "On balance the feeling of this team is that (its) work has been of considerable use in preparing the ground for the elaboration, on the basis of more elaborate institutional arrangements, of the national scientific and technological policy Ireland now requires..."

The Council, which has completed its four-year mandate, has itself recommended a successor with more authority. The OECD experts propose a "National Board for Science and Technology" to fill this role.

The suggested National Board could examine the detailed programming requests of state-supported institutes and establish priorities, in the process encouraging R & D tied to production and marketing needs. While the original NSC had recommended that its successor have full power to allocate resources, the OECD experts felt that those departments having a need for scientific input, as well as operational scientific institutes should continue

COMPARISON OF TOTAL R & D EXPENDITURES, RATIOS OF GERD/GNP, AND R & D EXPENDITURES PER HEAD OF POPULATION IN CERTAIN OECD COUNTRIES AND IN IRELAND IN 1969

Ireland has long been an "underdeveloped" country in terms of the proportion of its resources devoted to R & D, as the comparative table below illustrates. Approximate expenditure for R & D per head of population is 77 times more in the United States and 27 times more in the Netherlands.

Country	R & D Expenditure (US\$ million)	% GERD/GNP	Approximate R & D Expenditure per head of population per annum (US\$)
United States . . .	26,595	2.8	131.3
France	2,678	1.9	53.2
West Germany . .	2,652	1.7	43.6
Japan	2,592	1.5	25.3
United-Kingdom (1968)	2,439	2.4	43.8
Canada	979	1.4	53.9
Italy	694	0.8	12.8
Netherlands . . .	585	2.1	45.5
Switzerland . . .	391	2.1	63.0
Sweden	368	1.3	46.2
Belgium	261	1.1	27.1
Norway	97	1.0	25.2
Austria	85	0.7	11.5
Finland	63.3	0.7	13.7
Ireland	22.4	0.6	7.7
Greece	15.1	0.2	1.7

Source : Directorate for Scientific Affairs, OECD.

to have a say in such allocation. "The new body", says the report, "should not become either a fighting ground for distribution among institutes of government funds, nor a lobby of scientific and research managers."

Policy-making and Co-ordinating Functions

The report stresses "the element of strength that the Irish scientific system derives from the high degree of concentration of the R & D activities carried out within the government sector". One of the problems most frequently encountered in countries with a limited experience in research is the dispersion of their R & D activities and the absence of research establishments of a viable dimension permitting the organisation of research on the scale (or with the threshold) required to become meaningful.

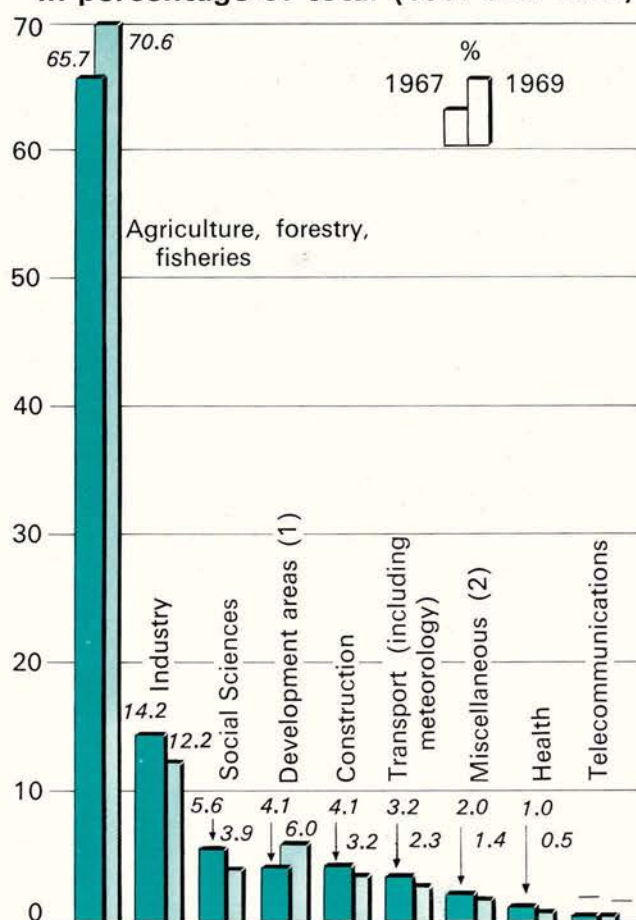
No such problem exists in Ireland with the government sector and this is a very positive aspect of the overall situation. The government research institutes are the backbone of the Irish scientific system and give the country a strong base on which to develop.

The report does note however that, "certain problems of co-ordination have existed and still exist, and that there certainly has been a lack of concerted efforts between different institutes in meeting given research requirements".

According to the OECD Examiners, "it will be one of the future statutory body's main responsibilities to take all necessary steps to ensure such coordination and concertation of efforts in the future".

(continued on page 38)

A. GOVERNMENT SECTOR: R & D EXPENDITURE BY FIELDS OF ACTIVITY in percentage of total (1967 and 1969)



(1) Within the State.

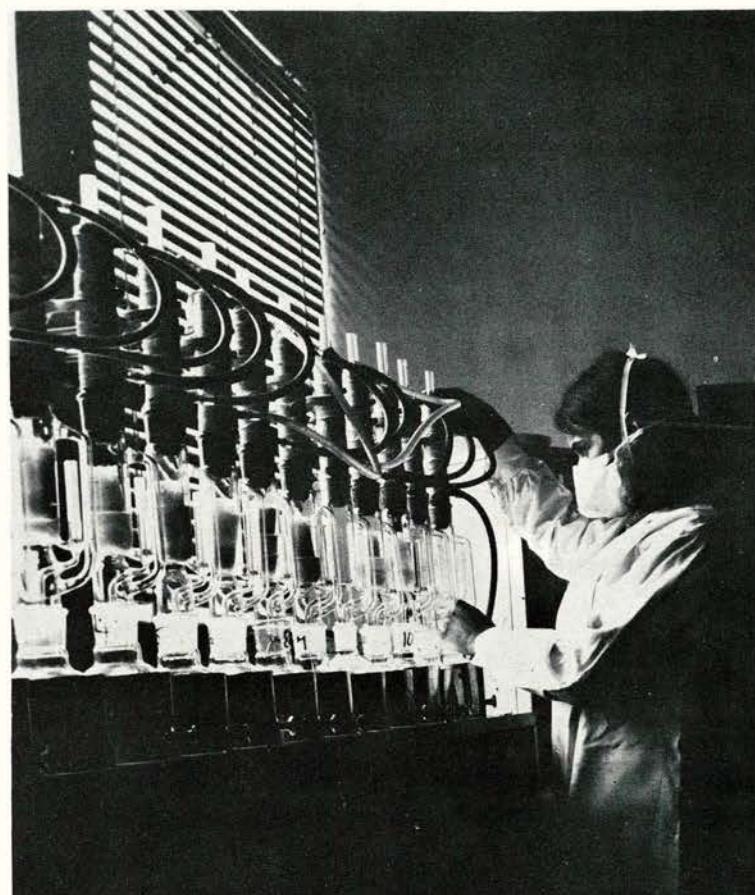
(2) Mainly physical planning (An Foras Forbartha).

Source: *Administration (special issue: the IDA)*, Vol. 20, No. 1, 1972, page 43.

2. GOVERNMENT SECTOR - TOTAL INTRAMURAL EXPENDITURES BY THE MAIN R & D AGENCIES, 1969 (in millions of £)

Agency	Total intramural R & D expenditure 1969 (in millions of £)	Per cent of sectoral total	
		1969	1967
An Foras Taluntais	2.452	52.0	58.9
Institute for Industrial Research and Standards	0.726	15.4	14.4
Dept. of Agriculture and Fisheries	0.722	15.3	13.9
An Foras Forbartha	0.301	6.4	3.6
Forestry Division (Dept. of Lands)	0.122	2.6	1.5
Fisheries Division (Dept. of Agriculture,)	0.090	1.9	2.0
Geological Survey	0.040	0.85	—
Central Bank	0.035	0.7	—
Bord Iascaigh Mhara	0.026	0.55	0.7
Meteorological Service	0.022	0.5	—

Source: *Published in "Effective Tariffs and the Structure of Industrial Protection in Ireland" by Dermot McAleese, Economic & Social Research Institute, June 1971. Paper No. 62.*



Multiple fat extraction unit of the Dunsinea Research Centre of An Foras Taluntais (Agricultural Institute). This Centre specialises in many aspects of animal production research.

National Science Budget

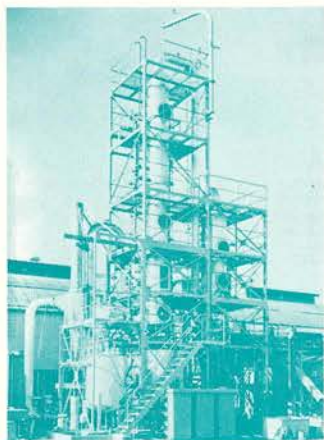
The examiners recommend a "national science budget", patterned after the procedure adopted in Belgium (2), rather than piecemeal departmental appropriations, since the latter are difficult to coordinate, fail to allow for overlapping needs, and make difficult an overall assessment of the resources devoted to science.

On a different level, the report supports the NSC proposal for a cabinet sub-committee on science and technology, to be chaired by the Minister of Finance, and made up of Ministers whose departmental policy requires a "major scientific input".

Role of Universities

The report emphasises the need to give a more intensive training and research role to the Universities, which represent in the short and medium-term the main reservoir of scientific manpower and thus one of the essential growth factors of the Irish science system. One suggestion made by the OECD team is for a joint university-IDA scheme to orient promising undergraduates towards an "entrepreneurial course" which would teach the management skills and knowledge needed to set up and administer successful export industries. As far as research policy is concerned, the examiners, in this sector of R & D as in the others, call for changes from the present uncoordinated policy to one which takes into closer account the needs of the economy and of society.

(2) "OECD Review of National Science Policies: Belgium", 1966, pp. 31



New Guidelines to Control Air Pollution

OECD Member countries have agreed on common action aimed at improving air quality in already heavily polluted industrialised urban areas.

This agreement, contained in an OECD Council Recommendation (1), comes at a time when Member governments are reshaping their energy policies to meet the increase in price of fuels and the shortage of certain clean fuels. It is in accord with current attempts to achieve more rational and efficient use of fuels and to make better use for environmental protection of those clean fuels now available.

The Recommendation provides for measures to control emissions of sulphur oxides and particulate matter, or dust, as the two main air pollutants.

It is designed to:

- encourage the use of clean fuels in sources emitting near ground level, especially in urban areas and where emissions occur under unfavourable meteorological conditions;
- ensure the adequate supply of clean fuels by encouraging the installation, where

necessary, of desulphurisation facilities at refineries and other appropriate installations;

- limit the maximum sulphur content of distillate fuels;
- encourage the confinement of high polluting fuels to large installations equipped with tall chimneys and, where necessary, with advanced particulate arrestment facilities, and/or whenever appropriate, desulphurisation facilities;
- encourage the efficient use of fuels.

The guidelines form part of the OECD's work of promoting concerted approaches to balancing the aims of environment and energy policies within the context of the Member countries' general economic and social objectives.

They are based on joint studies by OECD's Environment, Energy and Oil Committees.

Further Untying of Aid

Eight Members of OECD's Development Assistance Committee have signed a Memorandum of Understanding among themselves to untie their bilateral development loans in favour of procurement in developing countries. The countries are Denmark, the Federal Republic of Germany, Italy, Japan, the Netherlands,

Norway, Sweden and the United States. They hope that other DAC countries will also soon adhere to this Memorandum of Understanding. The new arrangement with certain qualifications, enables developing countries to bid on bilateral development loans provided by the participating governments, and hence will help to promote developing countries' exports.

The Memorandum of Understanding follows the conclusions reached at the DAC High-Level Meeting of October 1973 when DAC countries agreed to untie their future official financial development assistance contributions to multilateral institutions.

Export Credits

The OECD Council has adopted two Resolutions in the field of export credits in line with the pledge contained in the Declaration adopted at the Ministerial Meeting of 29th-30th May to abstain from destructive competition in official support of export credits.

One Resolution provides more stringent conditions for export credits granted with official support by shipbuilding countries. Under the new arrangement, which amends an Understanding reached in 1970, the governments of participating countries—Australia, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Japan, the Netherlands, Norway, Spain, Sweden and the United Kingdom—have agreed to raise the minimum interest rate on such credits from 7½ to 8 per cent, to reduce the maximum time allowed for repayment from 8 to 7 years from date of delivery and to increase the minimum payment required before delivery from 20 to 30 per cent.

The other Resolution concerns an Understanding on Export Credits for Ground Satellite Communications Stations under which Governments of Belgium, Canada, Denmark, Germany, France, Ireland, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States have agreed to limit the maximum duration of credit to 8 years and to fix the minimum downpayment payable by final shipment to 10 per cent. Both Understandings make allowances for the extension, under certain conditions, of credits at more favourable terms for development-motivated transactions.

(1) Recommendation on Guidelines for Action to Reduce Emissions of Sulphur Oxides and Particulate Matter from Fuel Combustion in Stationary Sources.

Three New Committee Chairmen



CONSUMER POLICY:

J. Blair Seaborn, Assistant Deputy Minister, Canadian Department of Consumer and Corporate Affairs.



FISCAL AFFAIRS:

Pierre Kerlan, Deputy-Director, General Directorate for Taxes, French Ministry for Economy and Finance.



TOURISM:

Anton Würzel, Director, Austrian Ministry for Trade and Industry.

AT OECD

Education and the Environment



The Rungsted Conference was held in the presence of H.R.H. Prince Henrik of Denmark (second from left) and the Danish Minister of Education, Tove Nielsen (far left). OECD's Secretary General, Emile van Lennep (second from right), opened the meeting. At far right is James R. Gass, Director of OECD's Centre for Educational Research and Innovation (CERI), which organised the meeting.

An OECD Conference on "Environmental Education at Post-Secondary Level" was held in Rungsted, Denmark, 4th-7th June. The focus of the conference was the need to imbue decision-makers, professionals and teachers with an awareness of environmental problems and with advanced training in environmental disciplines.

Existing environmental training facilities were discussed from the point of view of course content, teaching methods (such as the pursuit of individual projects), the required research base, how to ensure interdisciplinarity, the need for recurrent

education and the role of international co-operation.

The participants—educators, government officials, industrial executives and research workers, some 90 in all—devoted their attention to orientation and training of six main groups (1):

- *Environmental specialists.* Twelve universities having programmes to train such specialists were discussed.
- *Political decision-makers.* Italy's experience with an orientation programme for senators was among the cases examined, as were the training programmes of the

United States' Environmental Protection Agency.

● *Industrial executives.* Courses are provided by several large companies and business schools and by such special institutions as the Geneva Centre of Industrial Studies which provides training for the personnel of multinational companies.

● *Teachers.* University and other programmes must train both teachers of young children—whose task is to inculcate in their students an awareness of the need for

protection of nature—and teachers of specialised disciplines such as biology and geography to older students. Universities in the United Kingdom—Liverpool, Reading and Northumberland—were the main focus of study.

● *Doctors, architects, engineers and other professionals,* for whom environmental courses are provided in the course of retraining at institutions like the School of Public Health in Rennes, France, and the College of Engineering and the Depart-

ment of Family Medicine at Michigan State University in the United States.

(1) *The OECD Observer*, N° 68, February 1974, "Environmental Education in the Universities: A Key to 'Relevance' ". A new two volume publication containing 27 case studies of environmental training—"Environmental Education at Post-Secondary Level"—has just been published by OECD.

The Individual and the Computer

How to protect the individual's privacy in an era of increased and increasingly sophisticated data collection—an issue of growing concern to the public and to governments as well—was discussed by over 100 jurists, sociologists and government experts at an OECD seminar on "Policy Issues in Data Protection Concepts

and Perspectives" held on June 24th-26th at OECD headquarters.

There is a growing body of legislation designed to protect the citizen while making the maximum amount of information available to both governmental and private bodies. Thus a Data Protection Act went into effect in Sweden on July 1st,

a Data Protection Law is at present before the German Bundestag, France has created a commission to study the problem, several Bills are pending before the Congress of the United States and a special commission is drawing up government proposals.

The major issues discussed were :

- the need to set standards for the operation of personal registers and possibly to establish new institutions which could devise, monitor and enforce safeguards,
- the advantages and dangers entailed in use of personal identification numbers and the need for strict control when independent records are linked into a single system,
- the right of individuals to have access to personal registers so as to correct errors and challenge disputed information,
- the desirability of a code of principles governing the exchange of data between countries,
- the need for cost-benefit analysis of legislation designed to protect individual privacy.



Above : Clark Renninger, Institute for Computer Science and Technology, National Bureau of Standards, United States, presiding over the seminar (centre), Hans Peter Gassmann, OECD Secrétariat (left) and S.R. Barnes, Director, Local Authorities Management Services and Computer Committee, United Kingdom, (right).

Below : Per H. Svenonius (left), Department Head, Swedish Agency for Administrative Development, Chairman of OECD's Computer Utilisation Group, and Alan Westin (right), Professor of Public Law, Columbia University, United States.



Corrigendum. In the June 1974 issue of *The OECD Observer*, the photos of the Netherlands' delegates to the OECD Council at Ministerial Level were inadvertently reversed. At left is Laurens J. Brinkhorst, State Secretary, Ministry of Foreign Affairs and at right Rudolph F.M. Lubbers, Minister for Economic Affairs.



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