North-South
East-West

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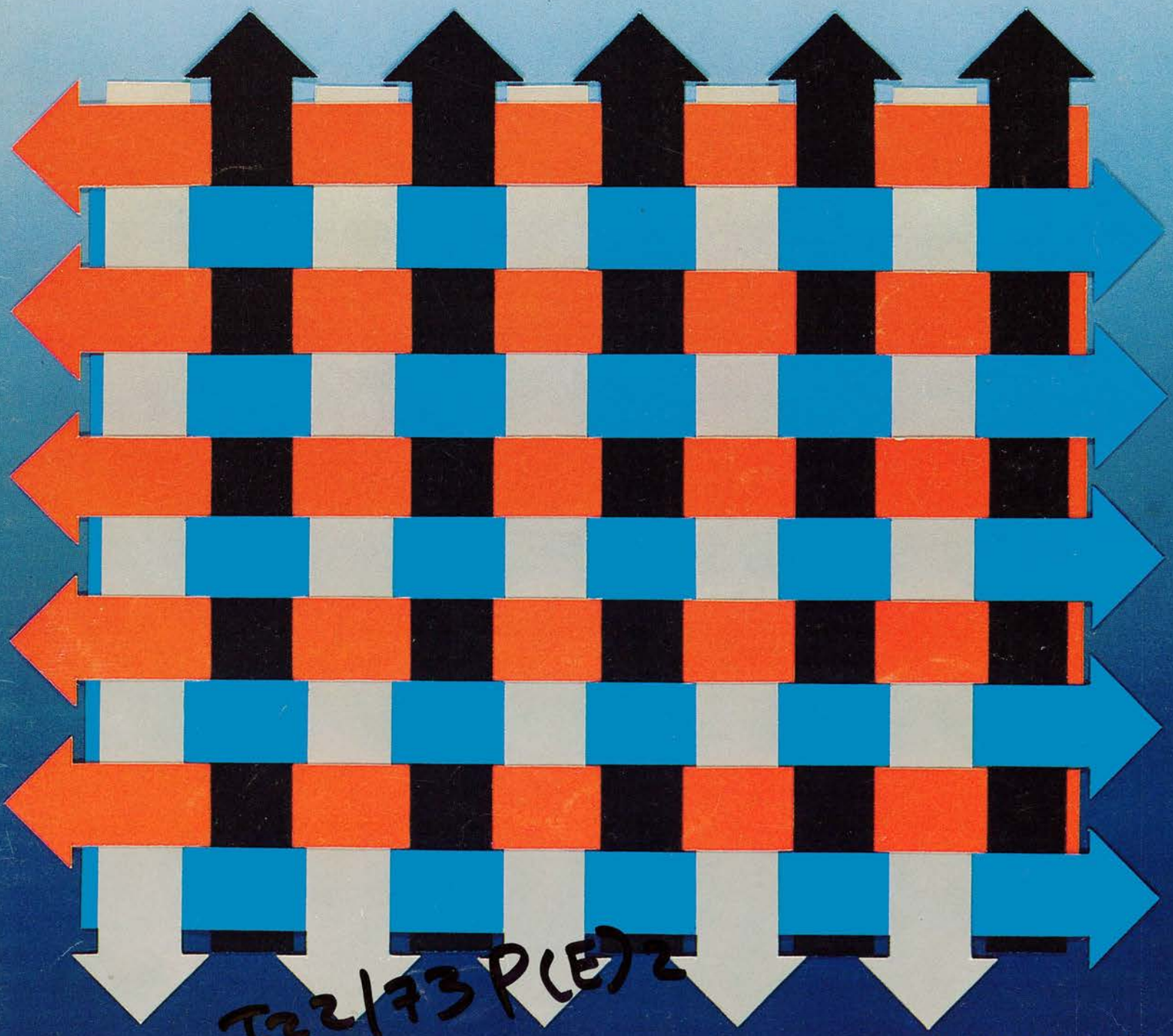

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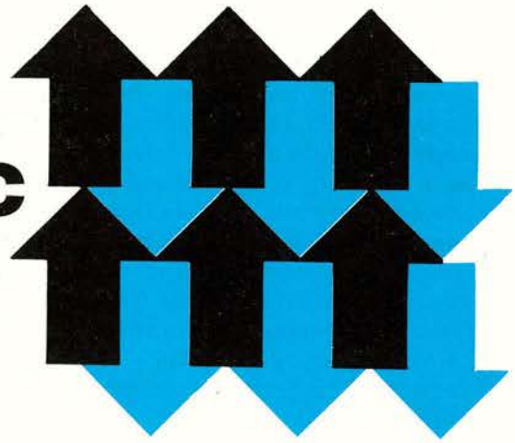
North-South Interdependence and Economic Reform



by Emile van Lennep, OECD's Secretary General

Over the last year, economic recovery in the OECD area has been gathering momentum. Economic growth in the OECD economies is forecast to continue this year and next year at higher rates than previously expected, not only in North America but elsewhere. Developing countries have seen the benefits already. The latest OECD figures indicate that exports of non-oil developing countries grew by 7 per cent in real terms in 1983 and we expect their import volumes to grow by nearly 6 per cent in 1984, the first real import growth for two years. It is no longer appropriate therefore, to talk of the need to get the world economy out of a recessionary crisis. It is rather time to talk about the fundamental policies which need to be put in place if the recovery is to be harnessed and translated into sustained growth. For there is still an important degree of fragility, with risks, imbalances and uncertainties. Now the structural and systemic issues must be addressed. This can be done in an economic environment which is more favourable for structural change than was expected even a few months ago.

Macro-economic and Monetary Issues

In the macroeconomic and monetary fields some important progress has been made in policy terms. The lessons of inflation have been, I believe, well learned. I see nowhere a belief that there is anything to be gained from increasing demand through stimulative monetary policies. Indeed there is a wide understanding in both developed and developing countries that such policies would soon bring higher inflation, higher interest rates, less investment and more unemployment. There has been therefore a general shift to a medium-term, stability-oriented approach to monetary policies in all the major countries and in many others. In the area of fiscal policy there has also been progress though much remains to be done. There is a general awareness that government expenditures, including social expenditures, have to be subject to more realistic limits. This does not entail abandoning the social safety net: rather it requires a clearer recognition of the need for priorities and efficiency in attaining objectives. In developing countries generally, including the debtor countries, there is also I believe a new concern for efficiency in the government sector and the need for reducing the claims of the public sector on the national economy. In many OECD countries one can point also to a new awareness of the incentive aspects of taxation and of the distortions which inappropriate tax structures can have on savings patterns and resource use in their economies.

Better monetary and fiscal policies within individual countries along these lines are essential for better economic performance in the medium-term. But, it is also important to have consistent policies among countries. The right balance of policies within countries, and policy consistency among countries, are necessary for the smooth functioning of the international monetary system. Inconsistent policies, operating through interest rates and the induced flows of capital, have major consequences for exchange rates. In turn, the interest rate and exchange rate effects have consequences for growth, trade and financial stability in the world economy. Achieving consistency is no easy matter, particularly since the discipline that exchange rates impose on domestic policy has tended to be erratic.

Finding ways to bring about greater consistency among policies, and a more uniform discipline is, I believe, the principal systemic problem in the operation of the international monetary system. Until this can be achieved, and it is no simple task in either political or economic terms, we will live with the reality of exchange rate volatility and at times, with exchange rate relationships which are unhelpful to growth and confidence in the world at large.

International liquidity is an issue which has in the past been a major element in the debate on international monetary reform. The SDR was conceived and created as an outcome of the discussion on international monetary reform among the countries of the Group of Ten during the mid-1960s. The prognosis at the time was that international liquidity would grow only slowly, retarding the expansion of world trade and, thus, the growth in world output. Ironically, almost immediately there was an unforeseen explosion of international liquidity in the form of a major outflow of US dollars. And throughout the 1970s international reserves grew at an unprecedented rate. The liquidity problem was therefore a problem of far too much rather than too little. In this context, although some allocation of SDRs was agreed, the objective of making the SDR the principal reserve currency under international control lost much of its relevance. Indeed, the rapid development of international borrowing has funda-

mentally altered perceptions about how reserves are created, so that there is a genuine problem of understanding what the international liquidity issue is.

In fact, it seems to me that the issue of liquidity is, in today's world, essentially subsumed under another international policy issue – the question of resource transfers.

Resource Transfer

The resource transfer question has been at the heart of the North-South relationship since the beginning. It remains a key issue today, not just for the development process, but for the functioning of the whole international economy.

The development problem has always been seen in large part, and often even in essence, as a problem of capital shortage. Accordingly, the transfer of savings from the rich capital-surplus countries to the poorer capital-deficient countries has been a prime element in thinking about the policy requirements of development. The aid effort, and the 0.7 per cent of GNP aid target, derives from this analysis.

Today, the resource transfer problem looks rather more complicated. For one thing, it is clear that capital alone is not the central development problem – it may be a necessary condition but it is not by any means a sufficient one. Domestic savings and investment ratios in all but the poorest developing countries have risen very significantly; in many developing countries these ratios are higher than in OECD countries. This is not to say that additional capital inflows are not appropriate or needed, but rather that large savings gaps cannot be taken for granted in all developing countries. What has proved to be of greater importance is the question of how savings are used.

At the same time, patterns of intermediation of savings flows from lenders to borrowers have undergone important changes. The shifts in global savings/investment balances associated with the oil shocks are well-known; they may prove to have been relatively transient. Less well-known, perhaps, is that during the past decade the increased role of banks in resource transfer was more or less offset by the decline in the relative role of direct foreign investment so that, overall, the share of resource transfer accounted for by private markets has not risen very much. Furthermore, it is not sufficiently recognised that official financing remains a major element – more than 60 per cent – of total resource transfers. But within the official flows, non-concessional finance, including export credits and guarantees and non-concessional multilateral development lending, has gained in relative importance, while the share of concessional aid has declined. Overall, on the side of both private financing and official financing, it is the flows with higher servicing costs that have increased most.

Savings

One indication of a changed savings situation in the world economy is the persisting high level of real interest rates. So long as such rates continue, developing countries cannot afford to borrow as much as in the past, even if access to international capital markets is fully restored. High interest rates also create financial strains because of servicing costs on the existing stock of floating-rate debt (see page 7). Shifting the savings-investment balance to permit interest rates to fall – and at the same time to enhance possibilities for investment and, hence, growth – is thus important. The primary way for governments to accomplish this is to restrain the growth of their own claims on national savings. Success in bringing structural budget deficits down as recovery proceeds is therefore essential. The industrial countries have a particular responsibility here if savings are to be adequate to meet domestic investment needs and to allow for a continuing flow of capital to the developing world.

Realism, however, cautions against taking the view that appropriate budget policies in the industrial countries will lead to very low interest rates. The negative real interest rates of the 1970s were an aberration rather than a norm. A world committed to avoiding the inflationary spirals of the past decade will be a world with positive real interest rates. Lending and borrowing within and between countries will have to adjust to this reality.

Intermediation

The intermediation of financial flows to developing countries is now, with the problems of debt and the banking system on the front pages, a highly topical issue. OECD's view of the international banks and the debt crisis departs from the common notion that the banks played mainly a convenient, but excessive, role in the recycling of oil surpluses. The real origin of bank lending to LDCs was the evolution of international banking and the Euromarkets in the 1960s, together with the emergence of a number of creditworthy developing country borrowers. OECD statistics show that the important growth of lending to developing countries occurred in the years *before* the first oil shock, with a second major expansion just before the second oil shock. In both periods there was a context of expanding export volumes, accumulation of reserves and reasonable internal balance in borrowing countries.

In contrast, the expansion of bank lending after 1978, particularly in 1980 and 1981, took place in a quite different context. Foreign exchange reserves were falling, real interest rates were escalating, and OECD import demand was contracting sharply. A further important difference was between the rising inflation and terms of trade in the two earlier periods and the disinflation and falling terms of trade in the early 1980s. And in this last period, internal economic policies in the countries which ran into debt problems were seriously at odds with the productive use of large foreign borrowing. The evidence also suggests that insufficient control was exercised over bank exposure, with a large amount of short-term bank lending simply "happening" rather than being part of bank policies.

Considerable attention has been given recently to the fact that the major debtor countries are now paying more in interest than the extra new loans they are receiving. This arithmetic has to be very carefully interpreted. It is interest, not capital, that is flowing out of these countries. They still have a net inflow of capital. In large part what is happening reflects an adjustment from the negative real interest rates of the 1970s to positive real interest rates now. When real interest rates are positive, it is rational, as well as necessary, to borrow less.

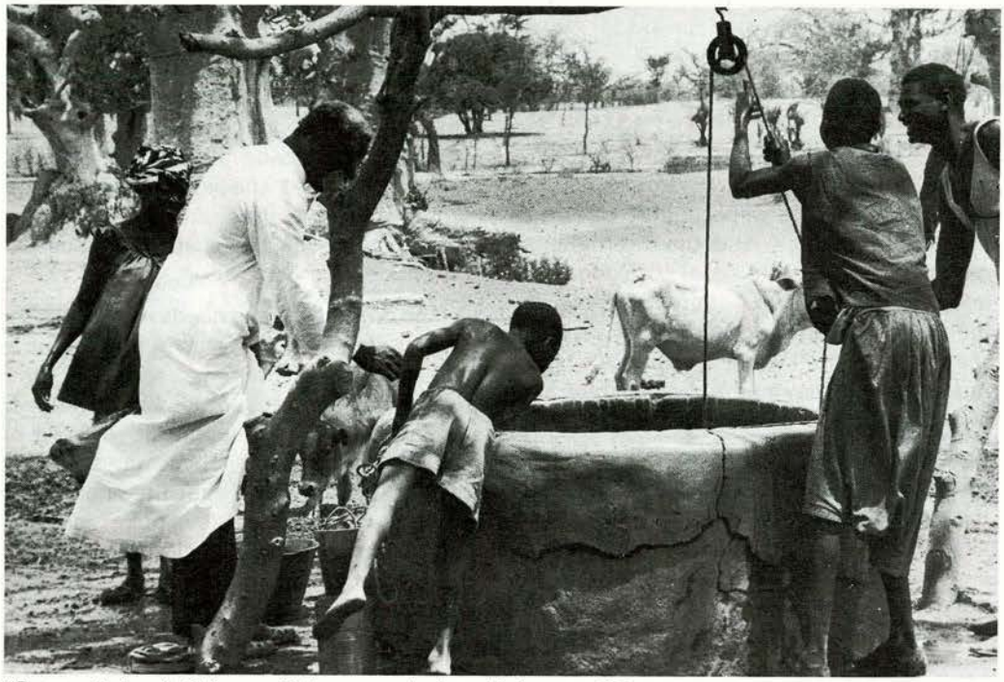
In a properly functioning capital-transfer process, the volume of interest payments will grow, and this will require a growing trade surplus. It would be unsustainable for new lending to cover interest payments indefinitely. I do not want to imply, however, that the present situation is anything other than a painful one for the debtor countries. Real interest rates that are so high strain and distort the transfer process. Key creditor countries and the international banks have an essential interest, and a responsibility, in helping debt-problem countries to stabilize their financial position and resume investment and growth.

It seems equally clear that those developing countries which pursue outward-oriented policies, focussing on efficient resource use and the development of genuinely competitive export sectors, will be the ones best placed to attract foreign capital and to carry the resulting servicing obligations.

In this context, special efforts are needed to improve the environment for direct investment flows – efforts which OECD countries could help. For example, they might seek ways in which the framework for co-operation on foreign investment among OECD countries could be applied to co-operation with developing countries.

The volume of Official Development Assistance (ODA) has been one of the most fundamental issues in the resource transfer discussion. Indeed, the 0.7 per cent of GNP target for concessional aid has come to symbolise the aspirations for North-South co-operation. The current aid performance, only about half that target, symbolises for many how far short of those aspirations the system of international development co-operation has fallen. I believe that the 0.7 per cent target has had and continues to have a real impact on the aid performance of a number of OECD countries. But I am equally convinced that the basic development problems of the poor countries cannot be solved simply with more aid. There is need for more aid in the poor countries where drought and world recession have deepened poverty and starved investment. But there are also serious problems of inappropriate domestic policies, inadequate institutions, aid allocation and aid effectiveness in these countries. Both sets of deficiencies have to be addressed through a common effort by recipients, donors and the multilateral development institutions.

Trends and prospects in the low-income countries of Sub-Saharan Africa are such they they must be a major international concern. Aid donors will have to envisage new departures from established aid practices if they are to address the particularly difficult nature of the development problems in Africa.



"Prospects in sub-Saharan Africa are such that aid donors will have to envisage new departures from established practices." Above: the frontier between Senegal and Mauritania.

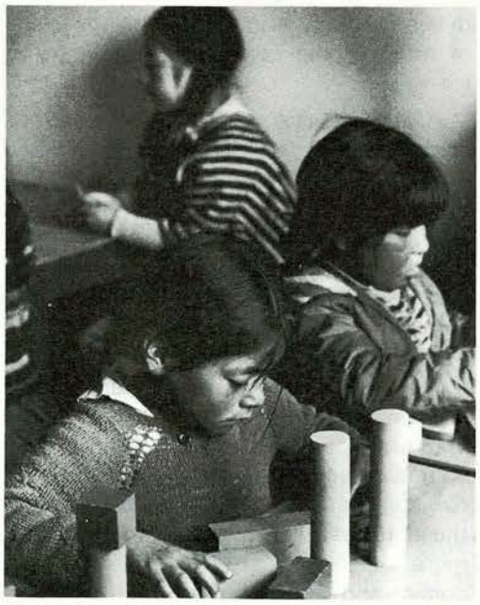
"What must be done to make clear to electorates the large gains in growth, in trade and in employment that can be obtained from the growing interaction between developed and developing countries?" Above: the port of Abidjan in the Ivory Coast.

Effective use of capital by the developing countries

The problems of financial intermediation all point towards a third aspect of the resource transfer process - the effective use of capital in developing countries. Both the debt problem and the aid effectiveness problem have to be seen in this light. Unless developing countries have coherent and effective policies for resource allocation and use, together with effective public institutions and productive private sectors, the resource transfer process cannot operate properly. Lenders, private investors and voters in donor countries must ultimately be convinced that there is a viable development process in train.

Governments can, and should, work together to ensure that the financial system as a whole functions in a stable and satisfactory manner. The issues here are pressing ones. Further evolution in approaches to the debt crisis are likely to be needed to meet the challenges in the period ahead. But as in other major policy areas, regard for the medium-term functioning of the international financial system is essential. Developed and developing countries need to be thinking together about what economic policies are needed to promote a set of more strongly based private financial flows to individual countries, including to debtor countries, around a core of official financing and development policy commitments.

OECD governments also have a major responsibility for the results and consequences of the transfer process where their own bilateral flows are concerned. The



"It is through the economic and development process that the capacity of individuals to make choices and thus to determine their own lives will be progressively increased." Above: pre-primary school in Ecuador.

need to ensure that aid flows, whether or not associated with export credits, do not promote special export interests at the expense of development objectives is basic in this regard and a major concern for OECD co-operation in these areas.

Trade and Production

Major problems have been accumulating in the trade and production system. There are serious rigidities in labour, product and capital markets of OECD countries. There has been a progressive tendency for their governments to intervene in the market system in a direct way in an attempt to influence employment, incomes, investment and trade flows. This tendency has contributed strongly to the situation where, in Europe especially, unemployment is high and investment has not been sufficiently productive. In addition, there are extremely serious conflicts in international trade relations. The developing countries have been adversely affected by these tendencies, even though the main conflicts and consequences have arisen between OECD countries.

In the developing countries themselves, there is also some clear evidence of the effects of trade and resource allocation policies. Those developing countries which have opted for coherent policies, avoiding biases against agriculture and exports, have performed relatively well. But the countries which have allowed their policies to be confused, expensive in terms of subsidies and protection and biased against agriculture, have run into debt problems or achieved little real economic progress. These policy factors underlie the contrast between the economic performance and financial stability of the dynamic countries in Asia and the problems of most of the countries in Latin America.

A prime challenge for the international community is to reverse these adverse developments. We cannot afford the waste of opportunities for mutually beneficial international exhanges, or the real damage that is being done to the international system. In all countries, the emphasis should be on increased flexibility and responsiveness in economic structures, on framework policies rather than direct intervention and on the effective functioning of markets. International issues concerning commodities, technology transfer and direct investment should be discussed in these terms. Trade policies ought to be more explicitly related to the wider economic and development context. Both developed and developing countries will need to adopt fresh attitudes and approaches if this vision is to be realized.

All trading partners need secure and stable access to export markets. It has to be recognized that this need is a particularly crucial one for developing countries, confronted as they are with the intricate and interrelated problems of trade, finance and investment. Commitments were undertaken a year ago by OECD Ministers to work for a strengthened open multilateral trading system which is essential to support economic recovery and the transition to sustained growth in the OECD area. The reversal of protectionist trends and the relaxation and progressive dismantlement of trade restrictions and distortions are the agreed aims of the exercise they set in train. This means not only reducing protectionism in the usual sense of the term but, more fundamentally, overcoming rigidities which become reflected in trade measures.

Implications for International Co-operation

Interdependence implies that countries can do themselves, and the international community, a great deal of good by adopting consistent and effective policies. It also implies, on the other side of the coin, that they can do themselves and each other much harm if they adopt inconsistent and short-sighted policies.

Politicians are in the front line of this struggle between policy options, between the short-term view and the longer-term view, between local and national horizons, and the international horizon. How can we get our political systems to produce the kind of results which make for a viable international economy, in which we can all feel more secure and confident and in which the vast human challenges of development can be met?

Why is it that, so often, policies are chosen which impose large net costs on the nation taking action and on other nations – policies which hinder adjustment of economic structures and threaten to disrupt the international economic relationships from which we derive so much of our economic achievement? What must be done to make clear to electorates the large gains in growth, in trade and in employment that can be obtained from the growing interaction between developed and developing countries? How can the adjustment pains for those people and regions whose lives are changed by new technologies and by new patterns of demand and trade be smoothed?

In my view, the basic reform which we now require is not primarily a reform of institutions. It is not a question of new rules, nor of new international decision-making procedures. What is required goes deeper.

Nationally, the need is to develop the frame of reference in which economic policies in each of our countries are conceived and presented to the public. A stable and predictable framework must be created within which our economies can adjust more quickly to change and become more flexible. Only within such a framework can we evolve a consistent set of policy approaches and provide a fundamental answer to the danger of renewed economic crisis.

Internationally, we need to create the same kind of framework. The linkages between trade, finance and development, which we now all appreciate so much better, demand much more consistency in national economic policies. This requirement reaches deep into the national political process. It would be a delusion to believe that a centrally agreed set of rules or policies can ever be implemented successfully in independent nations, large or small, without wide public understanding and acceptance. The international framework therefore has to be developed through a genuine and sustained process of international co-operation.

The policy dialogue needs to address the most relevant policy issues in developed and developing countries. Resource transfers to developing countries will continue to be influenced and supported largely by OECD governments. These governments need to be convinced that the finance and savings transferred to developing countries are effectively used. Equally, private flows will be attracted only when there is a reasonable assurance that they will be used for the benefit of both borrowers and lenders.

It is on these matters that the dialogue should be developed. This should not be seen as an interference in the domestic affairs of developing countries, but as a common effort to support a mutually-beneficial financial and trade system as well as effective development co-operation.

These challenges are human challenges, not simply a matter of economics. As the distinguished development economist Albert Hirschman has pointed out, rational economic interests have not by any means had the complete victory over deeper human motives that economic and other philosophers have expected. In the developed countries, no less than in developing countries, human factors can – and often do – stand in the way of economic progress. But the struggle for a more rational world is an equally human affair. The elimination of poverty and hunger depends on this struggle. And it is through the economic and development process that the capacity of individuals to make choices, and thus to determine their own lives, will be progressively increased.

Developing Countries' Debt in 1983 and Beyond

How have the debt situation and the international economic context evolved and interacted since 1978? OECD's analysis [1] tries to answer these questions and to highlight the main issues.

Significant progress has been made in containing and managing the individual debt problems of developing countries and their actual or potential consequences for the world economy. But there is no doubt that the situation overall has introduced a new source of fragility and vulnerability into the international economic system that will persist for some time.

According to OECD's survey, an implicit commitment to continue the co-operation between debtor governments, key creditor countries, the major international financial institutions and the private banking community is the basic guarantee that the international financial system can underpin world recovery and assist the resumption of economic growth and development progress in debtor countries.

Important as it will be to further resolve individual problems, it is equally essential for international economic co-operation to focus in 1984 on the more fundamental task of ensuring that trade and finance flow in the world economy in a dynamic and sustainable way, providing the incentives and the scope for investment, growth and adjustment in all countries. This task, with a time horizon stretching through the rest of the decade, is vital both to the well-being of developed countries and to the economic and social progress of the developing countries.

A better public understanding of the complex and composite nature of debt aggregates and the problems of measurement and interpretation has become necessary if the debt situation of developing countries is to be adequately understood. Special attention is given to these statistical, conceptual and interpretative issues throughout the report. The impact of changes in the value of the United States dollar is among these issues.

A paradox of debt: India is a low-income country which, despite world economic difficulties, has been able to avoid a debt crisis.

Debt and the International Economic Context, 1978-1984

The main focus of OECD's report is the way in which current account deficits, trade volumes and prices, debt accumulation and interest rates interacted over the period. Interest payments rather than amortization and roll-over problems are seen as the fundamental issue. The debt crisis has really been about the inability of the major debtor countries to maintain rapidly mounting interest payments in conditions characterized by high real interest rates, falling terms of trade and stagnating world trade volumes, against a background of massive borrowing in the same period, and in some cases, significant capital flight.

Between end-1978 and end-1982, the rise in interest rates, together with the massive increase in borrowing over the same period, brought about a doubling of interest payments on medium- and long-term debt alone. The increase was from some $25 billion in 1979 to $50 billion in 1982 for all developing countries, and from $17 billion to $35 billion for non-OPEC, non-OECD developing countries. In this situation the annual increases in the interest bill for medium- and long-term debt of developing countries were running at around $8 billion on average for all LDCs and $6 billion for non-OPEC, non-OECD countries. The bulk of these increases was accounted for by a few major borrowers paying the highest interest rates. Between 1982 and 1983, a crucial break in the strong upward trend of interest payments occurred. Instead of another major increase, the interest bill actually fell slightly. The origin of this major change was obviously the fall in interest rates on floating-interest debt, itself due to developments in United States interest rates.

1. External Debt of Developing Countries 1983 Survey, *OECD, Paris, 1984.*

The "saving" for non-OPEC, non-OECD developing countries in interest on medium- and long-term debt alone is estimated at some $7 billion in 1983 and, including the saving on short-term debt, may have reached a total of something like $9 billion. The magnitude of this reduction in interest costs was particularly crucial for the major debt-problem countries. It seems evident that the major fall in interest rates from the autumn of 1982 came just in time to prevent what remains a serious but still manageable situation from becoming an international financial impasse.

As it was, *interest arrears* did build up in 1983, even more than in 1982, and the fall in interest payments recorded in 1983 reflects this accrual of interest arrears as well as the fall in interest rates. In 1984, it is estimated that clearing up outstanding arrears could entail a once-and-for-all addition to interest payments of several billions of dollars.

The OECD's estimate is that, leaving aside any change in outstanding interest arrears between end-1983 and end-1984, the increase in the *on-going* (i.e. current) *interest bill* of all developing countries in 1984 would be in the $5 to $6 billion range, and for non-OPEC, non-OECD countries alone, around $4 billion. In the context of an improving world economy this, in aggregate, would represent a more stable situation in which the major debtor countries could make headway in combining adjustment with growth. However the manageability of interest payments, including arrears, can only be assessed in the context of individual debtor-country situations, which differ significantly from case to case.

Although the interest burdens look to be more stable, they are still heavy and interest payments must inevitably increase as the debt stock grows. The Secretariat's estimates, made in November 1983, are based on an average cost of floating rate debt (LIBOR plus spreads and fees) of 12.5 per cent in 1984, about the same as in 1983. If interest rate movements raise costs above this level, the pressures on major debtor countries will increase.

1. DEBT STOCKS, CURRENT-ACCOUNT BALANCES, BANK LENDING AND TRADE, 1978-1984

	1978	*1979*	*1980*	*1981*	*1982*	*1983*	*(1984)*[a]
Annual increase in stocks of medium- and long-term debt[b], *$ billion*							
Low-income countries	13	11	12	9	10	12	..
Lower middle-income countries	9	9	9	10	10	10	..
Upper middle-income countries	47	40	33	37	31	33	..
All developing countries	69	60	54	56	51	54	..
of which: non-OPEC, non-OECD	*47*	*40*	*43*	*53*	*44*	*42*	*(55)*
Non-OPEC, non-OECD current account and bank financing, *$ billion*							
Current-account balance	–26	–39	–60	–76	–65	–45	(–40)
Net borrowing from banks	24	29	32	44	32	20	(22)
of which: Long-term	*12*	*15*	*16*	*26*	*23*	*27*	*(24)*
Short-term	*12*	*14*	*16*	*18*	*9*	*–7*	*(–2)*
Increase in reserves	13	10	1	4	–6	8	(14)
OPEC current account and bank financing, *$ billion*							
Current-account balance	–1	65	111	52	–16	–31	(–32)
of which: "Low absorbers"	*8*	*34*	*87*	*57*	*0*	*–24*	*(–22)*
"High absorbers"	*–10*	*31*	*23*	*–5*	*–17*	*–8*	*(–10)*
Net borrowing from banks	..	6	4	5	8	12	(18)
of which: Long-term	..	*4*	*1*	*2*	*3*	*8*	*(25)*
Short-term	..	*2*	*3*	*3*	*5*	*4*	*(–7)*
Trade volumes and prices							
% change from previous year							
Non-OPEC, Non-OECD LDC trade							
Export volumes	7	9	8	9	3	7	(7)
Import volumes	5	10	5	6	–5	0	(6)
Export prices	8	18	17	–4	–7	–3	(4)
Import prices	14	19	23	0	–5	–4	(2)
OPEC countries							
Export volumes	–4	3	–15	–18	–19	–7	(7)
Import volumes	5	–12	15	25	5	–9	(3)
of which: "Low absorbers"	*7*	*8*	*9*	*30*	*8*	*–2*	*(4)*
"High absorbers"	*4*	*–23*	*24*	*21*	*3*	*–15*	*(2)*

(a) (b) See notes of table 2.

Situating the Debt Problem

Three factors combined to produce the unforeseen number and scope of the debt problems now having to be managed and resolved:

- The major transformations in the world economic environment over the 1979-83 period;
- The "overborrowing" from banks by some developing countries and correspondingly, "overlending" by the banks to those developing countries following the second oil shock;
- Unsustainable economic strategies in many developing countries, combined, at times, especially in some of the major borrowing countries, with sudden policy lapses and chaotic financial developments.

A number of points, sometimes overlooked, deserve to be kept in mind when consequences and lessons are being drawn from recent experience.

Developing-country debt problems are not all the same, and not all developing countries have debt problems.

The list of developing countries which do not have significant debt problems in current circumstances is as impressive in its own way as the list of those that do. Among the countries mentioned in this regard are Korea (which holds the fourth largest amount of debt), Algeria, Indonesia, Malaysia, Taiwan, Thailand, India and China. Also mentioned in this context is Turkey, an OECD Member country, which suffered a major debt crisis in 1979-80.

Bank lending to developing countries began to accelerate a whole decade prior to the second oil shock and was generally soundly based; the major mistakes following the second oil shock involved new factors.

The common belief that bank lending to LDCs was essentially a "recycling" phenomenon following the first and second oil shocks is seriously mistaken. The real origin is the evolution of international banking and the Euromarkets in the late 1960s, together with the emergence of a number of creditworthy developing country borrowers. Statistics on financial flows show that the important growth of lending to LDCs occurred *before* the first oil shock, with a second major expansion just *before* the second oil shock. In both periods there was a context of rising terms of trade for LDCs, reserve accumulation and reasonable internal balance in the borrowing countries. In contrast, the expansion of

2. INTEREST PAYMENTS, AVERAGE INTEREST COSTS AND INTEREST/EXPORT RATIOS, 1978-1984

	1978	1979	1980	1981	1982	1983[c]	(1984)[a]
Annual increase in gross interest payments on medium- and long-term debt *$ billion*							
Low-income countries (LICs)	0.7	0.7	0.3	0.4	0.6	0.0	(0.5)
Lower middle-income countries (LMICs)	0.5	1.3	1.4	1.0	1.5	–0.3	(0.9)
Upper middle-income countries (UMICs)	3.5	6.1	8.0	6.7	4.9	–1.9	(4.9)
All developing countries	4.7	8.1	9.7	8.0	7.1	–2.2	(6.3)
of which: non-OPEC, non-OECD	*2.9*	*5.1*	*7.6*	*6.0*	*5.4*	*–0.8*	*(4.1)*
Average interest costs on medium- and long-term disbursed debt, *%*							
Floating-interest debt	8.4	12.3	15.5	17.4	17.1	12.7	(12.5)
Total LDC debt	6.3	7.7	9.0	9.7	10.0	8.7	(9.0)
of which: LICS	*3.4*	*3.8*	*3.8*	*3.8*	*4.0*	*3.7*	*(3.7)*
LMICs	*5.2*	*7.3*	*8.7*	*9.0*	*9.8*	*8.3*	*(8.4)*
UMICs	*7.8*	*9.3*	*11.0*	*12.1*	*12.2*	*10.6*	*(11.0)*
Total gross interest payments as % of total exports of goods and services							
Non-OPEC, non-OECD LDCs	8	9	11	13	17	15	(14)
4 largest debtors:							
Brazil	24	31	32	39	50	39	(40)
Mexico	20	21	20	26	31	31	(35)
Argentina	11	14	22	34	52	42	(44)
South Korea	6	8	12	14	14	14	(13)
All others	6	6	7	8	10	9	(8)

a) 1984 figures are based on projections in the OECD Economic Outlook 34 *and on Secretariat projections regarding interest payments, based on interest costs and debt build-up in 1984, but making no allowance for payment of substantial amount of interest arrears now outstanding.*

b) The annual nominal increases in medium- and long-term debt must be seen in conjunction with changes in short-term borrowing from banks and changes in reserves. They also have to be assessed with the statistical impact of exchange-rate changes in mind. All 1984 figures in Tables 1 and 2 assume no change from November 1983 exchange rates.

c) Reflects mainly fall in interest rates, but also some further net accumulation of interest arrears during 1983.

Notes: Current-account balances *include ODA grants as a current receipt.* (IMF Balance-of-Payments Statistics *treat ODA grants as a capital receipt and therefore show larger current deficits for developing countries.)*

Net borrowing from banks *includes change in arrears of interest as a form of bank finance.*

bank lending after 1978, particularly in 1980 and 1981, took place in a quite different context. Terms of trade and reserves were falling, real interest rates were escalating. In those countries which developed debt problems, internal economic policies were seriously unbalanced and economic strategies and policies were quite clearly at odds with the productive use of such volumes of foreign borrowing.

The evidence suggests that insufficient control was exercised over bank exposure to a number of countries, with a large amount of short-term lending simply "happening" rather than being part of bank policies. It also suggests that country-risk assessments did not sufficiently focus on the overall coherence of economic strategies and economic policies in the major borrowing countries as fundamental determinants of debt-servicing capacity. These failures are perhaps the most important lessons for the future, in respect of bank lending to developing countries.

Disinflation and other recent transformations in the world economy have changed the economics of debt financing and produced a pattern of international balances which differs radically from the experience in the 1970s.

The new pattern of international balances may be only transitional, but its persistence for too long would, as the current situation on international financial markets indicates, produce a prolonged squeeze in developing countries relying on non-concessional finance. The challenge ahead is for both developed and developing countries to work towards policies in which capital flows from the rich countries to the advancing countries at moderate real interest rates through an appropriate mix of market processes and official financing mechanisms. On the side of the developed countries this means reducing the claims of the public sector on total savings and stimulating household savings. In the developing countries, policies need to ensure that resource allocation and use is efficient, that domestic savings are adequate, that the economic climate is attractive to foreign investors and that domestic capital is encouraged to stay in the country rather than be placed abroad.

Capital Inflows, Debt and Development

The debt crisis, coming after a decade or more of marked growth in resource flows to developing countries, has refocused attention on the underlying conditions and concepts of the resource transfer process.

The OECD Secretariat believes the real policy implications of the transfer process are in danger of not being properly comprehended, either in capital-exporting countries or capital-importing countries. It is disturbing that the "net financial-transfer" concept, which compares net capital inflows with the outflow of interest payments, is again enjoying some currency. Several recent reports have featured this concept.

As long as there is a current account deficit, there is a positive net capital inflow. Developing countries *should* normally run current-account deficits, financed by net imports of capital. Over time, the balance between net capital flows and interest payments may be either positive or negative. The real question is whether external and internal factors are such that this evolution is part of a well-functioning growth process or whether it reflects unsustainable domestic trends and policies and a malfunctioning of the international economy.

According to the OECD Secretariat the recent change in the relationship between net capital inflows and interest payments does however have a real significance, although not of the kind implied by the "net financial-transfer" concept. The significance relates to the contrast between high inflation and low negative real interest rates in the 1970s and low inflation and high real interest rates now. This difference changes both the arithmetic of real debt accumulation and the economics of external financing.

Management of Debt Problems

Of the 157 countries and territories covered in the OECD's survey, some 35 were involved, in 1983, in discussions with creditor groups regarding delays or non-payment of debt service. More significantly, these 35 countries represented around one-half of the total number of countries with outstanding debt of more than $1 billion in 1983. →

3. THE 20 DEVELOPING COUNTRIES WITH THE LARGEST DEBT-SERVICE PAYMENTS

Country ranked by average debt service in 1980-81[a]	Debt Service Paid				Interest Paid				Interest Payments as % of Debt Outstanding at Previous Year-End			
	$ billion											
	1980	1981	1982	1983	1980	1981	1982	1983[d]	1980	1981	1982	1983
1. Brazil	13.3	15.3	18.1	13.1	6.0	7.6	9.1	8.7	11.8	13.3	14.1	12.0
2. Mexico[c]	9.6	10.7	11.8	10.6	5.0	6.3	6.1	8.3	13.3	14.5	11.4	13.7
3. Argentina	2.8	4.4	6.3	7.0	1.3	1.8	3.4	3.1	10.3	11.3	14.3	11.4
4. Venezuela[b]	4.7	5.0	5.2	4.0	1.5	2.0	2.2	2.0	12.2	14.5	14.8	12.1
5. Algeria[b]	4.1	4.2	4.6	4.8	1.5	1.7	1.8	1.8	8.8	9.8	10.7	10.7
6. Korea, Rep.	3.3	3.9	4.5	4.3	1.4	1.8	2.1	2.0	9.0	10.2	10.5	9.1
7. Iran[b]	2.0	5.3	2.9	2.2	0.8	0.9	0.7	0.5	7.9	9.0	10.1	10.0
8. Yugoslavia	3.3	3.4	3.6	2.4	1.2	1.6	1.5	1.3	8.9	10.6	9.9	9.0
9. Chile	2.2	3.0	2.4	2.4	0.8	1.1	1.7	1.6	11.3	12.4	14.3	11.9
10. Indonesia[b]	2.1	2.5	2.8	3.1	1.0	1.2	1.3	1.4	6.6	7.2	7.4	6.9
11. Egypt[c]	1.5	2.1	2.5	2.3	0.3	0.6	0.6	0.7	2.5	4.0	3.9	4.2
12. Saudi Arabia[b]	2.0	2.2	2.1	1.8	0.2	0.2	0.2	0.3	7.4	6.9	8.3	10.6
13. Nigeria[b]	1.2	1.8	2.0	2.0	0.5	0.6	0.9	0.9	11.9	11.5	14.2	11.4
14. Iraq[b]	1.1	1.8	1.9	0.4	0.2	0.2	0.2	0.2	8.7	8.0	8.3	9.1
15. Peru[c]	1.6	2.0	1.6	2.0	0.6	0.7	0.9	1.0	9.4	10.4	12.2	11.3
16. Philippines	1.2	1.7	1.8	1.9	0.6	0.7	1.0	1.1	8.0	8.0	9.8	9.2
17. Greece	1.3	1.7	1.7	1.9	0.6	1.0	1.0	0.9	10.7	14.3	12.2	10.2
18. Turkey	1.1	1,3	2.1	3.3	0.6	0.7	1.2	1.1	5.1	5.9	8.2	7.3
19. Portugal	1.2	1.6	1.8	2.0	0.5	0.7	0.9	1.0	9.6	11.7	12.7	10.4
20. India	1.4	1.4	1.7	1.9	0.3	0.4	0.6	0.7	1.8	2.2	3.2	3.3
Total 20 Countries	**61.2**	**75.4**	**81.4**	**73.4**	**24.8**	**31.8**	**37.5**	**38.4**	**9.3**	**10.4**	**11.1**	**10.3**
20 as % of Total LDCs	*74.3*	*75.7*	*75.7*	*76.4*	*70.5*	*73.6*	*74.6*	*79.8*	*9.0*	*9.7*	*10.0*	*8.7*

a) Next-ranking countries include Israel (not including official military debt), Morocco, Thailand, Taiwan, Ivory Cost. Debt-service payments by China PR in 1982 are tentatively estimated at $1.5 billion. b) OPEC Member. c) Net oil exporter. d) Includes for some debtors payments of interest arrears accumulated in 1982.
Note : *Figures for 1983 are estimates of effective payments.*

The current extent of debt-rescheduling and refinancing operations, together with the major transitions in the world economy and relative creditor/debtor positions described earlier, strongly suggests that debt negotiations are likely to become a more important and permanent part of international financial cooperation. A broadly agreed set of approaches to handling debt problems includes: the various aspects of bank supervision and prudential management; IMF quota increases and the enlargement and recasting of the General Agreement to Borrow; World Bank structural adjustment lending and co-financing innovations; ad hoc collective aid efforts in low-income debtor countries; and the private and public sector debt-reorganisation "Clubs".

A critical but subtle balance is required between a reasonable degree of stability and a reasonable degree of risk, if the financial system is to function effectively. Current efforts to find ways of dealing with the debt problems of developing countries represent essentially a search for such a balance. It is important, when seeking to stabilize the situation, that no major party, whether borrower or lender, government or private, should be able to take everything for granted. This implies that residual elements of risk and uncertainty are not only likely, but necessary features of the system. They provide the pressures required to bring about responsible policies and practices on the part of both lenders and borrowers.

The Future

The role of the banks

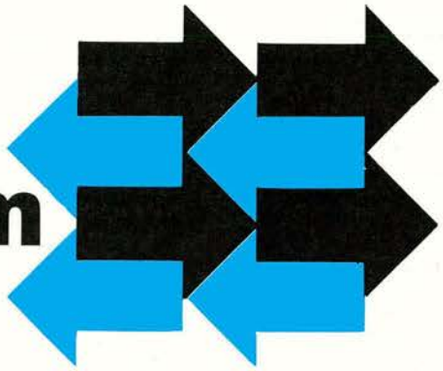
The key question now is how the future can be managed towards a more stable, self-sustaining financial situation. Private bank finance has a definite role to play in developing-country financing and probably cannot fall below a certain minimum. However banks, individually and collectively, will have to see their role and interests in a broader perspective than in the past. Their ability to avoid losses and cultivate profitable business will depend on being concerned with country situations as a whole, including the social and institutional framework. It is now abundantly clear that the banks cannot be assured of repayment and interest unless the borrowing country is on a sound development track. Recent developments suggest that banks and borrowing countries are able to meet on this common ground. Debt-reorganisation conditions, interest spreads, fees and new maturities may best be determined in this longer term perspective with the aim of securing social, political and financial viability as a whole.

International co-operation to maintain and improve the trade and finance systems

While it is inevitable that short-term ad hoc approaches will continue to play a role in resolving current debt problems, it should be clear that their contribution to a fundamental solution is limited. The need is also for long-term systemic policies which improve the functioning of the world economy in the interest of securing a sustainable worldwide recovery.

In the field of investment, policies which are conducive to improving the allocation of resources domestically and internationally will create new and more viable investment opportunities. The world economy can begin to reap benefits from better structural and trade policies even in the fairly short run because policies that offer more secure trade in the future create incentives for investment today.

East-West Economic Relations: A Longer-Term Perspective



by Stephen Marris[1]

Much of the often lively debate about East-West economic relations is concerned with political and security considerations. These lie outside the purview of the OECD. The Organisation has, however, recently carried out a review of the past record and future potential for mutually beneficial economic *relations between East and West, bearing in mind the different nature of their economic regimes.*

The following article summarises some of the results of this review. The story which emerges provides a case study of what happens when trade and financial relations open up between countries with significantly different economic and political systems. After getting off to a good start up to around 1975, these relations have since been strongly influenced by both conjunctural developments in the West and more deep-seated structural factors in the East. Future trends, the article concludes, may differ in important respects from those of the Seventies.

1970-75 - The Phase of Rapid Expansion

Between 1970 and 1975, the volume of East-West trade more than doubled, and the oustanding debt of the East to OECD countries rose nearly six fold[2]. Several factors lay behind this dramatic growth from the low levels of the late 1960s. The first oil crisis greatly increased the USSR's hard currency receipts from oil exports, and hence its capacity to pay for imports from the West. It also, through the OPEC surpluses, greatly increased the flow of funds into the international banking system, and made them available for lending to the East. More generally, East-West economic relations benefitted from the easing of political tensions in the early 1970s associated with the policy of "détente".

During this period both the USSR and the six CMEA countries of Eastern Europe were able to more than double their imports of manufactures from the West – of which over 40 per cent was machinery and equipment. (See Chart A which, as described in the box, is based on a somewhat novel analysis of East-West economic relations.) For the USSR, this was made possible in the first place by a tripling of its fuel export earnings. Increased Russian exports of other primary products played only a small role, despite a rich endowment in natural resources. This reflected in part weak prices and demand in the West during the 1974-75 recession but also increasing difficulties on the supply side in generating exportable surpluses. (Indeed, by 1981 such exports had fallen back almost to their 1970 level in terms of their purchasing power over Western manufactures.) Taken together, export earnings were insufficient to finance the very rapid rise in imports. As a result, roughly one half of the increase in imports during this period was financed by increased borrowing from the West (Chart A, bottom right).

The Eastern European countries are generally less well endowed with natural resources. They are, however, close to the large Western European market with which they have long-standing ties. There thus appeared to be a good basis for mutually advantageous two-way trade in manufactures based on ample supplies of medium-skilled labour working at lower real wages in Eastern Europe, and higher-skilled workers involved in more capital-intensive production at higher real wages in Western Europe. There was, indeed, a development along these lines in the first half of the 1970s, with Eastern Europe exporting light consumer goods and simple machinery, as well as parts and components, and importing more sophisticated capital equipment and consumer goods. By 1974-75 Eastern European exports of manufactures to the West had risen by around 50 per cent from their 1970 level. But this was from a low starting point, so that the very rapid growth of imports of manufactures was only made possible by increased debt financing to an even greater extent than in the case of the USSR.

On the Western side, substantial trade

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1. Up to September 1983, Stephen Marris was Economic Adviser to the Secretary General of the OECD. He is now a Senior Fellow at the Institute for International Economics, Washington D.C. The author wishes to acknowledge great help received from Nicolas Plessz, formerly of OECD's Economics and Statistics Department, and from Blanka Kalinova and other members of the Secretariat. The views expressed in this article, however, are put forward on the author's own responsibility and do not commit the OECD.

2. In this article the term East refers to the USSR and the six CMEA countries of Eastern Europe: Bulgaria, Czechoslovakia, the German Democratic Republic (GDR), Hungary, Poland and Romania. Unless otherwise specified, the term West refers to the 24 Member countries of the OECD. All figures in this article are expressed in terms of their purchasing power over imports of manufactures from the OECD at 1982 prices. Hence all these figures are deflated by the unit value index of OECD exports of manufactures (see technical note Chart A).

A. FINANCING OF EASTERN IMPORTS FROM OECD

($ billion at 1982 prices)

Chart A presents a somewhat novel analysis of East-West economic relations designed to bring out the importance of the commodity composition of the trade flows and the linkage between the trade and financial flows.

The starting point is the assumption that the East's primary interest in these relations is to be able to buy sophisticated manufactured products, and particularly capital goods, from the West. The diagram to left therefore shows the volume of Eastern imports of manufactures from OECD countries at 1982 prices. This is derived by deflating the value of such imports by the price (average value) of OECD exports of manufactures. The USSR has also had to import substantial quantities of food from the West. This has reduced the amount of hard currency available to it to buy manufactures; the value of these food imports is shown in terms of their purchasing power over OECD manufactures (i.e. deflated by the prices of OECD exports of manufactures). In other words, the chart shows how much more manufactures the USSR would have been able to buy from the West if it had not had to import food.

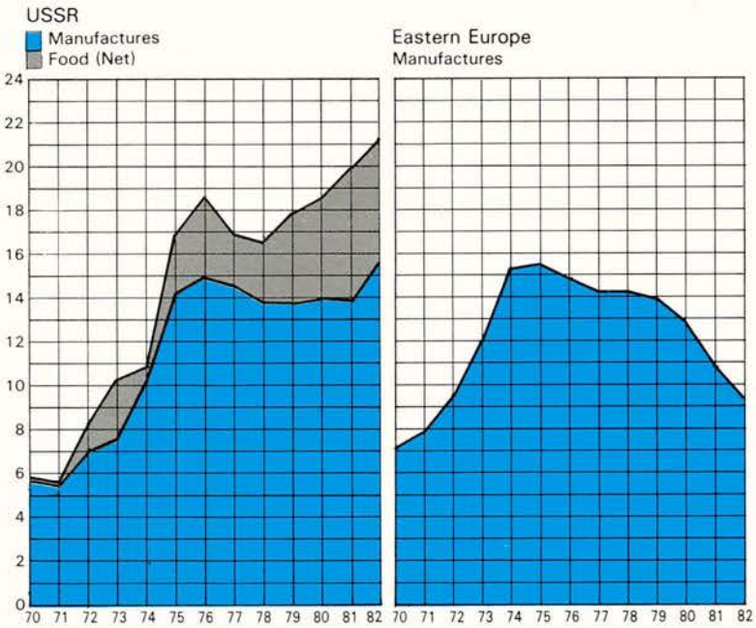
The lower panel to left represents the interest payments on outstanding debt which must also be covered by hard currency.

The panel to right shows how these imports and interest payments were financed. For the USSR, for example, export receipts from fuels were by far the most important source of hard currency. In terms of their purchasing power over OECD manufactures, they increased almost ten fold between 1970 and 1982. This reflects increases in the volume of energy exports, but the main factor was the five-fold increase in the purchasing power of these exports resulting from the price rises triggered by the two oil crises. The panels to right also show other categories of Eastern exports in terms of their purchasing power over Western manufactures.

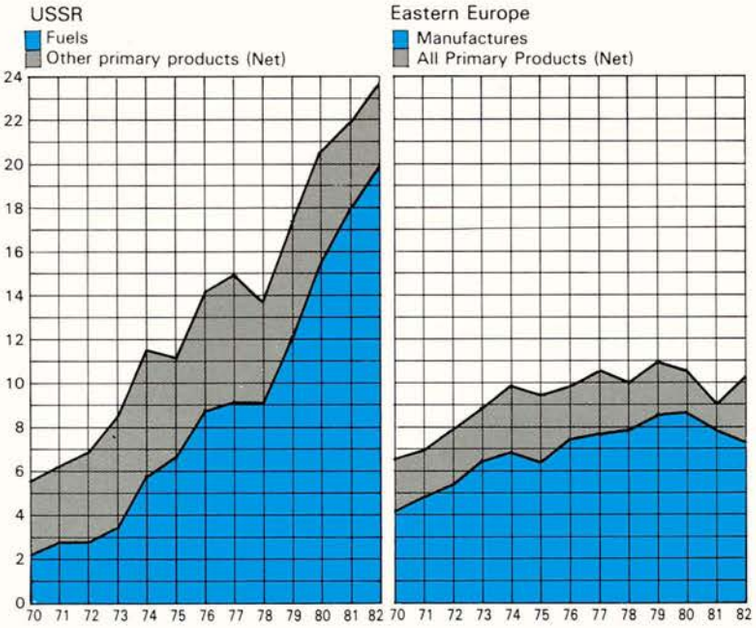
The panel below to right shows how much of the current year's imports were paid for by net borrowing from the West rather than out of export earnings. Again the net borrowing is measured in terms of its purchasing power over OECD manufactures at 1982 prices.

Since all the lines in this chart are measured in terms of a common unit, they can be directly compared. Thus, for example, it can be seen that, while Eastern Europe's imports of manufactures rose by just over $8 billion between 1970 and 1975, it was only able to pay for about $3 billion of this increase through higher hard currency export earnings, the remainder being financed by increased net borrowing from the West, equivalent to around $6 billion in terms of its purchasing power over OECD manufactured goods at 1982 prices. Equally, it shows that, from 1975 to 1982, the rapid rise in the purchasing power of the USSR's energy exports enabled it to eliminate its net borrowing requirement, whereas Eastern Europe was only able to achieve this by a very sharp cutback in its imports of manufactures.

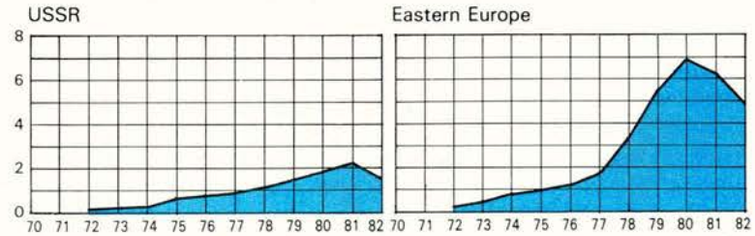
HARD CURRENCY NEEDS for Imports from OECD:



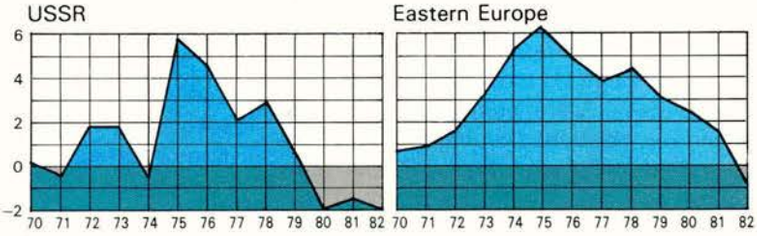
WERE FINANCED BY: earnings on exports to OECD from



and for net interest payments to OECD



and by net inflow of financial resources[a] into:



a) This chart is simplified in that it leaves out other items in the current balance of payments in hard currencies e.g. gold and arms sales, services, hard transactions with other areas, etc. The figures shown under the heading "net inflow of financial resources" actually represent the merchandise trade balance of the USSR and the Eastern European countries with the OECD area, derived from OECD statistics.

surpluses with the East emerged during this period. For Western Europe, exports of manufactures increased much more rapidly than imports and, despite the rising cost of fuel imports, the trade surplus had risen to $5½ billion by 1975 (current prices, fob-fob). For OECD countries outside Europe, imports of manufactures from the East rose only modestly, and this was more than offset by rising exports of food and capital goods, yielding a 1975 trade surplus with the East of just under $4 billion. There was, however, an increasing question about the viability of the large-scale lending needed to finance these trade surpluses, although this was not fully realised at the time.

1975-1982: Problems and Divergent Trends

In retrospect, 1975 marked a watershed. By then, the Eastern countries had become increasingly worried about their very large trade deficits with the West, which had risen to as much as 50 per cent

of their export earnings; i.e. export earnings covered only two-thirds of their imports.

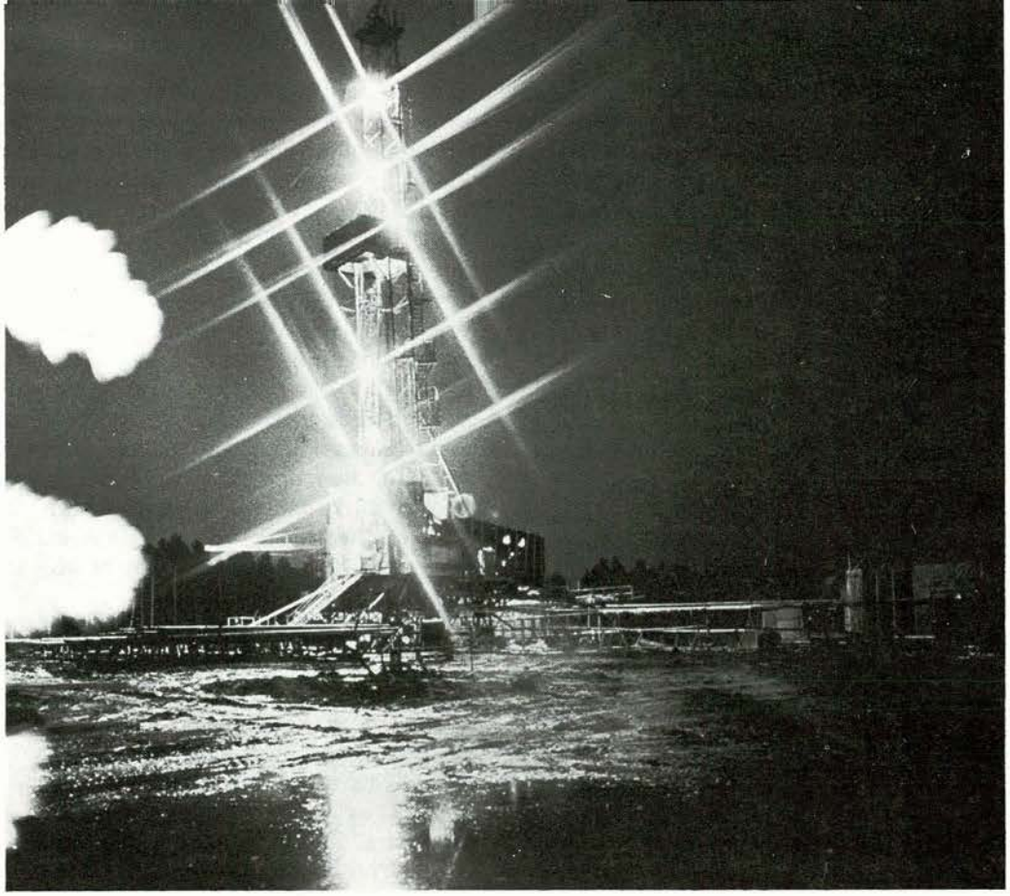
In the USSR, the rise in imports of manufactures was halted; indeed they only surpassed their 1974-76 level in 1982. And, within total imports the share of machinery and equipment dropped from 40 per cent in 1977 to 27 per cent in 1982. This cutback was necessary despite the further rise in fuel prices which, together with increased volumes, had by 1982 raised the purchasing power of Soviet export earnings nearly $18 billion above the 1970 level. Part of the reason lay in a further rise in food import requirements, but the main factor was a determined effort to cut back on borrowing from the West. As a result, a $4 billion annual average trade deficit in 1975-78 was converted into a $2 billion average annual surplus in 1980-82.

The change in fortunes was even more dramatic for Eastern Europe. The most important reason seems to have been the difficulties they encountered in establishing a competitive position in Western markets, even in those areas where they might have been expected to have comparative advantage. Thus their share in OECD imports of manufactures reached a peak in 1976 and by 1981 had fallen back to the 1970 level. In this respect they fared much less well than the so-called "newly industrialising countries" in the Third World (the NICs), which were also borrowing heavily to develop a competitive manufacturing base. This can be seen from developments in the percentage share of the two groups in OECD imports of manufactures:

	1963	1970	1976	1981	1982
Eastern Europe and USSR	1.6	1.5	1.9	1.5	1.5
The NICs[3]	1.8	3.3	6.1	7.9	8.5

It is true that Eastern access to OECD markets is hampered in some cases by trade restrictions (although this is more important for agricultural products). But the same has been true for the NICs, who nevertheless managed to increase their share in OECD imports of manufactures 2½ times between 1970 and 1982. It is also true that, while real wages in the East are lower than in OECD countries, they were, at the outset, still lower in most of the newly industrialising countries.

But, looking at the striking difference in the performance of these two groups of countries in OECD markets, it is hard to escape the conclusion that an important part of the explanation must lie in the difference in their economic systems. The NICs – particularly the more successful among them – have increasingly relied on export-led growth and market-oriented policies which leave a good deal of scope to competition and private initiative. The Eastern countries rely more heavily on centralised planning. The emphasis is on production more than on marketing and trade, with most prices fixed centrally rather than left to the play of market forces. Whatever the respective merits of these systems in other respects, the evidence of the last fifteen years suggests rather strongly that, in terms of developing an economy capable of competing effectively on Western markets, the more market-oriented policies of the NICs have proved far more successful.



Oil exports from the USSR (above) *have been the most dynamic element in East-West trade permitting the import of a variety of manufactures from the West including natural-gas pipeline parts for example* (below).

Thus the countries of Eastern Europe, unable to increase their market share in the West, and faced with the need to scale down their hard currency borrowing, had no option but to begin to cut back on their imports of manufactures, starting in 1976. This was aggravated by the second oil crisis, which put a severe double squeeze on them. From the West they were hit by weakening markets, rising protectionist pressures, soaring interest rates and a

3. Brazil, Hong Kong, South Korea, Mexico, Singapore, Taiwan and Yugoslavia.

drying-up of willing lenders. From the other side, they had to divert exports to the USSR to meet the cost of rising oil prices. At the same time, food consumption was running ahead of agricultural production, and they increasingly became net importers of food: some $1.7 billion in 1982 (concentrated on Poland, the GDR and Czechoslovakia, while Hungary and Bulgaria continue to be net exporters).

To some extent these pressures were eased by further borrowing from the West and a build-up of $17 billion in the deficit on their clearing accounts with the USSR between 1975 and 1983[4]. But, in consequence, annual interest payments to the West over the same period rose by nearly $6 billion before dropping back somewhat in 1981-82. Thus, by 1982 Eastern Europe had been forced to cut back imports of manufactures from the West by 40 per cent, to around $9 billion, i.e. about the level of a decade earlier in real terms.

It should be noted that Eastern countries have tried to alleviate their difficulties in trade with the OECD area by increasing their trade with developing countries. In 1982 their trade surplus with them reached a peak of $8 billion. Part of this surplus corresponds to an accumulation of credits on clearing accounts which generally are not convertible into hard currencies, and which in many cases could not be run down at all quickly because of the severe difficulties many of the developing debtor countries have run into. But part represents hard currency earnings, notably in trade with some OPEC countries (with a large component of military sales). Moreover, even when trading in inconvertible currencies, the East was able to acquire goods that might otherwise have required hard currency.

These trends in the East had very different consequences for the West, in particular as between European OECD countries, on the one hand, and the United States and some non-European OECD countries (but not Japan) on the other. The latter benefitted from the rise in the East's imports of food, while suffering relatively little from the decline in its imports of manufactures. The European OECD countries, however, had to pay very much higher prices for their rising imports of oil and gas and, at the same time, took the brunt of the decline in Eastern imports of manufactures. The result was a sharply divergent trend in the trade balances of the OECD area with the East ($ billion, fob-fob):

	1970	1975	1981	1982
OECD Europe	0.4	5.5	–4.7	–8.6
Other OECD	0.2	3.8	7.1	7.8

These trends have been a matter of some concern and controversy in the West. It may be worth noting, therefore, that for OECD countries who are working – to their advantage – within a multilateral system, there is nothing unusual or wrong in having large bilateral deficits or surpluses with different geographical areas. Indeed, attempts by OECD countries to reduce bilateral deficits with the East caused by changes in world prices and the commodity composition of trade, for example through counter-trade arrangements, will tend to lead to a misallocation of resources within the OECD area, and hence to a reduction of the overall benefits from trade with the East for the OECD area as a whole (although individual countries may be able to gain at the expense of others).

As concerns the commodity composition of trade, it should also be noted that in terms of the economic resources available for other uses (including military spending), the East gains just as much from importing grains, where it is at a comparative disadvantage, as it does from exporting oil and gas where it has a comparative advantage. On the Western side, there are obvious gains to be made by exporting agricultural products in surplus supply (as long as they are sold at or above costs of production). By far the largest element on the import side has been imports of energy, which doubled to 115 mtoe between 1972 and 1982; these provided a marginal but useful contribution to OECD energy supplies (about 3 per cent of energy requirements and 12 per cent of net energy imports in 1982).

Since 1970 there has been a net transfer of resources from the West to the East of approximately $50 billion measured in terms of their command over purchases of OECD manufactured products at 1982 prices[5]. This compares with a net transfer of resources from the West to the non-oil developing countries of around $280 billion measured on the same basis.

For the East, these transfers have supplemented the domestic savings available to finance investment. For the West, they have provided a boost to employment in the short run and a claim on future resources over the longer run. The record suggests, however, that these Western gains from lending to the East are proving less solidly based than might have been hoped. Had the Eastern countries been successful in using the additional resources to build up a strong export potential, they would have been able to service a continuing net inflow of funds for some time, and push off well into the future the point at which they began to repay debt in real terms. The West would then have been able to maintain its net employment gains for quite some time, while progressively benefitting in real terms from its rising investment income.

But, as described above, this is not the way things have worked out. To an important extent, the East proved unable to use

4. On which they are reported to pay interest of 2½ to 4 per cent.

5. Although the real resources came from the OECD area, and the corresponding financial claims are largely held by OECD financial institutions, an important part of the financial counterpart to this resource transfer is to be found in the cumulative financial surplus of the OPEC countries.

The USSR has had to import grain from the West though the new Food Programme may permit a reduction in such imports.

these additional resources to develop a competitive export base (with the important exception of energy). Since the mid-1970s the Eastern European countries have increasingly had to meet their debt-servicing obligations not by increasing exports, but by reducing imports. Gradual recognition of this by private lenders dampened their enthusiasm; the net transfer of resources declined beginning in 1979 and, with a sharp rise in interest rates, had become negative by 1982. For the USSR it became negative in 1980.

On the Western side, the net employment gains attributable to the OECD area's trade surplus in manufactures (mainly in Western Europe) rose to a peak of perhaps 300-350 thousand by 1975 but fell back to perhaps 150-200 thousand by 1982. As far as investment income is concerned, the benefits to the West have – at least temporarily – been put in jeopardy by the inability of several Eastern European countries to meet their current debt obligations.

The Present Position

Exports to the East are currently running at about $35 billion. The USSR is much the largest market, accounting for almost 60 per cent of the total, followed by the German Democratic Republic and Poland (Table 1).

For the OECD area as a whole these exports are of rather marginal importance. They compare, for example, with 1982 OECD exports of $110 billion to the OPEC countries, and $180 billion to the other developing countries. They account for only 0.5 per cent of OECD GNP. They are, however, of more importance to a number of smaller OECD economies geographically close to the East. In relation to GNP, 1982 exports to the East were equivalent to 7.8 per cent for Finland, 2.6 per cent for Austria, 2.3 per cent for Iceland, 1.1 to 0.7 per cent for Germany[6], Belgium, Greece, Sweden, Switzerland, the Netherlands, Italy and Canada; 0.5 to 0.25 per cent for all other OECD countries, with the exception of the United States at 0.12 per cent (Table 2).

Eastern markets are, moreover, of significant importance for certain products for some OECD countries: they account for some 15 to 35 per cent of national exports of wheat (for Canada, Australia, France and the United States), iron and steel plates (for Austria, Italy, Germany), metal-working machine tools (for France, Germany, Italy and Switzerland) and various engineering and textile and clothing products (for Finland).

On the Eastern side, East-West trade is of rather more importance. This is particularly true for the Eastern European countries, no doubt reflecting both their small size and limited resources and the difficulties they have encountered in developing mutually beneficial trade within the framework of the CMEA. Thus in 1982, imports from the OECD were equivalent to about 4 per cent of GNP for Hungary and Bulgaria, 2½ per cent for the GDR, about 1½ per cent for Poland, Romania and Czechoslovakia (Table 1). For the USSR the ratio was lower, at 1.3 per cent, reflecting its continental size and rich endowment of natural resources. But this is still well above the OECD average and, indeed, higher than for all but three OECD Member countries.

The events of the last ten years have left the East with a large legacy of outstanding hard currency debt, amounting to almost

1. INDICATORS FOR CMEA COUNTRIES, 1982

	% share in		Imports from OECD as % of GNP[a]	Net h.c. debt per capita $	Net h.c. debt as % of GNP	Net h.c. debt service as % of h.c. exports
	Imports from OECD	Net hard currency debt				
USSR	58.5	21.5[b]	1.3	54[b]	1[b]	20[b]
GDR	11.9	16.2	2.6	653	6	62
Poland	8.4	34.2	1.7	635	12	174
Hungary	7.3	10.0	4.2	626	10	76
Romania	4.4	10.9	1.6	324	7	67
Czechoslovakia	5.5	4.5	1.5	195	2	37
Bulgaria	4.0	2.7	4.1	202	5	51
Total or average	**100.0**	**100.0**	**1.6**	**177**	**3**	**46**
Eastern Europe	*41.5*	*78.5*	*2.2*	*477*	*7*	*80*

a) GNP as estimated in CIA economic handbook, 1983.
b) Including debt of CMEA banks.

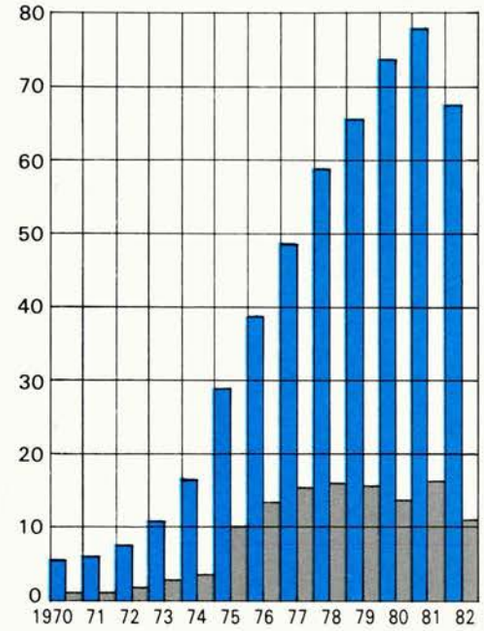
2. EAST-WEST TRADE OF OECD COUNTRIES

	Exports to East as % of GNP	Share of total OECD exports to East		Share of East in country's total exports	Exports to East as % of imports from East		
	1982	1970-80	1982	1982	1970-79	1980-81	1982
Finland	7.83	5.4	10.4	28.8	82	100	100
Austria	2.62	5.0	4.8	11.1	116	80	80
Iceland	2.30	0.2	0.2	8.4	69	67	59
Germany[a]	1.14	23.8	20.9	4.3	145	106	97
Belgium-Luxembourg	1.09	3.0	2.5	1.7	115	78	49
Greece	0.84	1.1	0.9	7.7	77	72	63
Sweden	0.84	3.5	2.3	3.0	87	77	52
Switzerland	0.80	2.9	2.2	3.1	141	70	71
Netherlands	0.72	3.2	2.8	1.5	85	55	30
Italy	0.71	7.6	6.8	3.3	82	52	47
Canada	0.71	2.7	5.7	3.0	315	736	1,156
New Zealand	0.60[b]	n.a.	n.a.	2.0[b]	n.a.	391	n.a.
Turkey	0.57	0.8	0.8	5.3	57	54	76
Australia	0.53	2.1	2.4	3.8	708	996	892
France	0.52	10.0	7.8	3.0	128	72	65
Denmark	0.45	1.1	0.7	1.6	56	61	34
Japan	0.42	8.7	12.4	3.2	140	173	241
Norway	0.39	0.9	0.6	1.2	77	69	37
Portugal	0.39	0.2	0.2	2.1	50	35	62
Ireland	0.38	0.1	0.2	0.8	30	72	49
United Kingdom	0.31	5.7	4.2	1.6	70	101	76
Spain	0.25	1.1	1.2	2.1	78	83	51
United States	0.12	10.7	10.0	1.7	285	275	337
OECD	0.47	100.0	100.0	3.1	118	99	91

a) Excluding Intra-German trade. b) 1981.

6. Sales to the GDR were equivalent to another 1/2 per cent of GNP.

B. NET DEBT TO THE WEST
$ billion



$70 billion on a net basis at end 1982 (see Chart B). This debt is very unevenly distributed, equivalent to 10-12 per cent of GNP for Poland and Hungary, 5-7 per cent for Romania, Bulgaria and the GDR, 2 per cent for Czechoslovakia and only 1 per cent for the USSR. These figures compare with 32 per cent for the developing countries classified by the IMF as major exporters of manufactures, and 51, 28 and 53 per cent for Mexico, Brazil and Argentina respectively.

In 1982, the ratio of interest payments on this debt to hard currency export earnings rose to about 13 per cent for the East as a whole and to 25 per cent for Eastern Europe on average, but it was as high as 60 per cent for Poland. These ratios overstate the charge on exports in terms of aggregate resources because export earnings from intra-CMEA trade are not included. But since those earnings are largely inconvertible, the ratios do provide a reasonable measure of the financing problem created by interest payments in hard currencies. The East's disappointingly poor competitive performance in Western markets has, thus, aggravated its debt problem. This is illustrated by the fact that, while the ratio of debt to GNP for the NICs is much higher than for the East, the share of their export earnings absorbed by interest payments (17 per cent in 1982) was less than for Eastern Europe.

Possible Future Trends

The significant deterioration in East-West trade and financial relations from 1979 to 1982 owed a good deal to recession and high interest rates in the West, and to a lesser extent to events in Poland. Last year, with recovery and a sharp drop in interest rates in the West, the volume of trade in both directions began to pick up again and the overall current balance of the East improved. Even with continued recovery in the West, however, there are at least two reasons why future trends in East-West economic relations are likely to differ in important respects from the 1970s. First, the price the USSR can obtain from its oil exports has declined and, barring accidents, it seems very unlikely to benefit from anything like the enormous increases in real energy prices which took place over the 1970s when the rise in the purchasing power of Russian energy exports financed virtually all of the three-and-a-half fold increase in imports (again in terms of purchasing power over OECD manufactures and in 1982 prices). Second, several of the Eastern European countries are likely to continue to be constrained in their efforts to resume growth by the high level of their debt burden.

By 1982 energy accounted for over 80 per cent of the USSR's export earnings from the West. In spite of the decline in the nominal and real price of oil since 1982, the Soviet Union has more or less been able to maintain the purchasing power of its energy exports by increasing the volume of oil sales to the West. Total 1983 earnings from oil and gas fell by only an estimated $300 million. But the prospects for making up for weaker export prices through selling more appears rather limited in the longer term. The large and easily exploited oil fields have probably already been found in the USSR. Given rising domestic consumption, net exports of oil could, therefore, decline in the future, unless additional fuel switching and conservation frees more oil for export to OECD countries.

In principle, there is considerable scope for the USSR to increase its exports of natural gas, of which it is estimated to have 40 per cent of world reserves; but it takes considerable time to develop the necessary infrastructure. Some 30 billion cubic metres of additional gas exports will be possible as the new Urengoy-Uzhgorod pipeline comes on stream, and an additional 5 billion may go to Japan as LNG. But in terms of export earnings, this is only equivalent to 0.6 mbd of oil, and might not be sufficient to offset a reduction in the volume of oil exports from their unusually high 1983 level.

The other key variable for the USSR will be food imports. The new food programme, which envisages increased investment, mechanisation, irrigation and other improvements in infrastructure could lead to somewhat better results. With more normal weather conditions, this might make it possible to reduce grain imports from 45 to perhaps 15 million tonnes at the end of the Eighties, although this would imply further postponement of the targets for meat consumption incorporated in the present five-year plan. Even this rather favourable outcome for agriculture would, however, save only about $4 billion of hard currency at 1982 prices.

Looking, therefore, at the prospects for the USSR's hard-currency export earnings, a resumption of a rapid growth in its ability

The Polish crisis, which has been closely linked to agricultural problems, has been accompanied by a large growth in debt.

Eastern Europe has been making strenuous efforts to reverse the deterioration in its agricultural trade balance.
Above: preparing Romanian fruit for export.

to finance imports from the West similar to that during the early 1970s seems unlikely. The outcome will also depend, however, on what happens on the capital account. The USSR has large gold reserves and has been running a current account surplus and repaying debt over the last few years. It is thus in a good position to borrow from the international markets if it so desires. However, the experience of other Eastern countries in the 1970s may well act as a deterrent, since it showed very clearly the dangers of heavy borrowing which is not accompanied by a corresponding increase in export earnings.

For Eastern European nations, the situation is more complicated. The current account balance has turned positive for most of them. As with other countries, they have benefitted from the drop in interest rates in the West, saving $1 billion in 1982 and another billion in 1983. The improvement in the trade balance is due not to any increase in manufactured exports but to a reduction in imports of both manufactured goods and food (see chart A). For example, Eastern Europe has been making strenuous efforts to reverse the deterioration in its trade balance in agricultural products. Prices of major food products have been raised to reduce consumption and improve returns to farmers. Grain imports have fallen from a 1980 peak of 17 million tonnes to around 10 million in 1982, and over the medium term may fall further, to 7 million tonnes. On the export side, however, access to traditional Western European food markets is likely to remain limited.

The favourable factors need to be weighed against the seriousness of the debt situation facing several of these countries particularly Poland (see table 1). Although there has been an improvement, this was achieved in part at the cost of extensive re-scheduling which, while it has gained time, has, in other respects, merely postponed the problem. It seems likely, therefore, that several Eastern European countries will wish to – and feel obliged to – continue their efforts to increase their current account surpluses. If this improvement were to average $1 billion a year, however, there would be little room for an increase in Eastern Europe's imports of manufactures from their present very depressed levels.

There will nevertheless be strong pressures to increase imports, since the low level to which they have fallen has had serious consequences. In the short run, the drastic cut in imports has, in several countries, led to a penury of supplies and stocks of spare parts and industrial inputs; higher imports will be essential to enable them to make full use of their existing industrial and export potential. Over the longer run, continued severe constraints on the possibility of importing machinery and equipment would increase the obsolescence of the capital stock and further handicap these countries in international competition and in achieving more satisfactory growth rates. Despite these pressing needs, however, there must be some doubt about how far Eastern Europe will be willing, or able, to finance higher imports through debt financing after the somewhat traumatic experience they and their creditors have been through over the last two to three years.

* * *

There are two very different schools of thought in the West about the geo-political aspects of East-West economic relations. Basing themselves on quite different assessments of the interaction between economic and political trends, one argues for specific actions by Western governments to encourage – and the other to discourage – the growth of closer trade and financial relations between East and West. Leaving all such considerations aside, the main conclusion to be drawn from the analysis of past and possible future trends presented here is that, if these relations are left to be determined essentially by the economic forces at work, they are unlikely to be a particularly dynamic element in the world economy over the next few years.

Spending Through the Tax System: A Review of the Issues

by Jeffrey Owens[1]

Because of high deficits and the need to control the size of the public sector, governments have been forced to examine more closely a type of public-sector "spending" which does not show up in the normal budgetary accounts – tax revenues forgone to subsidise particular activities or groups of taxpayers. Examples of such subsidies are tax incentives to encourage home ownership, investment and private social-welfare schemes.

Such subsidies can sometimes be important in achieving economic and social policy goals and just like direct expenditures represent a resource cost. To emphasize this similarity, these subsidies provided through the tax system are increasingly being referred to as tax expenditures. (A definition of tax expenditures, a description of the forms they can take and the methods used to measure their costs are set out in the box.)

A number of OECD Member countries now provide a regular accounting of tax expenditures, some in a format which is compatible with that of the regular budget so as to facilitate comparison between direct and tax expenditures, and OECD's Committee on Fiscal Affairs has been examining the issues raised by tax expenditures for both policymakers and technicians. Their report examines the impact of tax expenditures on the "size" and "transparency" of government programmes, the choice between direct and tax expenditures, and techniques for measuring the latter[2].

Tax Expenditure or Direct Expenditure – A Choice

Many government programmes (e.g. assistance for children and subsidies for investment, for example) can be imple-

1. *Fiscal Affairs Division of the Directorate for Financial, Fiscal and Enterprise Affairs.*

2. Tax Expenditures: A Review of the Issues and Country Practices *to be published shortly.*

TAX RELIEF AND TAX EXPENDITURE ACCOUNTS IN TEN COUNTRIES

	Australia	Austria	Canada	France	Germany	Ireland	Portugal	Spain	United Kingdom	United States
First application	1981-82 budget statement	1979 annual subsidy report	1979 Budget presentation. Regular updates	1981 law; annual report appears in "Ways and Means" draft law to Parliament	1959 first publication. 1967 law required biennial reports on direct and tax subsidies	1981 Annual Revenue Commissioners Report	1980	1978 law. Annual submission to Parliament	1979 first report in this area. Listing of all tax relief in annual White Paper	1968 annual expenditure budget. 1974 law required annual report in the Federal Budget
Statutory Obligation	No	Yes	No	Yes	Yes	No	No	Yes	No	Yes
Coverage	Federal Income Tax	Federal government taxes	Federal, Individual and corporate income taxes and sales and excise taxes	Direct and indirect taxes of the State	All Federal taxes and some Länder taxes	Central Government personal & corporate income tax	Income taxes only	Direct and indirect taxes of Central Government	Direct taxes of Central Government	Federal personal and corporate income tax
Contents	160 tax expenditures and description of objectives	Detailed analysis of main tax subsidies and link with expenditures	220 tax expenditures. Data plus description of major provisions	350 tax expenditures. Analytical data plus description of major provisions	Detailed analysis of 122 tax expenditures and link with direct expenditures	Listing and evaluation of main tax reliefs	Listing and evaluation of certain reliefs	Listing of main tax expenditures	Analysis of 108 tax reliefs. Data plus description of major provisions	Analysis of 87 tax expenditures. Data plus description of major provisions
Classification	By functional category	By type of tax, function and beneficiary	By objective, beneficiary and type of tax	By objective, beneficiary and type of tax	By objective, beneficiary and type of tax	By type of tax	By type of relief and tax	By type of tax and function	By type of tax	By type of tax and by functional areas
Quantification	Periodic evaluation. No aggregation	Annual evaluation and aggregation	Periodic evaluation. No aggregation	Annual evaluation. No aggregation	Biennal evaluation. Aggregation by sector of overall economy	Annual evaluation. No aggregation	Annual evaluation. No aggregation	Annual evaluation. Aggregation	Annual evaluation where data available. No aggregation	Annual evaluation of individual items. Aggregation
Measurement Concept	Mixed: revenue forgone and revenue gain, accrual figures	Revenue forgone, accrual figures	Revenue forgone, accrual figures	Revenue gain cash figure	Revenue forgone, accrual figures	Revenue forgone, accrual figures	Revenue forgone, accrual figures	Revenue gain, cash figure	Revenue forgone, accrual figures	Outlay equivalence/revenue forgone, accrual figures

WHAT ARE TAX EXPENDITURES?

Tax expenditures are defined as departures from the "generally accepted" or "normal" tax structure which give a favourable tax treatment to particular types of activities or group of taxpayers by reducing their tax liability. Thus, for example, incentives may be offered to individuals to encourage saving or to companies to stimulate new investments. Such provisions, whether they are called tax expenditures or not, are available in all Member countries.

The countries which formally recognise the tax expenditure concept qualify it according to certain criteria e.g. that the provision should be applied only to a limited range of taxpayers and that it could be replaced by a direct expenditure. The concepts of "generally accepted" and "normal" tax structures is subjective and relatively abstract. Accordingly there can be legitimate disagreement about whether or not a particular tax relief provision (e.g. a lower rate of value-added tax on food than on other products) should be regarded as a tax expenditure or as an essential part of the "normal" tax system. Country practices differ in this regard.

What forms can tax expenditures take?

Tax expenditures can take one of four forms:

- Tax exemptions: *income or sources of income which are excluded from the tax base.*
- Tax allowances: *amounts deducted from gross income to arrive at taxable income (under progressive income tax systems the higher the income of the taxpayer, the more they are worth).*
- Tax credits: *amounts subtracted from tax liability which may or may not be allowed to exceed tax liability; if the latter, they are called "wastable"; if the difference is paid out to the taxpayer, they are called non-wastable. (Except when they exceed tax liability and are wastable, their value is normally unrelated to the income of the taxpayer.)*
- Special rate reliefs: *reduced rates of tax which may be built into the schedule, which are intended to benefit special groups or activities.*

How can the costs be estimated?

The costs of tax expenditures cannot be directly measured in the way most direct cash programmes can (cash outlays are usually recorded in budget accounts). A variety of statistical methods must be employed to estimate these costs. Three different estimating techniques have been used.

- Revenue forgone. *This may be defined as the amount by which tax revenue is reduced because of the existence of a particular tax provision and is the approach used by most countries. It is an ex-post measure of the cost of a particular relief, based upon a comparison of existing legislation and the legislation without the tax provision in question. The behaviour of taxpayers is taken as observed in the year for which the calculations are being made.*
- Revenue gain. *This is the increase in revenue that could be expected if a particular relief were to be abolished. To obtain an accurate estimate of the revenue gain that could be expected from the withdrawal of a relief requires, in principle, that the behavioural or secondary effects associated with such a change be taken into account. For example, many expenditures are intended to encourage taxpayers to undertake certain activities. If they are successful, they will alter the taxpayer's behaviour which, in turn, may change his taxable income.*
- Outlay equivalence approach. *This approach estimates what direct expenditure outlays would be required, in pre-tax dollars, to achieve the same after-tax dollar benefit if a tax expenditure were replaced by a corresponding direct expenditure programme and the direct outlay were accorded the tax treatment appropriate to that type of income in the hands of the recipient.*

In all three approaches there is a problem: that the costs of the different tax expenditures cannot meaningfully be added together since the revenue impact of simultaneously eliminating two tax expenditures is generally not the same as the sum of their individual impacts on revenue. For example, the elimination of one tax relief may push taxpayers into a higher bracket and thereby increase the value of the tax reliefs they continue to receive. Similarly, a change in one tax provision may encourage greater use of another. Thus it is difficult to measure the overall magnitude of tax reliefs within a particular area.

mented either through direct expenditure, e.g. cash transfers, to the eligible beneficiaries or through tax expenditures. In practice, OECD countries invariably use a mix of the two to achieve their policy goals. The choice between these alternative "delivery" systems should in part depend upon which will achieve the aims of the programme in the most efficient and equitable way.

Without taking a position as to which type of expenditure is preferable – the choice will depend upon the the aims of the programme, the type of tax expenditure to be used and the institutional framework – one can identify a number of differences involved in using one or the other:

Transparency and government control

Tax expenditures are usually less transparent than direct expenditures. Their use may ensure a certain stability in a programme and can be attractive to departments which are concerned with remaining within their direct spending limits. This lack of transparency, however, can lead to difficulties in evaluating a programme and in controlling its cost.

Progressive tax systems and the distribution of benefits

Where a tax expenditure is provided within a progressive income tax system, the value of the subsidy will usually increase with the marginal rate of tax (see box). Consequently, taxpayers with higher incomes will receive a larger subsidy than those with lower incomes. This has been called the "upside-down" effect and suggests that tax expenditures may be an inappropriate means of implementing many social programmes.

Similarly, tax expenditures are ill-adapted to attenuating poverty since, unless they take the form of non-wastable tax credits (see box), which is rare, they are of little or no value to those having only a small tax liability or none at all. Another disadvantage is that tax expenditures will usually benefit the wage earner (usually the father) whereas certain social programmes may be aimed at increasing the income at the disposal of the mother. Nevertheless, there are two arguments in favour of tax expenditures: they may avoid the social stigma usually attached to "social handouts" and can be used to alleviate the "notch" or "poverty-trap" problem which arises when income-related benefits are withdrawn at the same time that a worker crosses the income-tax threshold.

Outside the social area, tax expenditures may be favoured if the aim is to encourage

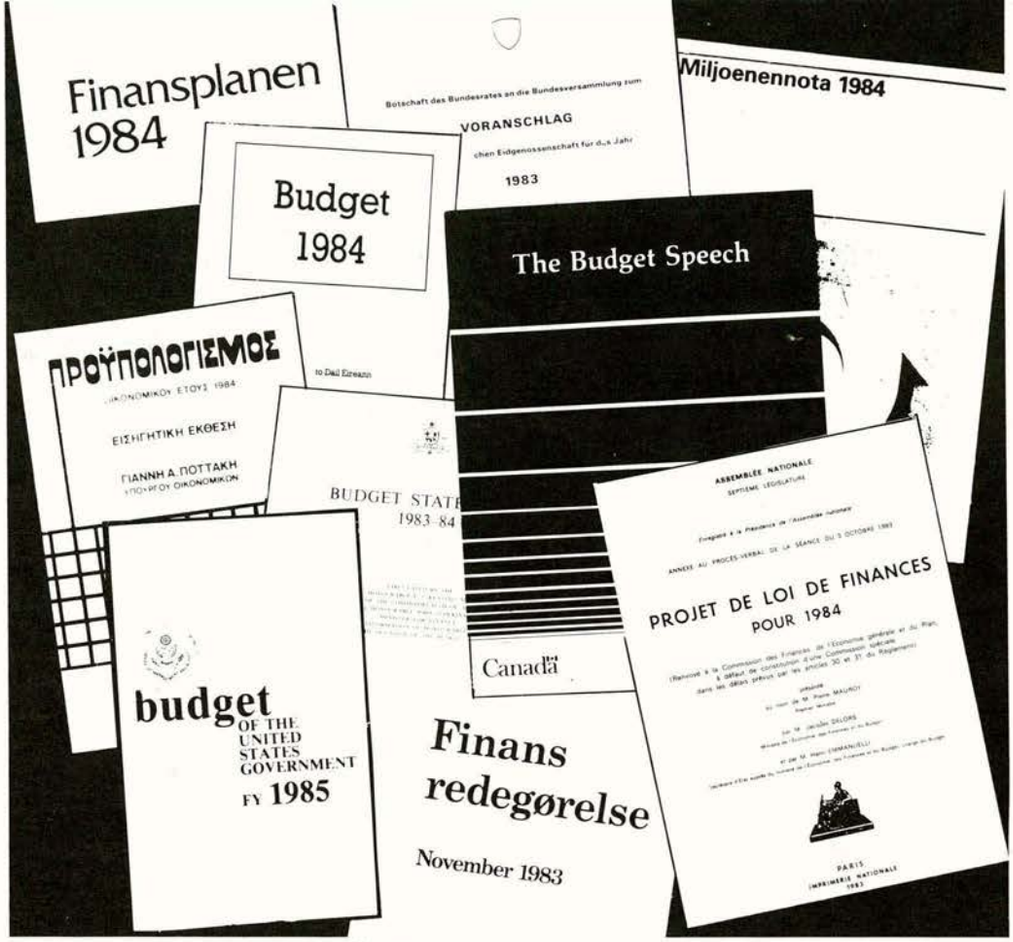
investment on the part of profitable firms, since a tax allowance rather than a grant will enable such firms to gain most. More generally, tax expenditures may be more flexible than grants in that they allow the individual or firm to decide how much of the subsidy to use.

The complexity of tax systems ...

A profileration of tax expenditures may overburden the tax assessment process, increase the complexity of tax systems and jeopardize the overriding aim of tax systems – to raise revenue in an efficient and equitable way.

... and administrative costs

One element of an efficient delivery system is to minimise the resources going into administration. Whilst the administrative cost of a tax expenditure vis-à-vis a direct expenditure is likely to vary from project to project and from country to country, the tax system is, in most countries, one of the most efficient parts of the administrative machinery and, of course, it is usually less costly to use a system which is already "in place" than to set up new institutions. But this is not always the case. Canada, for example, moved from tax allowances for parents to non-wastable tax credits in the Seventies, finding the latter route less costly, while Germany and the United Kingdom moved from tax allowances for parents to cash transfers.



Tax subsidies are not usually included in the budget, but some OECD countries are trying to find ways to bring these "tax expenditures" into the normal budgetary process.

Control of Tax Expenditures: Three Approaches

Although governments agree that information on the cost of subsidies given through the tax system is a prerequisite for rational policymaking, they do not always agree on how this information should be provided.

In the majority of OECD countries, information on tax reliefs is provided on an "ad hoc basis" in the context of reviewing specific policy issues. Thus, for example, a government which is examining its own regional or industrial policy may look at tax reliefs given to encourage investment as well as cash grants for the same purpose. Similarly, when new tax reliefs are proposed, they are invariably accompanied by estimates of how much revenue will be forgone.

At the other extreme, seven countries (Australia, Austria, Canada, France, Germany, Spain, United States) provide regular tax expenditure consolidated accounts and, except in Australia and Canada, there is a statutory obligation to do so. These accounts are periodic (usually annual) listings, accompanied by estimates of the main tax expenditures and are generally attached to the annual budgetary statement. Only in Canada and to some extent in the United States are they virtually integrated into the budgetary review process. The tax expenditures are broken down by type of tax, relation to specific expenditure programmes and identification of beneficiaries.

The following arguments are put forward in favour of consolidated tax expenditure accounts:

- Tax expenditures are a way for governments to pursue their policies and should be subject to the same evaluation and control procedures as are used for government subsidies provided by direct expenditures.
- A review of government policies in any area will be more effective if all the different methods of government intervention (direct expenditures, tax expenditures, regulations, etc.) are taken into account and if similar budgetary techniques are used to evaluate the cost of both direct and tax expenditures.
- The size of government may be more difficult to control if tax expenditures can be easily substituted for direct expenditures.

A third approach, which lies between the ad hoc and consolidated account solutions, is followed by Ireland, Portugal and the United Kingdom. These countries provide periodic listings of the most important tax reliefs but without any attempt to separate out those which could be considered as tax expenditures from those which form part of the "normal" or "benchmark" tax structure. The arguments for this approach are at the same time arguments against the consolidated account approach:

- It is difficult to determine whether a particular tax relief is a tax expenditure or part of the benchmark tax structure. For example, are allowances for children a means of subsidising families or a means of differentiating between the taxable capacity of childless couples and families?
- In practice, it has been difficult to provide coherent estimates of the cost of tax expenditures.
- Difficulties can arise in deciding where to classify a tax expenditure in the consolidated accounts (e.g. a tax subsidy to encourage saving may directly benefit the savers but may also indirectly benefit the institutions to which the savings are eventually lent).

These difficulties, and especially the conceptual problem of identifying tax reliefs which are deviations from the "normal" tax structure, have led some countries to prefer to publish a straightforward list of reliefs and, where possible, their costs without attemping to allocate them to particular spending programmes. The reliefs listed cannot, under this sytem, be integrated into the general budgetary control process. Nor are all of the items included necessarily considered as tax expenditures. Nevertheless this approach provides an alternative to a consolidated tax expenditure account.

Obstacles to International Trade in Services: Banking

As part of its continuing work on international trade in services, OECD has turned its attention to banking, following its recent reports on insurance and tourism[1]. A survey of banking regulations and practices in Member countries[2] concludes that most OECD Member countries have opened their markets to international competition, but restrictions on the right of establishment of foreign-owned banks in a few countries still represent a significant restraint.

Banking is among the most heavily regulated of economic activities. One of the traditional functions of banking supervision has been to protect the public from financial irresponsibility and fraud in order to maintain confidence in the financial system and the currency. Moreover, banking authorities are interested in assuring orderly change in domestic markets, and the presence of foreign banks obviously affects the competitive balance in a national financial system. Indigenous banks may be seen as being insufficiently equipped to withstand competition from more sophisticated foreign institutions. There may be a danger of "overbanking" or of foreign banks obtaining the most profitable business. And at a general level, control of the domestic financial system is regarded as essential for the implementation of national economic policies, especially monetary policy.

For all these reasons, governments are extremely reluctant to risk losing control of their domestic financial systems. Where foreign banks are allowed to enter the domestic market, legislation is often framed so as to enable the authorities to derive the maximum benefit from the presence of foreign banks. A powerful factor that has opened up domestic markets for foreign banks in the OECD area in recent years has been the concern to gain reciprocal access for domestic banks in foreign markets.

The report discusses restrictions on four kinds of banking services:

- De-novo entry and establishment of branches, agencies or subsidiaries
- Acquisition of equity participation in indigenous banks
- Limits on domestic operations of foreign or foreign-controlled entities
- Cross-border operations.

Establishment of Branches or Subsidiaries

The policies of Member countries towards the presence of foreign banks in the domestic banking market are summarised in the chart. While only a few countries forbid any kind of foreign bank presence whatever, virtually all reserve the right to scrutinise applications for the establishment of foreign branches, at the very least in order to judge whether the applicant is affiliated with financially sound and responsibly managed foreign institutions.

The entry and establishment of foreign banks' agencies and branches is either prohibited by law or not permitted under current policy in seven Member countries – Australia, Canada, Finland, Iceland, New Zealand, Norway and Sweden. All other Member countries authorise the licensing of foreign banks' branches, subject to a number of specific requirements. A special case is that of the United States, where some states expressly forbid the establishment of foreign banks' branches or impose reciprocity requirements.

Subsidiaries

Foreign banks are not allowed to establish subsidiaries in four of the seven countries where foreign branches are also banned – the exceptions being Canada, Finland and Norway. These three countries have explicitly stated their policy that foreign banks have to operate through locally-incorporated entities, instead of through branches or agencies, so as to facilitate their regulation by local supervisory bodies. In Canada, entry is limited by a requirement that the overall volume of domestic assets controlled by foreign bank subsidiaries may not exceed 8 per cent of the total domestic assets of all banks. This provision constitutes a specific constraint on the expansion of foreign banks' subsidiaries in Canada.

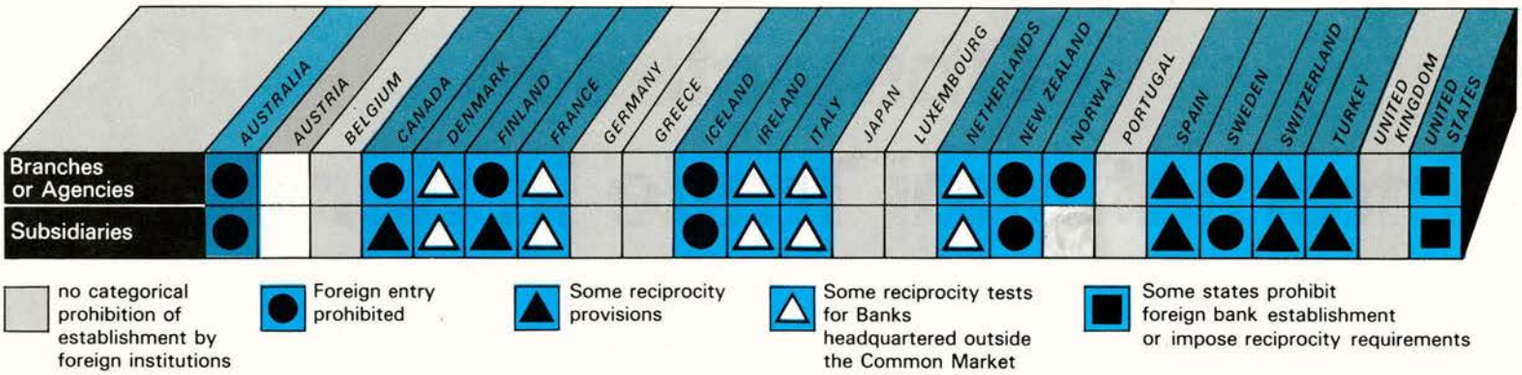
All other OECD countries permit the establishment of subsidiaries on the basis of the licensing procedures governing the entry of new banks into the domestic market. In some instances, special procedures are applied before authorisation is granted, but it is more common for countries to impose reciprocity conditions or other requirements which must be satisfied in order to obtain a licence.

Reciprocity

Reciprocity tests are, or may be, applied in eleven Member countries when considering foreign banks' application for entry. They may either be embodied in national banking legislation or have become part of

1. *See "OECD Observer", no. 126, January 1984.*
2. International Trade in Services: Banking, *to be published shortly.*

POLICIES ON THE ESTABLISHMENT OF FOREIGN BANK AGENCIES OR BRANCHES AND SUBSIDIARIES



the authorities' normal administrative practices. Within the EEC, credit institutions whose head office is in a member state are automatically given right of entry and establishment, but reciprocity tests may be applied to applications by credit institutions whose head office is located outside the European Community.

Reciprocity provisions appear to be applied with considerable flexibility by Member countries. In general, host countries require that the applicant's home country permits some form of foreign bank entry, not necessarily identical to the form sought by the applicant. Moreover, countries usually follow a case-by-case approach, with reciprocity being one of the various requirements (and not always the most important one) to be satisfied for authorisation to be granted.

Minimum capital requirements and head-office guarantees

A special issue associated with foreign bank branches and agencies is the adequacy of branch capital. For prudential purposes, supervisors normally require a specified amount of capital to be used in tests of capital adequacy. However, a branch of a foreign bank is part of a larger organisation, and the parent company, its ultimate guarantor, is located outside the jurisdiction of the domestic authorities. Most countries require that the parent assign a certain amount of funds for exclusive use as the capital for its branch or branches within the country. Usually, the minimum "earmarked" capital is the same as the minimum required for new domestic banks. In some cases, the definition of the branch's own capital takes explicit account of the branch's net position vis-à-vis its parent company. A number of exceptions are worth mentioning, however. In Italy and Turkey, the minimum capital requirement for new foreign branches is set irrespective of the provisions for domestic banks. No specific requirement exists in either Japan or the United States, where general criteria of financial soundness are applied. In the United Kingdom, a branch of a foreign bank is not expected to maintain its own capital, but the local authorities demand the confirmation of their counterparts in the foreign country that the parent bank has an adequate capital base.

Some OECD countries require special guarantees and/or "letters of comfort" from the parent institutions before authorising the establishment of branches on their soil. In some cases (such as the United Kingdom, Canada and Ireland), the request for a letter of comfort has become an established practice as a means of obtaining a formal acknowledgement of the parent bank's moral commitment to support its foreign offshoot. In other countries, the possibility of requesting specific guarantees is left to the discretion of the licensing body. This cannot be considered a discriminatory provision, and indeed banks do not seem to regard such requests as impediments to entry into foreign markets.

Other requirements for licensing

Foreign bank entry into a national banking system is affected by the specific requirements attached to the granting of the licence or authorisation. By and large, it would appear that countries permitting foreign bank entry apply the same criteria and requirements as for the establishment of domestic banks. In a number of areas, however, banks are subject to differential treatment which, although not necessarily intended to discriminate against foreign banks, may bear more heavily on them than on domestic institutions.

Although regulations governing the integrity and competence of bank directors might conceivably be used to exclude foreign interests from the domestic market, the private banking sector does not perceive this to be a problem. At the same time, a number of countries apply specific requirements as regards the nationality of directors or managers. One important reason for this is to ensure that some members of senior management have a sufficient knowledge of local laws, regulations and market practices. Besides, provisions for nationality usually apply to indigenous banks as well.

Acquisition by Foreign Banks of Equity Interests in Indigenous Institutions

Member country regulations regarding the acquisition of equity capital in domestic banking institutions by foreign interests are summarised in the table. As with other forms of bank establishment, few countries allow absolutely unrestricted access by foreign interests to the domestic market. Virtually all OECD countries make their banking authorities responsible for deciding whether a given investment is in the national interest. Smaller countries in particular appear to be worried about an excessive share of the domestic banking system passing into foreign control.

Foreign access to the domestic banking system through equity interests in indigenous banks may be subject to the general provisions applying to inward direct investment or, more often, to rules specifically covering the banking sector. The reasons for forbidding or severely restricting non-resident holdings in indigenous banks are broadly the same as those for limiting de-novo foreign entry.

Some Member countries are willing to consider majority foreign ownership of domestic institutions, if it is judged to conform to the national interest. However, even among countries which nominally allow majority ownership, policies span a broad spectrum, and the national authorities are usually given considerable flexibility to apply a wide variety of criteria in considering individual applications.

ACQUISITION BY FOREIGN BANKING ORGANISATIONS OF EQUITY PARTICIPATION IN INDIGENOUS BANKS

Australia	Forbidden under current policy
Austria	Licence required
Belgium	Mergers are subject to prior authorisation. The banking control authorities must be notified of any significant change in equity ownership
Canada	For Schedule A banks (in which equity ownership is widely dispersed), permitted up to 10 per cent of capital for each shareholder (maximum 25 per cent held by non-residents). Free for Schedule B banks (those in which equity is owned by a small number of shareholders)
Denmark	Permitted up to 30 per cent of share capital (but possibility of authorisation for higher percentages)
Finland	Non-resident ownership limited to 20 per cent of share capital (but possibility of authorisation for higher percentages)
France	Authorisation required by Conseil National du Crédit
Germany	Free, subject to anti-trust law
Greece	Permitted up to 40 per cent of share capital (but possibility of authorisation of up to 51 per cent)
Ireland	Subject to the same requirements as for establishment of foreign bank subsidiaries
Italy	Free
Japan	Free up to 5 per cent of equity capital, authorisation by the Fair Trade Commission required for higher percentages
Luxembourg	Free
Netherlands	Free up to 5 per cent of voting shares, higher participations subject to a declaration of non-objections
New Zealand	Authorisation required for foreign acquisition of 25 per cent or more of equity of New Zealand incorporated banks
Norway	Free up to 10 per cent of share capital (but possibility of authorisation up to 25 per cent)
Portugal	Forbidden 1977-83. Liberalised by law of November 1983. New regulations to be published shortly
Spain	Subject to individual authorisation
Sweden	Forbidden
Switzerland	Authorisation required for majority participations
Turkey	Authorisation may be granted for participations between 10 and 49 per cent of share capital
United Kingdom	Free up to 15 per cent of share capital, higher participations are subject to supervisory approval by the Bank of England and controlling majority participations may be subject to investigation
United States	Free up to 5 per cent of voting shares. For higher participations, Federal regulatory approval is required

Operations of Existing, Foreign-Controlled Banks

Even when foreign interests are permitted to have a presence in the domestic market, foreign banks may not be accorded equal treatment with domestic banks. Measures which differentiate foreign-owned institutions fall into three categories: limits on branching, limits on the range of activities in which foreign establishments may engage and various other specific measures.

Branches

In Australia, the authorisation held by Banque Nationale de Paris and Bank of New Zealand Savings Bank specifies the points at which these banks may carry on banking business: official approval is required to establish additional points of representation. The authorisation of the Bank of New Zealand is unconditional.

Canadian subsidiaries of foreign banks are not permitted to open branches outside the country. The main rationale for this prohibition is the authorities' desire that Canada should not be used as a pass-through for foreign banking operations. It may also be noted that foreign bank subsidiaries, like any other Schedule B banks (i.e. those in which equity is held by a small number of shareholders) but unlike Canadian Schedule A banks (those with broader ownership), may open more than one branch in Canada only if they receive authorisation from the Minister of Finance. In practice, however, the authorities encourage the opening of branches, especially if they contribute to a better regional distribution of banking offices in Canada.

In Greece, foreign banks are allowed branches only in the major towns.

In Spain, foreign bank subsidiaries are allowed to establish two branches in addition to the head office.

In Turkey, foreign-owned banks can operate a maximum of five branches, with only one branch permitted in each town, except in Istanbul where two branches are permitted – one on the European side and one on the Anatolian side.

Types of service and range of activities

There seem to be few regulatory provisions in OECD countries which intentionally discrimate against established foreign banks by limiting the types of services they may offer. Spain is the only Member country which imposes highly discriminatory conditions on banks' deposit-taking business; funds raised in the domestic market by a foreign bank licensed under the 1978 Decree may not exceed 40 per cent of the bank's total assets, unless a special

dispensation is granted by the Bank of Spain.

When it comes to dealing in securities, there are discriminatory restraints in a number of countries. In Spain, the security portfolio of foreign banks should normally consist only of government and private bonds, though authorisations may be granted for equity investments in companies operating in certain areas of the financial services industry. In Austria, foreign banks are not normally permitted to issue bonds or manage, or participate in, security issues. In a number of other countries – France, Germany and the Netherlands, for instance – the lead management of domestic currency issues in the domestic market is confined to domestic banks. In the United Kingdom, foreign banks are eligible to participate in leading sterling issues if they have the appropriate issuing house capacity in London and if reciprocal opportunities exist for British banks in their home markets.

There appear to be only a few other restrictions which discriminate against foreign banks: they include less than equal access to government export guarantees in Austria and restrictions on remittances of earnings in Greece. A report of the Committee on Capital Movements and Capital Markets of OECD's Business and Industry Advisory Committee (BIAC) concluded that the most important complaints of foreign banks involve requirements that do not intentionally discriminate against foreign banks but, while nominally applying to all, effectively bear more heavily on foreign-owned institutions.

Cross-Border Transactions

Most Member countries regulate cross-border transactions, which is to say the operations of residents vis-à-vis banking offices located outside the country. Only seven Member countries apply no restrictions to the international movement of capital – Belgium, Canada, Germany, Luxembourg, Switzerland, the United Kingdom and the United States. Other countries enforce regulations which limit the capacity of residents to export capital or incur foreign liabilities. Similarly, most Member countries impose controls on the international dealings of commercial banks operating in the domestic market. It should be pointed out that such restraints are not primarily motivated by an intention to discriminate against the activities of foreign-based banks and that they usually apply to domestic banks as well.

In general, regulations are introduced and maintained for balance-of-payments reasons, to ensure a certain degree of monetary autonomy and to achieve other general macroeconomic policy goals. That said, the importance of such obstacles to international banking is evident.

* * *

The most serious impediments to international banking activities relate to limitations on the right of establishment of foreign-owned banks. Current regulations and policies provide scope for *some* foreign banking presence in all Member countries, but in a number of instances, the right of establishment of "operative" bank offshoots is either forbidden or severely limited. While it is difficult to determine how seriously constraints on equity investment in indigenous banks limits international trade in banking services, the most severe impact is clearly felt in countries which prohibit or restrict de-novo entry. On the other hand, once admitted, foreign institutions are generally accorded "national treatment".

The effect of limitations to the right of establishment in the banking sector may be attenuated somewhat if possibilities exist for foreign banks to provide financial services to residents of a given country either through offshore operations or by operating in the domestic market through local establishments that are not considered to be "banks" under the terms of national legislation. It remains true, however, that access to the local market through a physical operative presence is a prerequisite to the pursuit of banking business proper.

Reciprocity provisions could conceivably be used as a pretext for limiting foreign access to the domestic banking system, but this does not appear to be the case. Rather, a number of countries pursuing a comparatively liberal policy towards foreign bank entry use reciprocity provisions as a means of securing rights of establishment in other countries. The internationalisation of banking, and the need for all countries to ensure that their domestic banks can participate in international business, has meant that considerations of reciprocity have in most instances had the effect of opening up domestic markets to international competition, rather than the reverse.

Member countries' policies towards the presence of foreign banks on their soil are continually evolving, usually in the direction of more liberal treatment of foreign interests. Portugal, for instance, which had prohibited the establishment of foreign banks since 1977, issued a decree in November 1983 authorising foreign bank participation in the form of branch subsidiaries or investment in domestic banks. Sweden and Australia are currently considering the relaxation of existing restrictions. Norway recently liberalised its policy and now permits foreign bank subsidiaries.

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With fluctuating – and, in many cases, with public expenditure cuts, educati must be more flexible in their allocat

The contraction in the school populations of OECD countries caused by the sharp decline in birth rates during the 1970s – quite dramatic at compulsory school level – was originally seen as providing an excellent opportunity for improving the quality of education. Teacher/pupil ratios could be improved, more resources could be devoted to disadvantaged groups, school buildings could be modernised, more and better equipment provided, and curricula could be broadened and enriched. For these improvements to come about, however, the essential prerequisite was that public spending on education should be maintained at existing levels, if not increased.

This was not to be the case, though. The contraction of the school system was accompanied by a contraction of the economy in most OECD countries, in the wake of the first quantum leap in oil prices in 1973-74 and the second round of oil price hikes in 1979-80. The prolonged period of low growth, high unemployment and high inflation which followed put pressure on governments to contain public expenditure and thus to review spending programmes in all areas. In education, the fall in the number of clients was invoked to justify a commensurate cut in allocations.

Birth rates have fallen in almost all OECD countries, although the dimensions of the decline and its chronology have varied considerably (Table 1). The number of births started to decline in most countries in the mid-1960s, and the downturn was particularly sharp in Germany, the United Kingdom and the United States. Birth rates have now begun to recover in a number of countries, with the possibility that the trend may have stabilised, if not reversed. Japan is an exception: the decline in birth

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rates began only in the mid-Seventies, and no-one knows when or whether they will turn up again.

The impact of falling births on educational systems has not been a straightforward decline in the numbers of schoolchildren (Table 2) or school-age children (Chart A). Some age groups have been declining while others are still increasing, leading people to talk in terms of a "fluctuating" rather than simply "diminishing" school population. The number of children in primary education has been decreasing in the majority of OECD countries for some years now, while the decline in those in secondary education is more recent. In higher education, however, the age group has only started to fall in one or two countries and then only in the past couple of years. Again Japan is an exception.

Responding to the Spending Squeeze

During the years of economic prosperity, public expenditure had risen faster than GDP[1], and spending on education increased more rapidly than public expenditure as a whole. In those halcyon days, the main financial headaches that educational authorities experienced were caused by the job of allocating their annual budget increases to the different areas of their empires. It was very rare for any sector to receive less one year than it had been allotted the year before, although the relative share of each level shifted gradually over time. During the 1960s and 1970s, secondary and higher education spending increased relatively to other levels. Overall, spending on education peaked as a percentage of GDP around 1975 in most OECD countries while, as a proportion of total public expenditure, it reached its maximum between 1975 and 1977. Since then, its share has been on the decline. It is a pure coincidence that enrolments began to fall at the same time, and one may speculate what would have happened to educational spending if they had not fallen.

Whatever the answer, educational authorities were inexperienced in managing the contraction or fluctuation of school populations under conditions of restricted funding, and they reacted convulsively to the need to make economies. Over the past five or six years, the share in expenditure of each level of the educational system has remained virtually unchanged. This may

1. See OECD Observer No. 121, March 1983.

1. NUMBER OF BIRTHS: 1956-1982
thousands

	Australia	Austria	Belgium	Canada	Denmark	Finland	France	Germany	Greece	Iceland*	Ireland	Italy	Japan	Luxembourg*	Netherlands	New Zealand	Norway	Portugal	Spain	Sweden	Switzerland	United Kingdom	United States
1956	212	116	150	451	77	89	803	856	158	46	61	884	1,665	48	231	57	64	203	601	108	88	825	4,244
1957	220	119	151	469	75	87	813	892	156	47	61	886	1,567	50	234	58	63	212	639	107	91	851	4,332
1958	223	120	156	470	75	81	809	904	155	47	60	880	1,653	50	237	61	63	213	646	106	91	871	4,279
1959	227	124	161	479	74	83	826	952	160	48	60	911	1,626	50	242	62	63	213	647	105	93	879	4,313
1960	230	126	156	479	76	82	816	969	157	49	61	923	1,606	50	239	63	62	214	655	102	94	918	4,307
1961	240	132	158	476	76	82	835	1,013	150	46	60	924	1,589	51	247	65	63	218	646	105	99	944	4,317
1962	237	133	154	470	78	81	829	1,019	152	47	62	946	1,619	51	246	65	62	220	650	107	104	976	4,213
1963	236	135	158	466	82	82	865	1,054	148	48	63	978	1,676	51	250	65	63	212	663	113	110	990	4,142
1964	229	134	160	454	83	80	874	1,065	153	48	64	1,035	1,732	52	251	62	66	217	689	123	113	1 015	4,070
1965	223	130	155	419	86	78	862	1,044	151	47	63	1,018	1,839	53	245	60	66	210	668	123	112	998	3,801
1966	224	129	151	388	88	78	860	1,050	155	47	62	999	1,375	52	240	60	67	207	662	123	110	980	3,642
1967	229	127	146	371	81	77	837	1,019	163	44	61	962	1,955	50	239	61	67	202	672	122	107	962	3,555
1968	241	126	141	364	75	74	833	970	160	42	61	945	1,887	47	237	62	68	195	660	113	105	947	3,535
1969	250	121	141	370	71	67	842	903	154	42	63	949	1,907	45	248	63	68	190	659	108	103	921	3,630
1970	258	112	141	370	71	65	850	811	145	40	64	917	1,948	44	239	62	65	181	656	110	99	904	3,739
1971	276	109	139	362	76	61	881	779	141	43	68	911	2,037	45	227	64	66	181	665	115	96	902	3,556
1972	265	104	135	347	76	59	878	701	141	47	68	893	2,075	41	214	63	64	175	666	112	91	834	3,258
1973	248	98	129	343	72	57	857	636	138	46	68	888	2,109	38	195	61	61	172	666	110	88	780	3,137
1974	245	97	123	346	71	62	801	626	144	42	69	887	2,046	39	186	59	60	172	682	110	83	737	3,160
1975	233	94	119	358	72	66	745	601	142	44	68	842	1,897	40	178	57	56	180	669	104	79	698	3,144
1976	228	87	120	359	65	67	720	603	147	43	68	807	1,845	39	177	55	53	187	677	99	74	676	3,168
1977	226	86	122	362	62	66	745	582	143	40	68	758	1,767	41	173	54	51	181	656	96	73	657	3,327
1978	224	85	122	359	62	64	737	576	147	42	70	721	1,720	41	176	51	52	167	637	93	72	687	3,333
1979	223	86	124	366	60	63	757	582	148	45	72	683	1,654	41	175	52	52	160	597	96	72	735	3,468
1980	226	91	125	371	57	63	800	621	148	45	74	658	1,589	42	181	51	51	161	566	97	74	754	3,589
1981	236	94	125	371	53	63	805	625	141	44	72	628	1,541	44	179	51	51	154	532	94	74	731	3,651
1982	240	95	n.a.	373	53	67	798	621	137	43	71	635	1,515	43	171	n.a.	n.a.	154	510	93	75	n.a.	3,704

* *Figures in hundreds.*
Turkey is not mentioned as data is not available.

2. ENROLMENT GAINS OR LOSSES 1970-1980

or nearest year

	Pre-primary	%	Primary	%	Secondary	%	Higher	%	Total	%
Australia	64,942	64.4	8,221	0.5	−41,350	−3.6	144,052	80.2	175,865	5.4
Austria	37,630	31.3	−131,537	−25.0	109,448	17.4	76,996	129.0	92,537	6.9
Belgium	−70,800	−15.6	−179,394	−17.6	111,821	15.5	71,296	57.1	−51,891	−2.2
Canada	47,400	13.5	−612,900	−21.0	−163,700	−6.4	167,800	35.3	−561,400	−8.9
Denmark	42,000	201.0	−8,396	−1.9	137,792	38.2	30,217	39.7	172,080	18.5
Finland	50,400	178.7	−12,883	−3.3	−65,526	−12.9	25,567	42.8	−2,442	−0.2
France	199,400	9.0	−318,013	−6.4	734,001	17.1	259,256	32.4	874,644	7.3
Germany*	266,000	22.2	−1,147,000	−28.8	1,936,800	27.5	533,700	104.5	1,589,500	12.5
Greece	55,341	63.5	−7,905	−0.9	330,818	63.6	31,631	36.9	409,885	25.6
Italy	101,860	6.4	−421,736	−8.7	1,485,039	38.8	430,500	62.6	1,595,663	14.6
Japan	732,500	43.7	2,268,434	23.7	1,078,580	12.4	603,592	33.2	4,683,106	21.6
Netherlands	−72,400	−15.0	−129,034	−8.8	388,612	38.6	128,866	55.7	316,044	9.9
Norway	48,700	383.5	8,882	2.3	52,775	17.4	29,164	58.3	139,521	18.6
Spain	339,900	41.5	−320,715	−8.2	1,962,281	100.6	442,440	196.7	2,423,906	35.0
Sweden	152,200	136.6	51,348	8.3	52,353	9.4	59,781	42.3	315,682	22.2
Switzerland	n.a.	n.a.	−49,550	−9.9	113,804	32.9	31,748	61.7	n.a.	n.a.
United Kingdom	34,700	11.5	−672,639	−11.6	1,137,969	27.4	198,162	33.0	698,192	6.4
United States	884,000	20.7	−1,252,000	−4.4	−5,352,000	−26.9	3,600,883	42.4	−2,119,117	−3.5
Yugoslavia	135,000	86.6	−147,482	−9.3	444,086	22.4	187,552	71.8	619,156	15.6

Source: UNESCO-OECD Questionnaire.
* *National Statistics.*

come as a surprise for, in a period of fluctuating school populations and zero or very low expenditure growth, it would have been reasonable to expect resources to shift from sectors of falling demand, i.e. compulsory schooling, to those where demand is rising. That this has not happened is an indication of the highly compartmentalized organisation of educational

Students at the Chief Jimmy Bruneau School in the Northwest Territories of Canada have to travel up to 65 miles to reach this modern "one-room schoolhouse". Are schools in other countries going to have to return to this pattern?

systems, though it may also be due to deliberate policies to improve the quality of basic education.

A large proportion of current spending is swallowed by the salaries of staff who, because of tenure, cannot easily be dismissed in the short term. Hence, expenditure restrictions have fallen primarily on capital outlays, causing the cancellation or postponement of investment plans. Capital spending, which early in the Seventies was as high as 20-25 per cent of educational outlays, generally accounted for no more than 5 to 10 per cent of such outlays by the end of the decade and the downward trend seems to be continuing[2]. Educational authorities have been faced with difficult decisions in a bid to cut costs, such as whether to keep village schools open despite their relatively high cost per pupil. Very few new schools are being built, and many of the existing ones are becoming increasingly dilapidated, which must have an impact on the quality of education.

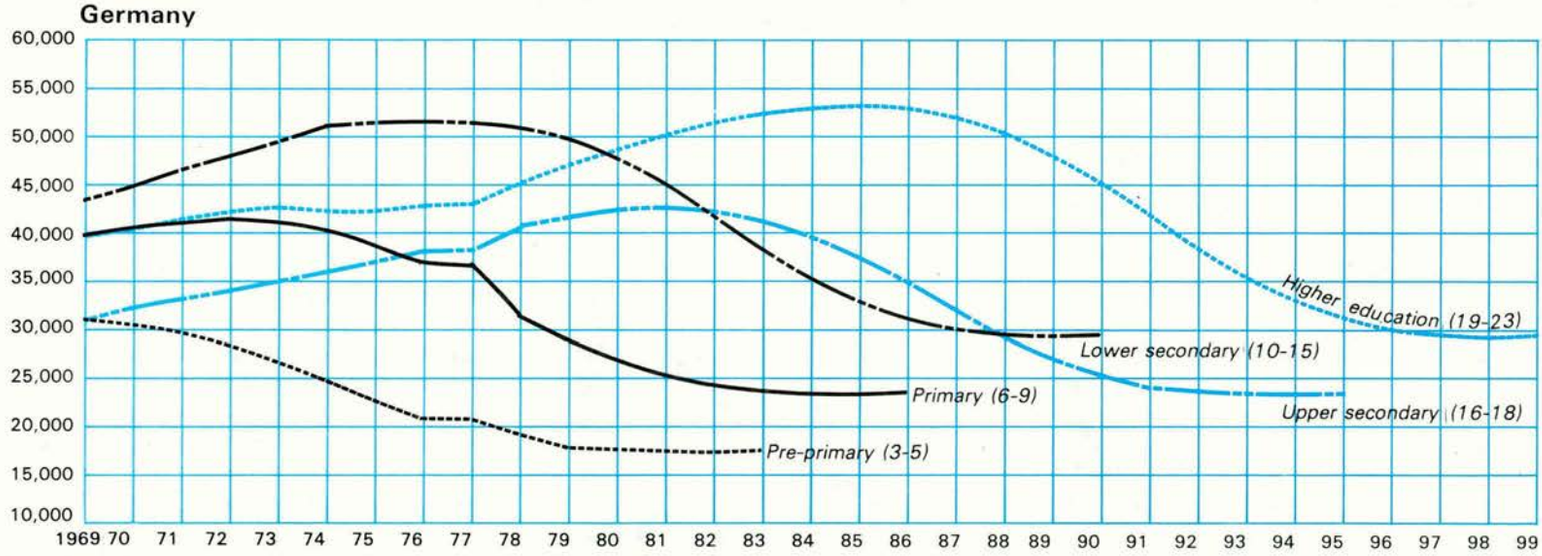
When it comes to staffing levels, education authorities have tended to follow rule-of-thumb guidelines for teacher/pupil ratios. In the absence of hard evidence, it has generally been assumed that reducing the average number of pupils per class contributes to an improvement in both the quality of education and teachers' working conditions. When educational authorities came under pressure to restrict spending, they endeavoured to maintain existing staffing levels and to reduce the number of teachers in line with the decline in the number of pupils. They soon discovered, however, that it was unrealistic to expect the teaching workforce to shrink as rapidly as school populations. Therefore they decided to focus on policies for determining the future supply of teachers. Three main factors have been taken into account:

- the need to maintain a sufficient flow of new entrants to promote innovation and adaptation and to conserve an acceptable age spread,
- the need to train secondary school specialist teachers in subjects for which qualified teachers are in short supply,
- the problem of coping with the swing

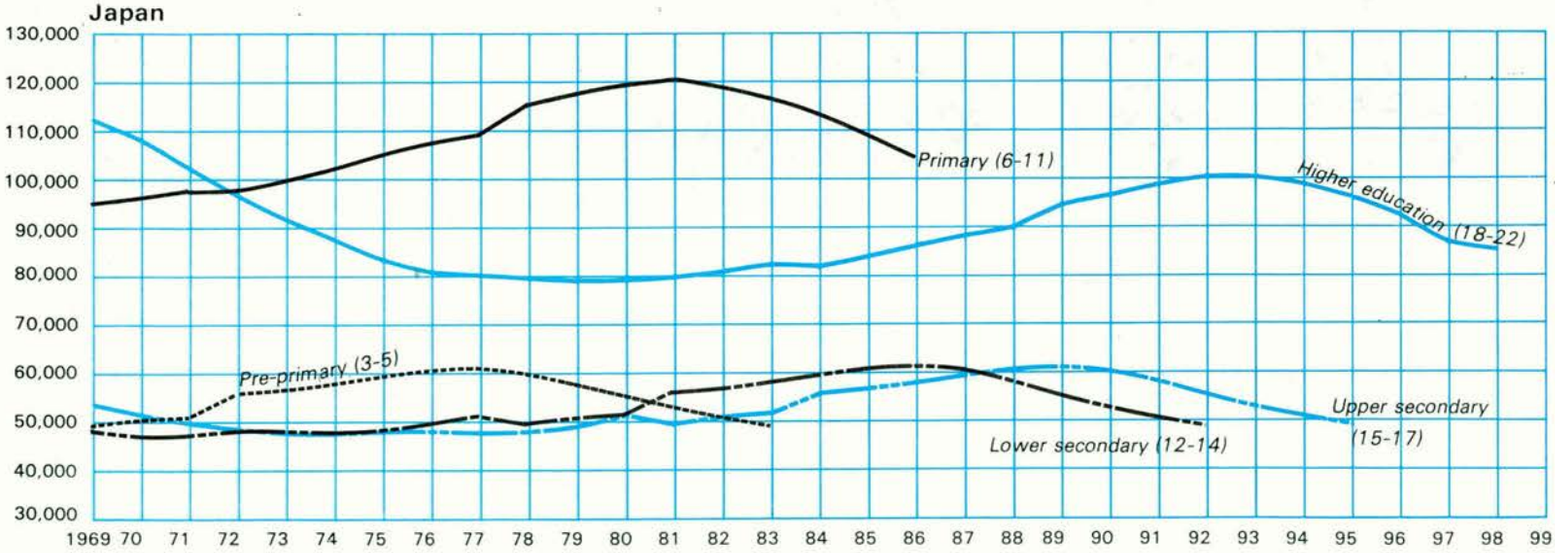
2. Japan's capital outlays have remained at the same level, around 26 per cent.

A. THE DEMOGRAPHIC WAVE: TWO PATTERNS GERMANY AND JAPAN

School-age population 1969-1999 in hundreds



Like the United Kingdom, Canada and the United States, the number of primary-school age children in Germany has declined since the early Seventies while the secondary and higher education age population rose. The latter will fall off later in the decade when the demographic wave reaches this age group. If the birth rate rises again, the number of pre-primary and primary school age children will also start growing again.



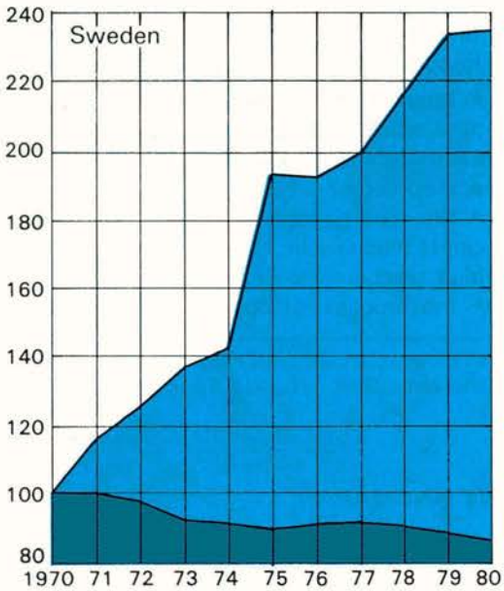
The pattern is almost the opposite – the number of primary and pre-primary age children grew while secondary and higher education age groups fell. The number of primary age children is now beginning to fall and the higher education group has started to grow.

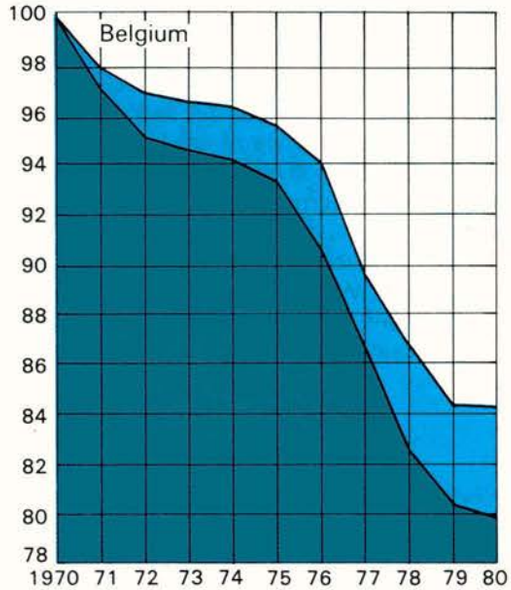
B. TRENDS IN ENROLMENT AND AGE GROUP

1970 = 100

Enrolment
Age group

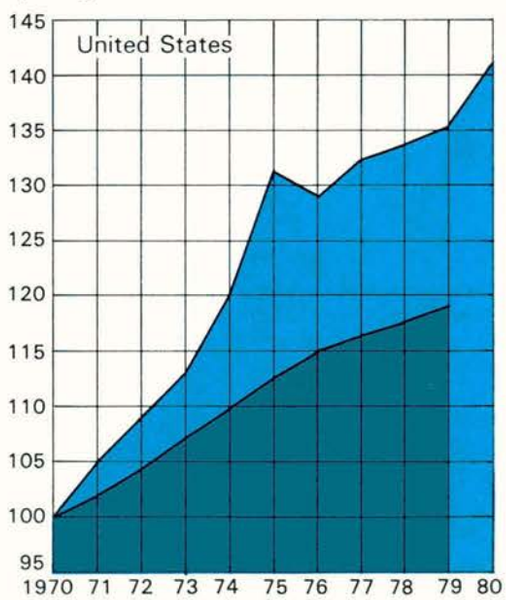
a) Pre-primary education

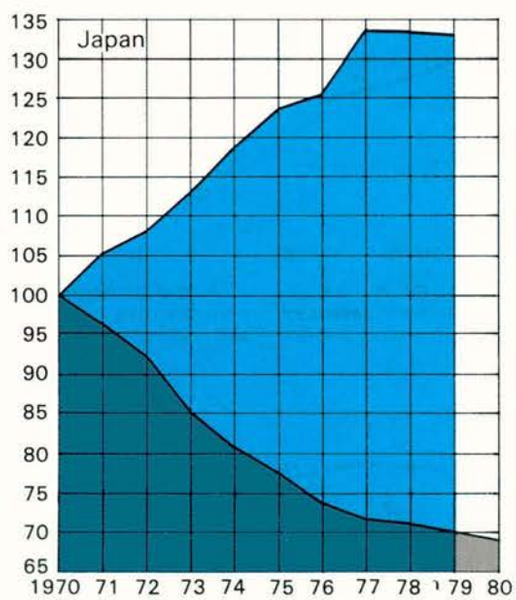




The Scandinavian countries had a low enrolment rate in pre-primary education, but in the Seventies this changed as more women went to work (the female labour participation rate increased from 39 to 63 per cent between 1970 and 1980 in Norway, for example, and from 59 to 74 per cent over the same period in Sweden). Thus pre-primary enrolment has increased under the influence of "social demand" even though the pre-primary age group has declined. Other countries like Belgium, Germany and the Netherlands had a high pre-primary enrolment rate prior to the Seventies and experienced a sharp drop in the birth rate during that decade. The demographic decline therefore is reflected in enrolments.

b) Higher education





The demand for higher education has been increasing in almost every country even where, as in Japan, the age group has been falling sharply. In future, the age group will decline in most countries and therefore pressures on the higher education system may ease, but in Japan the age group is expected to increase and this demographic factor plus social demand will increase the strains on higher education.

from primary to secondary now, and the shift back again later (if births continue to increase).

Despite the rigidities, governments have succeeded in reducing teaching staffs, resulting in a new labour market phenomenon – the unemployed teacher. But unemployment has not eliminated teacher shortages in certain regions and subjects. Moreover, fewer higher education students seem to be considering a teaching career, not just on account of government policies to restrict teacher numbers, but also because of the relative decline in teachers' salaries and the higher risk of unemployment. In the United States, an overall shortage of teachers is foreseen for 1985, with the shortfall reaching 20 per cent by 1988.

Planning for Future Needs

The future growth of school populations will depend on birth rate trends, since the demographic factor will continue to be the crucial one, at least as far as compulsory education is concerned. The economic climate will be an important determinant of "social demand" for education, although its main impact will increasingly be on the supply side – the availability of educational facilities in the non-compulsory sector. Against the backgroud of these uncertainties on both the demand and the supply side, it is hard to formulate a long-term strategy for the quantitative development of education. To that extent, it is important that educational authorities build sufficient flexibility into decision-making and resource allocation to ensure that funds can be directed to levels where they are most needed.

Pre-primary

At pre-primary level, demand has already increased despite the fall in birth rates and is expected to rise further where birth rates are recovering, reflecting parents' views about schooling and their own personal and family situations. Many people are convinced of the decisive influence of the first years of life on the child's subsequent learning ability. Parents with low incomes may think that a year or two of pre-school education will help their children perform better in their later school years, despite the disadvantages of a difficult home life. Yet disadvantaged families are less likely to send their children to pre-primary schools than better-off ones. Thus there are reasons for thinking that there is considerable *potential demand* for pre-school education which is not at present being met, at least not by the public sector. Policy-makers must assume that demand for pre-primary education and child services will continue to grow, irrespective of trends in the number of working mothers.

Compulsory – primary and lower secondary

Enrolment in primary and secondary compulsory education will be directly related to movements in the relevant age groups. OECD countries are begining to feel the impact of the fall in birth rates at the primary level, and the decline in numbers will last for some time. For most countries, though, the number of primary pupils should start to rise again by the end of the 1980s or the beginning of the 1990s. The overall numbers in compulsory education will continue to fall, however, as the decline in enrolments works its way through the secondary level.

At the compulsory level, therefore, education authorities will be faced with the contraction of one educational group and the expansion of another. To facilitate a smooth and rational redistribution of resources, they will have to formulate policies that span the whole of compulsory education, both primary and lower secondary. This may present management problems, especially with the use of teachers because of their specialised training, but it is important to stress that, unless education authorities devise efficient systems for directing resources to the areas most in need, they will be faced with increases in per-student costs as a result of diseconomies of scale.

Upper secondary

At the post-compulsory end of the secondary level, trends are more diverse from one country to another. This is to be expected since there is a broader range of possibilities at this stage, with children having to choose between terminating their education altogether and entering the labour market, continuing their general education to the age of 18 or beyond, or embarking on some form of vocational or technical occupational training. The general tendency appears to be that demand for technical/vocational courses is increasing in countries with well developed general education systems like France, while the opposite is occurring in those countries which already have a strong tradition of vocational training like Germany. Future enrolments in upper secondary education can be expected to decline generally as the number of children in this age group falls, and this trend will last into the 1990s. The quantitative outcome is hard to predict, however, because it is essentially a function of social demand and also depends on the level of recruitment into occupations requiring some preliminary training.

The ultimate expansion in post-compulsory enrolments will be determined largely by supply policies, that is, the extent to which the authorities satisfy social demand. The considerable disparity in OECD countries' enrolment rates at the upper secondary level suggests that there is a large margin for growth in the majority of them. However, national projections for future provision seem to be based primarily on demographic criteria, with little or no allowance made for changes in social demand, and this may be proven wrong.

Higher education

During the 1970s, higher education expanded substantially in all OECD countries, in response both to the growth of the relevant age group and to strong social demand. Enrolments in university and non-university course alike have nevertheless been controlled in many countries by government selection policies. The number of students in higher education can be expected to go on growing, however, until the mid-1980s, when the corresponding age cohorts will start to fall. But under the pressure of tight financial and economic conditions, governments are thinking in terms of restricting and influencing the demand for higher education in line with their conception of the country's actual economic requirements. This kind of approach could however entail a heavy political cost if it failed to induce a voluntary reduction in social demand and had to rely on a drastic curtailment of supply.

Buildings as well as teachers need to be flexible. Above: a plastic "school" in Lancashire in the U.K. can be added to an existing one in four days – or taken away.

Training outside the formal school system

The non-formal type of post-compulsory education and training was initially designed for those who have in some way "failed" in their "normal" schooling. The number of failures who are considered to need some compensatory education and training before seeking employment depends to some extent on whether technical training is incorporated into the system at post-compulsory level.

The acute problem of youth unemployment in many OECD countries has engendered a new breed of training scheme aimed at giving school leavers some technical training and limited work experience to facilitate their transition from school to employment. Conceived originally as a short-term remedy for what was assumed to be essentially a cyclical phenomenon, they have tended to be of a temporary nature. However, with the problem of unemployment among the young now widely regarded as a structural one requiring long-term solutions, these programmes have been taking on a more permanent character. Educational and employment policies are in fact now being revised in many countries to include permanent schemes for bridging the gap between education and employment with relevant occupational training.

These programmes have been criticized on several grounds. Employers are accused of simply substituting work experience places, which cost them nothing, for permanent jobs. At the same time, it is pointed out that the posts created for trainees might otherwise have been offered to other potential candidates. In this regard, it is significant that, while teenage unemployment is now decreasing because of the proliferation of education and training schemes, unemployment amongst 20-24-year-olds has risen in relative terms.

Youth training schemes are also thought to compete with the formal education system, and it might be useful to evaluate the efficiency of these programmes in comparison with alternative courses that could be provided within the formal system, as well as with more general measures like raising the school-leaving age or broadening the curricula available at the post-compulsory level. In a similar way, the public resources going into youth unemployment benefits might be more constructively deployed to support education and training for young people.

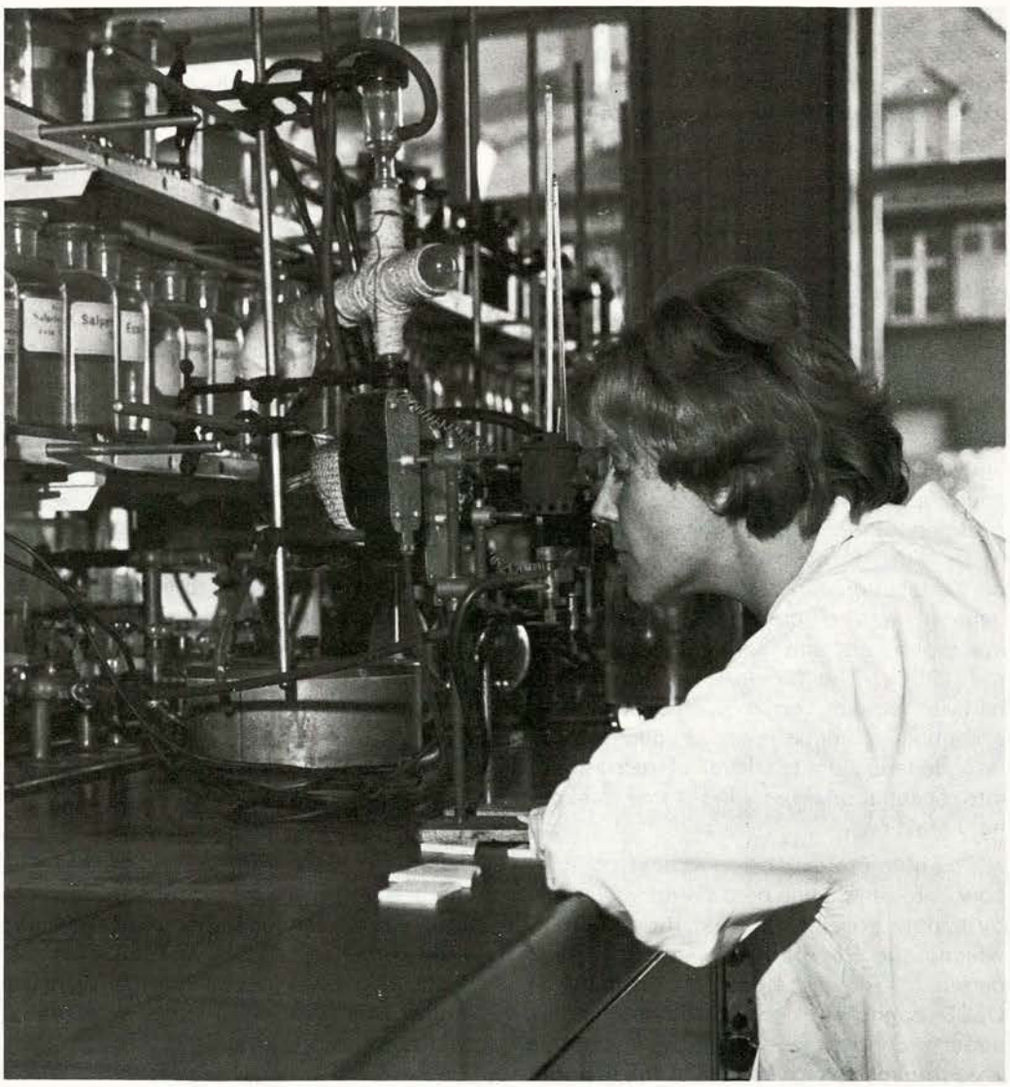
If inefficiency is to be avoided and resources are to be directed to the areas where they are most needed, educational policy makers need to monitor the shifting demands of a changing population and ensure a greater measure of flexibility in the provision of educational and training services.

Protection Against Hazardous Chemicals: An OECD Recommendation to Exporting Nations

OECD governments have taken an important step towards protecting the citizens of those countries, whether within the OECD area or outside of it, which import particularly hazardous chemicals[1]. Member countries, which are among the largest producers, exporters and importers of chemicals in the world, have agreed that information on chemicals which have been banned or severely restricted in the OECD exporting country should be provided to the governments of importing countries at the time of and, preferably, prior to export. The importing countries can then decide whether or not they should ban or restrict use of the chemical.

If production of a hazardous chemical were prohibited altogether, the problem of export notification would not arise. But production has been banned in only a very few cases such as PCBs in Japan and the United States and DDT in Germany. Usually the *use* or *handling* of such chemicals is banned or subjected to controls in OECD countries. Manufacturers may then continue to produce such chemicals for sale abroad. Examples of chemicals whose use has been banned in exporting countries but are nevertheless exported include organochlorine pesticides (not only DDT but also aldrin, dieldrin and others in the same family) and mercury.

Jim MacNeill, OECD's Director of the Environment, notes; "There are many documented instances set out in the files of government agencies – especially aid agencies – and in books, professional articles and TV programmes of serious damage to health and the environment that has occurred in importing countries from the use of such chemicals. This is a clear case where, from a societal point of view, if not from the point of view of individual exporting industries, anticipation and prevention make a lot more sense economically than after-the-fact reaction and cure."



The dangers to importing countries are evident but what are the responsibilities of the exporting countries? Once having declared a chemical hazardous for domestic use, should they ban its export? Some people think so, but export control is something from which free-market economies traditionally recoil. Do they have, or should they assume, the constitutional authority to make regulations to prevent harm to health and the environment in other jurisdictions? Some countries – even 10 years after the Stockholm Declaration – think not. What about requiring the prior and informed consent of importing countries? Would this be a form of remote import control?

OECD countries have discussed these issues at length and decided that, while the importing nations have the primary respon-

1. *Australia has abstained, pending the outcome of internal consultations.*

RECOMMENDATION OF THE COUNCIL CONCERNING INFORMATION EXCHANGE RELATED TO EXPORT OF BANNED OR SEVERELY RESTRICTED CHEMICALS

The Council,

Considering that the export of chemicals hazardous to man and the environment is a matter of increasing international concern;

Considering that importing countries have the primary responsibility for the protection of man and the environment from the hazards associated with chemicals imported into their territories;

Considering that OECD Member countries are among the major producers, exporters and importers of chemicals and that, by virtue of the experience and expertise they possess concerning chemicals control, they can assist each other as well as non-Member importing countries to make timely and informed decisions about chemicals entering their territories;

Considering that concerted action in this regard could contribute to and support national efforts to control the hazards associated with chemicals while minimising competitive and trade distortions;

On the proposal of the Joint Meeting of the Management Committee of the Special Programme on the Control of Chemicals and the Chemicals Group, endorsed by the Environment Committee:

1. Recommends *that if a chemical is exported which is banned or severely restricted in the exporting Member country, information be provided from that country to the importing country to enable the latter to make timely and informed decisions concerning that chemical.*

2. Recommends *that, in exchanging information related to export of chemicals which are banned or severely restricted in the country of export, Member countries take into account the Guiding Principles set out on page 32, which are an integral part of this Recommendation.*

3. Recalls *that the Complementary Information Exchange Procedure established by the Chemicals Group in June 1977 calls for early and rapid exchange of information among Member countries on regulatory actions, planned or taken, concerning the control of chemicals.*

4. Invites *non-Member countries to take note of the provisions contained in this Recommendation and to consider applying them.*

5. Instructs *the Secretary-General to take the necessary steps to ensure the wide distribution of this Recommendation and to maintain communication with other international organisations working in this field.*

6. Instructs *the Environment Committee and the Management Committee of the Special Programme on the Control of Chemicals to review actions taken by Member countries with a view to facilitating the practical implementation of this Recommendation, and to report thereon to Council no later than three years after its adoption.*

sibility for protecting their people and their environment from the hazards associated with chemicals imported into their territories, governments of exporting countries have a clear responsibility to assist the importing countries in this respect. In the first place, it is they who have made the judgment that the chemical should be banned or that its use should be severely restricted in their own countries. Second, it is usually only the exporting country which is in possession of the information that could lead to a proper judgment on the matter by the importing nation.

The assistance, OECD governments have decided, should be provided in the form of information rather than the control of exports but importing countries must have access to this information at the time of and, preferably, prior to export.

This recommendation builds on earlier OECD actions on chemicals. In 1971, OECD's Council adopted a "Resolution concerning a Procedure for Notification and Consultation," which, among other things, provides that Member countries which take action to ban or severely restrict a chemical should so inform other OECD Member countries and the OECD Secretariat. In 1977, a Complementary Information Exchange Procedure was adopted to improve the timeliness of such information. But the present Recommendation goes beyond these earlier measures in two important respects:

- Under the 1971 Resolution, the information exchange is linked to the regulatory action itself. Under the present Recommendation, just approved by OECD's Council, the exchange of information is linked to the actual physical export of a banned or severely restricted chemical. When such an export "is expected or about to occur", the importing country will receive an "alert" and a package of information. Later, at the request of the importing country, a further package of much more detailed technical information on the chemical in question will be provided.

- Information will now be provided not only to Member countries but also to non-Member countries, including those Third World countries with perhaps the greatest need for assistance in the matter of hazardous chemicals.

The OECD Recommendation applies solely to chemicals which have been banned or severely restricted at home – an estimated 150-200 in all. This is not a large number in terms of the chemicals in commerce – an estimated 80,000 – but it is more significant as a proportion of world trade and in its potential to impose heavy costs on importing countries in terms of damage to health, the environment and property. The exports of an indeterminate number of other equally hazardous chemicals are not yet covered by this OECD Recommendation: notably, those chemicals for which the exporting company has not applied for approval for domestic use (or has withdrawn the application), but then produces them for export only; and those chemicals which are exported to one country and then re-exported to another.

OECD's Recommendation is the first international commitment to tackle this complex issue in a practical, effective way and is the outcome of extensive discussions in several international fora over several years.

GUIDING PRINCIPLES ON INFORMATION EXCHANGE RELATED TO EXPORT OF BANNED OR SEVERELY RESTRICTED CHEMICALS

Introduction

While importing countries have the primary responsibility for protection of health and the environment from risks associated with imports of chemicals which have been banned or severely restricted for use in exporting countries, exporting Member countries should take steps to assist importing countries in making timely and informed decisions.

These Guiding Principles:

- *provide for an information exchange which will give an importing country a better opportunity to determine its need for action on chemicals banned or severely restricted in the exporting Member country; they do not deal with the control of export of such chemicals;*
- *should not preclude, in any way, national authorities from instituting wider and more frequent information exchange;*
- *apply to exports from one Member country to another, as well as to exports to non-Member countries;*
- *may be implemented by countries through public or private entities designated or authorised by them to do so;*
- *are not designed to apply to export of hazardous waste.*

Scope

For purposes of these Guiding Principles, a banned or severely restricted chemical includes any chemical that is the subject of a control action taken by a competent authority in the exporting Member country:

- *to ban or severely restrict the use or handling of the chemical in order to protect human health or environment domestically; or*
- *to refuse a required authorisation for a proposed first time use of the chemical based upon a decision in the exporting Member country that such use would endanger human health or the environment.*

Guiding Principles

Where an exporting Member country has taken control action to ban or severely restrict chemicals, such exporting Member country should make relevant information available to importing countries.

If an export of a banned or severely restricted chemical occurs, the exporting Member country should ensure that necessary steps are taken to provide the importing country with relevant information so as to alert it to that fact. It is the intention that, in so far as possible, the alert information should be provided prior to export, but it is recognised that this may not always be possible, and that the procedures of the exporting country should not be such as to delay or control the export.

The minimum information needed to alert the importing country would be:

- *The fact that an export is expected or about to occur;*
- *The chemical identification/specification;*
- *A summary of control action taken in the exporting Member country. If the control action bans or restricts certain uses but allows other uses, such information should be included. Information on the rationale for the control action may also be included;*
- *The fact that additional information is available and the indication of the contact point in the exporting Member country to which a request for additional information should be addressed.*

The provision of such information to the importing country would be on a one-time basis when the first export following the control action in the exporting Member country occurs. It should recur in the case of any significant development of new information or condition surrounding the control action. For purposes of the Guiding Principles, where the use of a chemical has been banned or severely restricted before adoption of these Guiding Principles, "the first export following the control action" shall be deemed to be the first export after adoption of these Guiding Principles, unless the exporting Member country has already provided such information.

The exporting Member country should also take the necessary steps to provide to the importing country, at its request, additional available information which would assist the importing country in determining its needs for action in relation to assessment of chemicals in protection of man or the environment.

The provision of information by the exporting Member country must take into account the protection of the confidentiality of data in the importing country and the protection of proprietary rights and also the resources which would be required in the exporting Member country to provide this information.

The additional information needed in the importing country to determine its need for action would be:

- *Rationale for the control action taken, and the readily available data used by the exporting Member country to reach its control decision; and*
- *Such other information surrounding the circumstances of the export/import transaction as may be agreed upon by the exporting and importing countries.*

While the procedures in exporting Member countries for providing relevant information to importing countries will vary, there are certain elements which should be common to the procedures established in all exporting Member countries:

- *Provision for determining when a control action has been taken which would initiate the information exchange and for informing exporters and other appropriate parties of such determination;*
- *Provision for assuring that the information exchange to each importing country is initiated when the first export to that country following the control action in the exporting Member country occurs;*
- *Provision for sending the alert information to the importing country on a one-time-notification basis, except where the exporting Member country wishes to have more frequent information exchange.*

The importing Member country should establish internal procedures for the receipt and handling of information from the exporting Member country. While these internal procedures will vary from one importing Member country to another, there are certain matters which should be provided for:

- *The designation of a recipient by the importing Member country to receive the alert information;*
- *Procedures for reviewing the alert information to determine the need for additional information;*
- *Internal procedures for receiving and acting on the additional information before requesting such information;*
- *Procedures for determining whether the additional information needed in the importing Member country is available from sources other than the exporting Member country;*
- *Procedures to maintain confidentiality of information and to protect proprietary rights when claimed by the exporting Member countries.*

Any control measures applied to an imported chemical for which information has been received within the framework of the Guiding Principles should not be more restrictive than those applied to the same chemical produced domestically or imported from a country other than the one that supplied the information.

Green Energy– The Pros and Cons of Biomass

At a moment when the oil market is relatively calm, there seems to be less urgency about developing alternative sources such as biomass. But this is a short-term approach. Moreover, biomass for energy is of interest in another context – its potential as an outlet for agricultural surpluses. These issues form the background of a new OECD study on "green energy"[1].

The energy contribution that can be expected from biomass is marginal: – for most countries it could supply perhaps one to four per cent of energy requirements by 1990. This percentage however should be compared with another: when the price of oil rose fourfold in 1973, the supply deficit was only 5 per cent. Consequently, this marginal contribution could be extremely important. Moreover, although most forecasts count on a slight reduction in oil prices for a year or two if there are no political events affecting producer countries, the oil market could be subject to new stresses from 1985-86 if production stagnates and demand increases.

The fragile balance between oil supply and demand, and the need to cope with the problems of growth, employment, and balance of payments disequilibrium caused by the two oil crises point to the need for effective energy policies: energy conservation, development of domestic sources on a competitive basis, and substitution of other energy resources for oil.

The agricultural and forestry sector is in a position to help achieve these aims through biomass which has several advantages: it is normally a domestic resource for which conversion techniques are known and for which the equipment can be manufactured at home; it can be substituted for oil products in space heating, as a fuel for motor vehicles, or as a raw material in the chemical industry.

However, there is a difference between what is technically feasible – the energy potential of biomass in this respect is considerable – and what is economic since conversion is still very expensive. At the present time, the cost-benefit trade-off for biomass must be weighed against that obtained from the conservation of energy, but by the year 2000, the comparison will have to be with other "new" energy sources. If governments feel that the contribution made by biomass to energy supplies, even if marginal, is of sufficient importance nationally to merit continued investment, they should, to make it more economically rational, support, at least initially, bio-energy R&D, whether on residues or energy crops.

Residues and Energy Crops: Two Different Problems

The concept of agricultural biomass covers two very different aspects.

- *Agricultural residues and wastes* as well as some of the wood found on farmlands, are low-cost raw materials which can be used in boilers, gas generators or methanisation digesters. Almost always, this biomass is used on the farm, thus contributing to the energy balance in agriculture itself. The main task is to improve harvesting and conversion equipment so that its profitability and convenience (an aspect sometimes overlooked) are enhanced. Farmers only use these forms of biomass if, by so doing, they can reduce energy costs through saving on oil and hence can increase their income.
- *Energy crops* on the other hand require the use of all the inputs of a production system – land, labour, machines, fertilizer, etc. Such crops are primarily used to produce fuels, particularly alcohol (always blended with petrol in the case of OECD countries, but used by itself in Brazil) and basic materials such as those provided by the petrochemical industry. Thus this form of biomass is used almost exclusively outside agriculture and does not contribute to the energy balance of the individual farm. Moreover, the conversion of certain energy plants (cereals, Jerusalem artichokes) gives rise to by-products (protein feed and oils) which improve profitability of biomass crops and compete with traditional products (soya, sunflower, etc.). The effects on the agricultural economy are therefore much more complex than for residues.

WHAT IS BIOMASS?

Plants are the basic constituent of biomass. However, plants are themselves transformed by the animals which eat them and use plant energy to make their own: animal wastes and the wastes of industries processing animal milk and meat also constitute biomass.

Achievements and New Prospects

Biomass has gone beyond the stage of experiment and pilot project; large-scale conversion is already underway. Among the *agricultural residues* which can be used for energy production, straw has been the most popular with farmers. Straw-fired boilers are being installed at a rapid rate in a number of countries: nearly 15,000 in Denmark for instance. Only a few hundred biogas units have been built, however, and the seven million Chinese digesters, designed for a totally different environment, are not adaptable to OECD countries. *Energy crops* are used almost exclusively for the production of ethanol: in the United States, 11,000 service stations sell gasohol and in 1982, 800 million litres of agricultural ethanol were sold. In Brazil,

1. Biomass for Energy: Economic and Policy Issues, *to be published shortly.*

4.1 billion litres of ethanol were produced in 1982, 12 per cent of the volume of petrol and diesel fuel used in the Brazilian transport system (see box).

New prospects for energy crops have recently come to light. The United States has decided to exempt gasohol from one of the five cents of supplementary tax levied as from 1st April 1983 on every gallon of petrol; the implicit subsidy on ethanol thus amounts to 13.2 cents a litre (50 cents/gallon). For the United States, support for ethanol production is an instrument not of agricultural policy but of energy policy.

The EEC is looking into the question of whether it would be possible to use a strategy focussing on "biomass energy" to tackle two problems at once – farm surpluses and energy. The basis of this strategy would be to switch 7 or 8 million hectares (about 14 per cent of farmland) to energy crops by the year 2000. This would cover 2.5 per cent of forecast energy consumption at that time without affecting the security of the Community's food supply.

USES OF ENERGY OBTAINED FROM AGRICULTURAL BIOMASS

Type of biomass	*Technical conversion*	*Forms of energy*	*Uses*
Agricultural residues and wastes			• domestic heating in rural areas
• dry residues • moist residues and wastes	• combustion • fermentation[a]	• thermal • biogas/electricity	• energy requirement for agricultural installations
Wood and forest wastes	• combustion, pyrolysis[b] and gasification	• thermal/ electricity/ lean gas	• heating systems • wood industries • other industries
Energy crops			
• rich in sugar or starch • ligno-cellulosic • oilseeds	• fermentation[c] • hydrolysis fermentation • chemical synthesis • extraction[c]	• ethanol • ethanol • methanol • vegetable oil	• motor fuels • raw material for industry

Note : a) *Fertilizers,* b) *raw materials for industry,* c) *Animal feeds are obtained as product of energy.*
Source : *OCDE.*

Economic Criteria ...

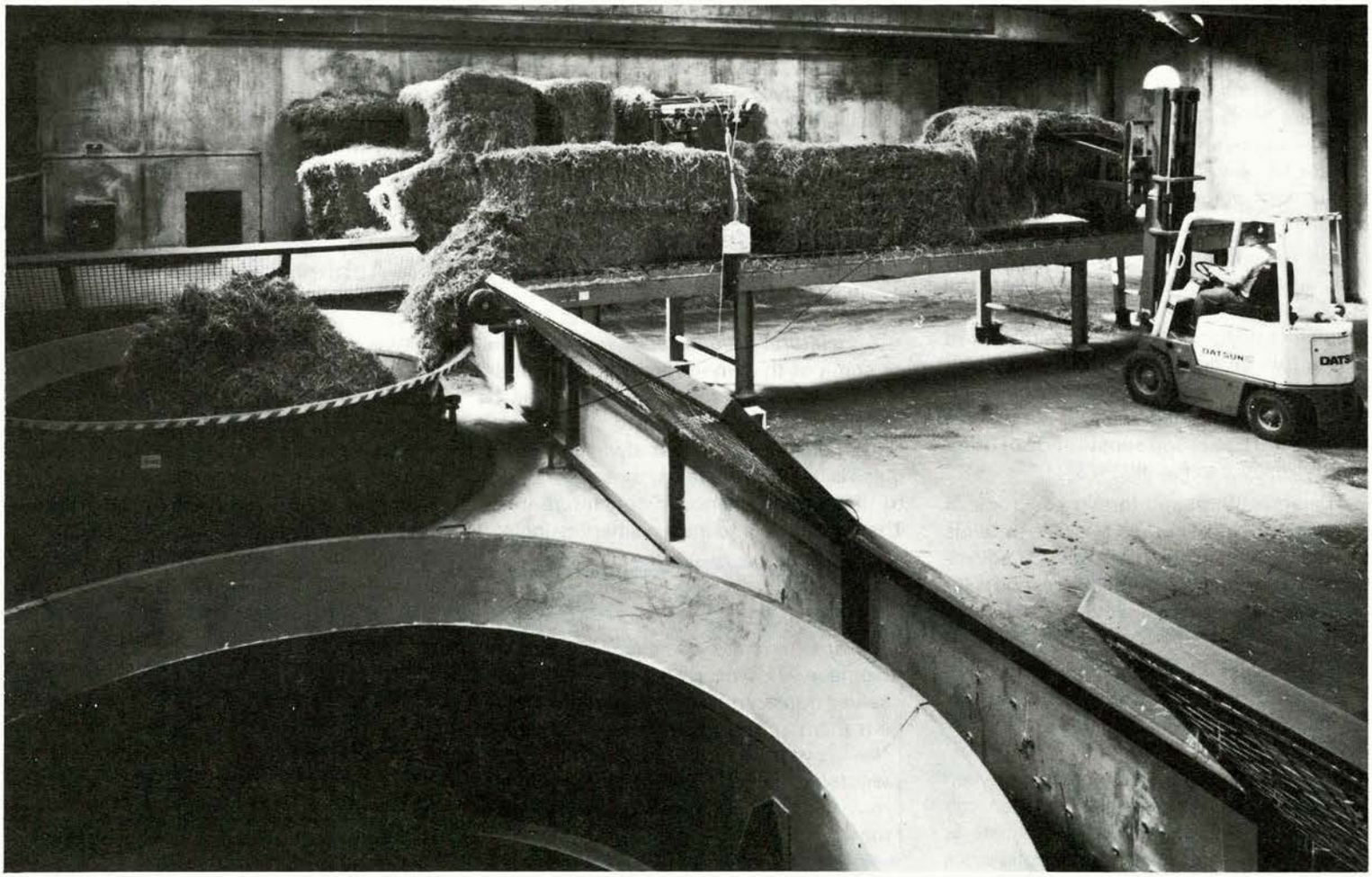
To assess the potential of biomass, one must:

- evaluate its role vis-à-vis competing energy sources, and particularly new sources (solar energy, heat pumps, etc.)
- weigh its characteristics in terms of power, mobility and installation time
- examine the various non-food uses of biomass in such industries as paper and plywood, chemistry and pharmaceuticals etc. In Japan, the biomass conversion programme includes an inventory of all possible uses.

Profitability

One determining factor in the use of biomass is its profitability. For farmers and

Straw being fed into a boiler in Denmark.



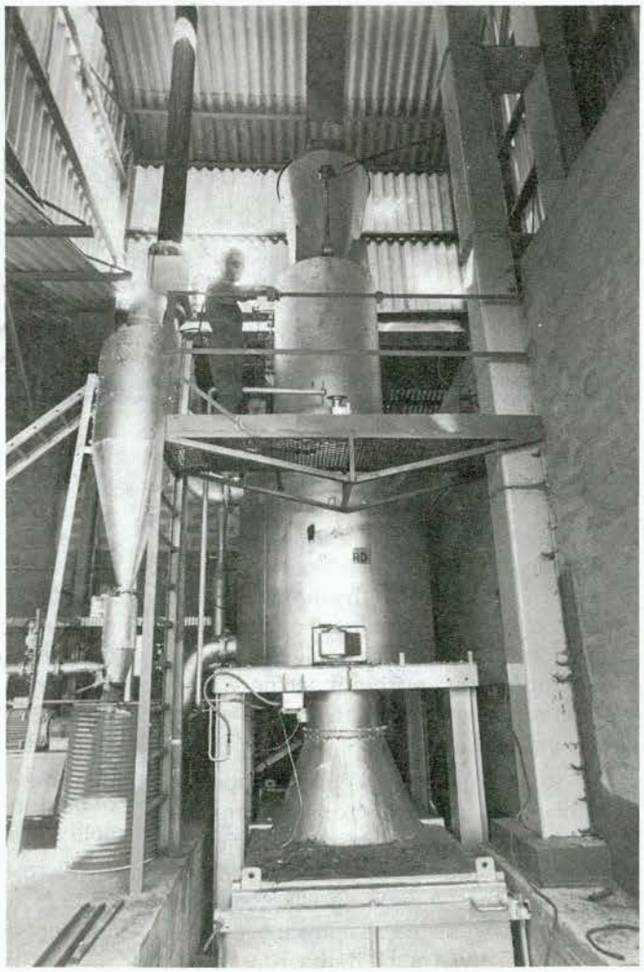
IMPLICATIONS FOR THE THIRD WORLD

For most of the Third World countries which do not produce oil, the rise in oil prices and dollar exchange rates have made it difficult to procure oil products, and the financial crisis caused by their high level of indebtedness makes the future even more uncertain. Thus their need for substitute energy is particularly pressing. Some of these countries, situated in humid tropical or equatorial areas, can obtain high yields of biomass. If OECD countries developed appropriate technologies for processing biomass under such conditions, they could not only contribute to the energy supply of the developing countries but at the same time sell equipment and have longer production runs than if they produced only for their own markets. Some developing countries might even, under the right economic conditions, export biofuels to the industrialised countries, on the model of Brazil, and thus earn foreign currency. There would, however, be problems of how to finance the investment and acquire the know-how to run the plant which could be considered in the context of development aid.

However, world food security and competition between food and energy uses are already very acute problems in some Third World countries where over-cutting of fuel wood is leading to deforestation and speeding the process of desertification; the rise in oil prices has probably aggravated this problem by shifting demand to charcoal. And increasing food production remains a priority objective for most of these countries. From the point of view of the OECD countries, despite the existence of high agricultural stocks, the amount of food aid to less-developed countries has hardly increased at all: in 1982, at 9 million tonnes of grain, it remained below the 10 million tonne target recommended in 1974 by the United Nations World Food Conference. Using agricultural resources to produce bio-energy in the OECD countries could raise the prices of the food replaced – grain for example – and these higher prices would work against the less-developed countries which import from the OECD area. On the other hand, relieving the downward pressures on the sugar market in OECD countries by converting sugar to alcohol would tend to relieve the world market and promote exports from developing countries. However, conversion should not be carried to extremes, nor should agricultural potential be impaired through misuse of marginal land. An effective food security policy needs to be considered in an international as well as a national context.

industrialists, profitability of course depends on farm structure and agro-climate, present and future cost of biomass, location and size of biomass-processing plants, markets for alcohol, present and future price of competing forms of energy, the economic impact of technical progress, etc. If a particular type of biomass is to develop, a sufficient number of farmers must be able to move into mass production without incurring unreasonable costs for production of the capital equipment.

Crushed bamboo reeds for use as a fuel in St. Laurent des Eaux, France.

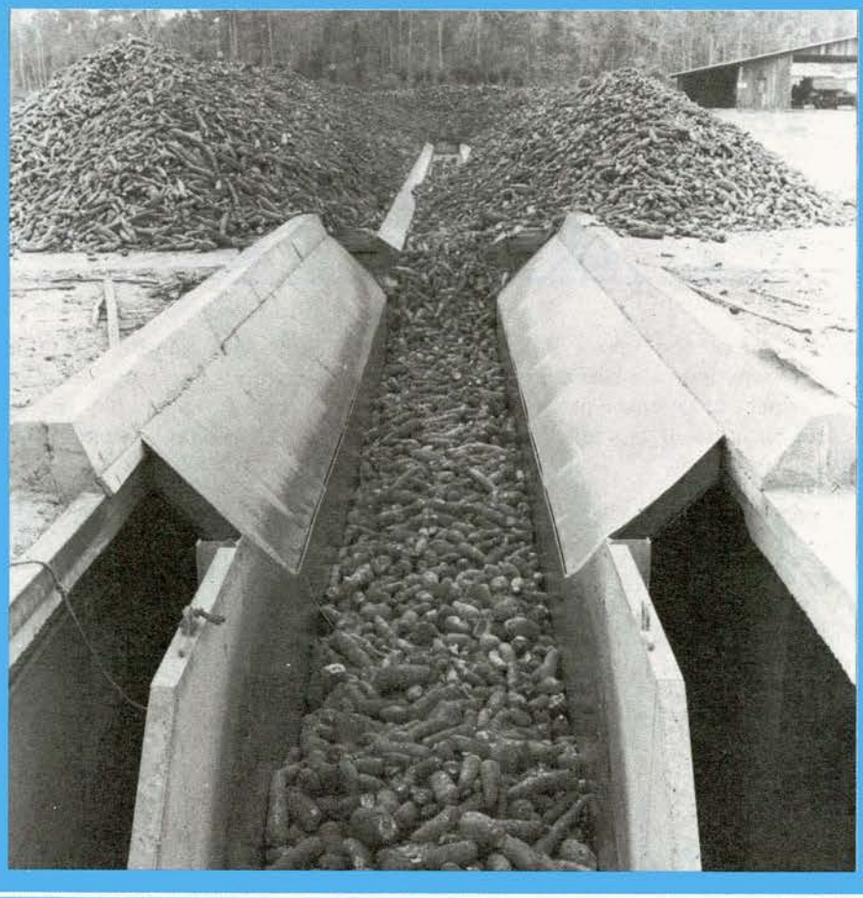


THE SITUATION IN BRAZIL

Brazil, which has few fossil fuel resources, saw the cost of its oil product imports increase from $837 million in 1973 to nearly $10 billion in 1980 – roughly the equivalent of 50 per cent of total Brazilian exports. Serious balance-of-payments problems resulted.

To deal with this situation, the energy policy adopted by the Brazilian authorities has focussed on developing ethanol production, a logical solution in a country where petrol has contained alcohol for 50 years. Substantial aid was given to investment and research to promote further production and use of alcohol . In order to stimulate demand for vehicles using only alcohol, the price of pure hydrated alcohol was fixed at a mere 59 per cent of the price of the blend. It is estimated that nearly 1 million vehicles – new or converted – run on pure alcohol. At present, all Brazilian vehicles (except in a small area in the south of the country) run either on a blend or on pure alcohol.

This development led to the construction of enormous distilleries, often attached to sugar works, several of which have a capacity of over 800,000 litres per day. However, to avoid the disadvantages of over-concentration and monoculture, the construction of micro-distilleries (with a capacity of 1,000 to 5,000 litres of alcohol per day) is now being encouraged. The Brazilian pro-alcohol programme, unique in the world, is undeniably a success both technically and in terms of growth. However, because of the financial transfers from which it has benefitted and its impact on agricultural production, its social cost has been – and is – high.



For *residues,* heat producing facilities (straw or chip burners, for instance) seem likely to be profitable but biogas digesters less likely to be so unless they can avoid high after-the-fact pollution-control costs. One of the problems for the farmer – at the present stage of development of biomass – is to estimate the cost of collection accurately and to obtain from machinery manufacturers realistic estimates of operating costs and performance.

As to *energy crops,* certain types of alcohol production are close to breaking even. However, most published studies are not based on real costs as these are held confidential by the large distilling companies. Access to reasonable current estimates would seem necessary if the State is to assess the economics of energy crops. In France, the Ministry for Agriculture and the Energy Control Agency have commissioned an engineering competition in order to assess the cost of producing ethanol for blending with oil motor fuels. Germany has begun work on two experimental plants (Ochsenfurt and Rotenburg). In Sweden, the construction of a test plant to process some 30,000 tonnes of grain a year was completed in 1983 at Lidköping. Since March 1984, petrol containing 4 per cent of ethanol produced by this plant has been sold in the Stockholm area.

Micro-economic profitability, however, is only one aspect of the problem. The production of energy – both costs and risks – has ramifications on the whole of the economy, and decisions on substitute energy sources, such as biomass, must be taken in the economic context. And one consideration which has to be kept in mind is the cost of food crop surpluses to the government. If the authorities decide to intervene in biomass production, they must set micro-economic profitability in a broader context and draw up a macro-economic balance sheet of the operation. Several elements must be included: the real cost of oil (taking into account its effect on growth, the balance of payments and employment), the cost of any support given to the machinery used or the energy produced compared to that of other forms of support (to other energy sources and especially to farmers' incomes). If, for

example, taking all these factors into account, it proved cheaper in the long term to support alcohol production than to support and/or limit sugar or corn production, it would be obvious where the advantage lay.

Lastly, other social and political considerations may be involved – employment and the environment being two cases in point. Bio-energy will probably create only a few jobs, though even a small number may not be negligeable in the present local context. On the other hand, it may at least help to safeguard some existing agricultural jobs that are threatened by agricultural surpluses. As to the environment, the effects may be negative or positive: an increase in energy crops could lead to over-cultivation of the land. Conversely, the growing pressure in many countries to eliminate lead as an additive to petrol[2] constitutes an incentive to use alcohol instead.

... And Uncertainties

If the authorities decide to exploit the energy potential of biomass, they will have to try to ensure a degree of stability in the economic factors involved in assessing profitability. For example, profitability of investment in biomass is currently low or negative. Farmers and manufacturers will commit themselves to such a venture only if they think that profitability is likely to improve in the medium term and not be endangered by excessive fluctuations in the price of oil or, in the case of energy crops, the price of agricultural products.

Another uncertainty is linked to the likely emergence, by the end of the century, of new energy sources capable of contributing to the energy supply of OECD countries: fuels derived from bituminous rock or synthesized from coal, solar energy etc. Biomass could well meet increasing competition from these new energy sources from then on. This raises problems of adjustment – it would be necessary to write off equipment, convert it to other uses etc.

Can Energy Crops Solve the Problem of Agricultural Surpluses?

A distinction should be made between temporary and structural surpluses. Converting the former to alcohol is expensive as the equipment is only used intermittently (distillation of surplus wine, for example). Conversion of structural surpluses, on the other hand, would be less costly since it is the production capacity of surplus products that would be switched to energy crops rather than the surpluses themselves: sugar would not be converted into alcohol, but sugar beet would be made directly into alcohol. Areas producing surplus food could be used for other energy crops (in Europe corn could be replaced by sugar beet-alcohol, for example).

How much energy production could help to solve the problem of surpluses obviously depends on the products involved: converting surplus sugar into alcohol is feasible, but dairy products are another story. Even for carbohydrate-rich plants, distillation is not a universal solution since by-products would come onto the market: distillation can relieve the corn market but it also throws large quantities of distillers' grains on the market and this can create surpluses of protein feeds. Thus it would be useful to determine which areas might be devoted to which energy crop, what would be their links with other crops and what changes could be anticipated in the overall structure of production. Such a model would also make possible a quantification of expected reductions in budgetary expenditure resulting from a reduction in food crops.

A prerequisite for any decision in this field will be to compare the costs arising from surplus production with those of supporting bio-energy. If the decision were made to promote bio-energy development, care would have to be taken to prevent support, intended as a temporary measure, from becoming permanent and therefore difficult to reduce or eliminate; for, if that happened, it would no longer help to reduce budgetary expenditure.

Will Biomass be a New Element in Agricultural Policy?

While it is probable that energy uses of *agricultural and forestry residues* will develop to some extent in almost all countries, fewer countries have conditions suitable for *energy crops*. However, even countries without such crops might, through agricultural trade, still feel the impact of crops raised in other countries. If energy crops were grown on a large scale, the response in terms of production and trade would have to enter into agricultural policies.

At a time when the increase in surpluses has made it difficult to progress in agricultural policies, incorporating bio-energy into these policies could help reshape their overall concept. Although the potential of biomass is not equally great in all countries, it deserves study in all of them while the budgetary impact, drawbacks, benefits for production and trade, etc. should be quantified.

It should be possible to adjust the production of energy crops from year to year, depending on the state of the various agricultural markets. The degree of flexibility would vary, however, depending on the system of production: it would be greater if the basic product had both food and energy uses (corn, sugar cane) or if the conversion plants' supplies were purchased daily; flexibility is less if the product is grown specifically for energy or if the plants are supplied on a contract basis. Adjusting production will also become easier as technological progress enlarges the number of food crops useable for energy production. In certain cases, the authorities may be impelled to intervene, for example if a large oil price rise brought about such a large increase in alcohol production that resources were diverted from other foods and food prices rose excessively or if food exports or the fertility of the land were threatened. Monitoring of alcohol production and markets might prove necessary above a certain level of production.

While bio-energy could help reduce the supply of agricultural products and hence diminish tensions in international trade, two subsectors – protein-rich products and edible oils – would, owing to the by-products of grain distillation, increase in supply. Imports of protein by-products have, of course, implications for animal production, in particular dairy produce, and this problem would have to be taken into account, particularly if the fall in edible oil prices put downward pressure on butter prices by making margarine less expensive. More generally, importers of agricultural products might have to adjust to changes in the pattern of trade brought about by bio-energy. Thus, all in all, bio-energy could play a role in the difficult negotiations now under way to improve the conditions of agricultural trade.

* * *

The many uncertainties – both economic (price trends of oil and agricultural products) and technological (cost reduction and improved profitability) make any forecasts of biomass production extremely risky. What seems sure is that development will take different forms in different countries. Moreover the emergence of new energy sources in twenty or thirty years will require a reexamination of the role of biomass and a search for new uses, particularly in the chemical industry. Bio-technological progress will probably open up new outlets for biomass – whether residues or plants grown for specific purposes – in the manufacture of synthetic foods and fine chemicals. It seems likely that, as with other crops, agriculture will continue to have to adapt to future conditions.

2. By 1986, lead will be eliminated altogether from petrol in Germany and the United States.

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