

The
OECD

OBSERVER

Reforming
the Public Sector

Over-exploiting
the Oceans

Is the Debt
Crisis Over?

Rural
Schools

Early
Learning

South-East Asia:
Trade and Growth

The Car
in the City

East/West:
Scientists on the Move

Employment
Outlook

184

October/November 1993



3 347370 467895

WORLD



ENERGY OUTLOOK



INTERNATIONAL ENERGY AGENCY



In this new study, the International Energy Agency examines the evolution of world energy markets through 2010. World demand for energy is expected to increase significantly through the first decade of the next century as population and real incomes rise. Demand will increase in OECD countries but growth will be strongest in non-OECD countries – particularly in China, India and the dynamic Asian economies. By 2010, OECD countries will account for less than half of total world oil consumption. On the supply side, the study projects a large increase in the role of natural gas, especially in Europe. The impacts of these and other supply and demand developments on energy use patterns will be significant. As the world enters the 21st century, electricity will become an increasingly important energy form. How electricity is generated, as well as how transportation systems develop, will affect how successful countries will be in meeting their energy needs and achieving their environmental objectives.

(61 93 09 1) ISBN 92-64-13904-4 May 1993 72pp
FF120 US\$28 DM49

Also available:

ENERGY STATISTICS OF OECD COUNTRIES 1990–1991
(61 93 05 3) ISBN 92-64-03861-2 Bilingual April 1993 272pp
FF230 US\$54 DM95

ENERGY BALANCES OF OECD COUNTRIES 1990–1991
(61 93 06 3) ISBN 92-64-03860-4 Bilingual April 1993 222pp
FF180 US\$42 DM70



INTERNATIONAL ENERGY AGENCY

WORLD ENERGY STATISTICS AND BALANCES ON DISKETTE

This annual service covers energy supplies and uses. The diskettes complement one another, have the same structures and layout and are intended to be used as a package. Subscribers purchasing **all four parts** will be invoiced at the **special price of: FF6,600 US\$1,200 DM2,000**

Part 1: ENERGY STATISTICS OF OECD COUNTRIES

Detailed annual supply and consumption data for OECD countries in physical units (tons, joules, and GWh). The data cover the principal coal and other solid fuel categories as well as manufactured gases, crude oil, NGLs, refinery feedstocks and the principal oil products. Supply data cover production, trade, bunkers and stocks while end use data cover categories such as electricity generation, refineries, iron and steel, chemicals, road and air transport, residential, commercial and public services, and agriculture. The series begin in 1960.

FF2,500 US\$455 DM755

Part 2: ENERGY STATISTICS OF NON-OECD COUNTRIES

Presents energy statistics in the same format as for OECD countries statistics in physical units for non-OECD countries and regions. Key oil production and consumption series are presented in barrels/day as well as in tons. The series begin in 1971.

FF2,500 US\$455 DM755

Part 3: ENERGY BALANCES OF OECD COUNTRIES

Supply and demand balances for the main energy sources expressed in a common unit (thousand tons of oil equivalent). The energy balances are derived from the supply consumption data in physical units in Part 1. The series likewise begin in 1960.

FF2,500 US\$455 DM755

Part 4: ENERGY BALANCES OF NON-OECD COUNTRIES

Supply and demand balances as for OECD countries in a common unit (thousand tons of oil equivalent) for non-OECD countries and regions. The energy balances are derived from the supply and consumption data in Part 2. The series begin in 1971.

FF2,500 US\$455 DM755

ELECTRICITY INFORMATION

A comprehensive reference on country-specific statistics on electricity and heat for OECD member countries. Latest year and historical annual data for prices, production, consumption (by sector) and trade are included, in addition to data on installed generating capacities and fuels used for the generation of electricity and heat. The diskette is mailed to subscribers in July.

FF2,500 US\$ 455 DM755

The data are provided on either 5¼ inch, double-sided, double-density diskettes formatted on both sides to 360 Kbytes or on 3½ inch, double-sided, double-density diskettes formatted to 720 Kbytes. IEA data are supplied in a compressed format and the diskettes contain a simple programme to translate the files into other formats. The data can therefore be readily used with software packages such as LOTUS 1-2-3, EXCEL, SYMPHONY, MULTIPLAN, VISICALC and the MS-DOS operating system. Technical documentation accompanies each data package. For special conditions (academic circles, government agencies) contact OECD Publications, Electronic Editions which can supply full information on other IEA diskettes and magnetic tapes.

The OECD OBSERVER

Published every two months in English
and French by the ORGANISATION
FOR ECONOMIC CO-OPERATION
AND DEVELOPMENT

Editorial Address:
OECD Publications Service
Château de la Muette
2, rue André-Pascal
F 75775 PARIS CEDEX 16
Tel. (33 1) 45 24 82 00
Fax (33 1) 45 24 85 00

© OECD 1993
Applications for permission to reproduce or translate
all or parts of articles from *The OECD Observer* should
be made to:
Head of Publications Service, OECD
2, rue André-Pascal
75775 PARIS CEDEX 16, FRANCE
Reprinted articles should carry the credit line
'Reprinted from *The OECD Observer*' plus date of
issue. Signed articles reprinted must bear the author's
name. Two voucher copies should be sent to the
Editor, with an indication of the circulation.
**Signed articles express the opinions of the
authors and do not necessarily represent the
opinion of the OECD.**
The Organisation cannot be responsible for
returning unsolicited manuscripts.
All correspondence should be addressed
to the Editor.

Single copies
US\$5 FF22 DM9

Annual Subscription Rates
US\$24 FF110 DM46
Tel. (33 1) 45 24 81 66

Editor
Ulla Rahnall-Reyners
Associate Editor
Martin Anderson
Assistants
Françoise Douaglin
Carol Thornton
Art, Production and Layout
Gérald Tingaud
Photo Research
Silvia Thompson

C O N T E N T S

public management

4

IMPROVING GOVERNMENT PERFORMANCE

Derry Ormond

fisheries

9

THE NET EFFECTS OF OVER-FISHING

Carl-Christian Schmidt

development

13

IS THE DEBT CRISIS COMING TO AN END?

Raundi Halvorson-Quevedo and Isabelle Jourmard

education

17

INFRASTRUCTURE FOR RURAL SCHOOLS

Martine Safra and Richard Yelland

21

EDUCATION AND CARE IN EARLY CHILDHOOD

Mary Ann McGovern

trade

24

KOREA, TAIWAN AND THAILAND: TRADE LIBERALISATION AND ECONOMIC GROWTH

Anne Richards

urban affairs

29

REDUCING CAR USE IN CITIES

Ariel Alexandre and Jack Short

economies in transition

33

EASTERN EUROPE: WHAT BENEFITS FROM THE BRAIN DRAIN?

Anne de Tinguy and Catherine de Wenden

economy

37

INDICATORS

39

NEW OECD PUBLICATIONS

centrefold

OECD EMPLOYMENT OUTLOOK

184

October/November 1993



Tom Craig/R.E.A.

Cover

Pressure is now on governments throughout the OECD – here the French Ministry of Finance at Bercy, on the outskirts of Paris – to reduce the size of the public sector, and improve its efficiency. What measures have been taken, and with what success?



Improving Government Performance

Nahassia/R.E.A.

Derry Ormond

Calls to 're-invent government' appear against a backdrop of public management reforms already under way in many OECD countries. These are changing the size and structure of the public sector as well as the ways by which government activities are carried out.¹

The last decade has seen the efficiency of the public sector come increasingly under the spotlight. Large government debts, fiscal imbalances and renewed pressures for spending (primarily on social benefits) have added to concerns about the allocation of public resources. Extensive government rules and regulatory controls are seen to be burdensome and a barrier to the flexibility required in an increasingly competitive international marketplace. There are other emerging issues – such as the aging of populations and the growing political prominence of the environment – that require innovative responses from government. Consum-

ers, whether business representatives, interest groups or private individuals, have become more articulate. They demand more say in how and what governments do, and they expect value for money. Put together, these pressures have resulted in a rethinking of the size of the public sector and the quality and effectiveness of public-sector activities. This has stimulated a reworking of roles, responsibilities and management.

The reform of public-sector management is an integral part of the structural reforms being pursued in OECD countries. It is now recognised that the public sector is a vital agent of structural reform as well as being itself an object for reform.

Although there is considerable diversity between countries² – depending on historical, institutional and economic factors – some definite trends are emerging. Among these are:

- changes to size and structure
 - changing structures of incentives and institutional arrangements to encourage and allow managers to pursue more desirable outcomes
- >

¹ **Public Management Developments: Survey 1993**, OECD Publications, Paris, forthcoming 1993.

² **Public Management: OECD Country Profiles**, OECD Publications, Paris, 1993.

Derry Ormond is Head of the OECD Public Management Service.

- improving decision-making processes and developing new instruments for delivering public policies.

Traditional boundaries separating public and private sector activities are shifting in many countries (Figure). Some, such as Austria, New Zealand or the United Kingdom, have embarked upon privatisation programmes, or have changed the status of public utilities –

typically those that carry elements of 'natural monopoly' – to public enterprises, sometimes as a precursor to full privatisation. The aim has been to develop a market environment which requires managers to emulate the behaviour of their counterparts in competitive, private firms. Such arrangements typically involve enterprises that function at arm's-length from government, with considerable independence in operation, but within a framework of clear government direction on social and economic objectives and responsibilities.

Such 'decontrol' has been manifested in freedom in standard managerial decisions such as pricing, choice of inputs and, in some cases, borrowing. But increased flexibility has been balanced by increased accountability. Performance targets set in commercial terms – rates of return reflecting the opportunity cost of capital, measured by the real rate of return on capital in the private sector – have provided simple but reliable measures of performance.

These changes have raised questions as to the extent to which attempts to make state-owned enterprises more competitive creates tensions between the freedom to operate commercially in the market and the transparency expected of public bodies. Another concern is that fair competition between public and private suppliers may be hampered by the hidden subsidies or implicit guarantees – ultimately funded by the taxpayer – which are enjoyed by public producers. While teething problems are almost inevitable in any major reform, these are issues that will require continuing attention as the reforms 'run in'.

Other changes affecting the shape of the public sector have been brought about through decentralisation or devolution of responsibilities to lower tiers of government. In Spain, for example, no fewer than 32 major responsibilities, including education, have been transferred from central government to autonomous communities (like Catalonia and the Basque province). In the Netherlands a similar shift of respon-

IMPROVING RESPONSIVENESS

There is general agreement amongst OECD countries that the administration should be responsive to its clients, the public.¹ There is less consensus on how that should be achieved. Some common elements have been identified as essential for responsive service delivery:

- **transparency** – clients should know how the administration works, what the constraints on actions of public servants are, who is responsible for what and what remedies are available if things go wrong. The Citizen's Charters in the United Kingdom are one example of defining citizens' rights and setting out mechanisms for redress

- **client participation** – clients resent being treated as passive recipients of whatever the administration dishes out to them. In many cases their involvement is necessary if the administration is going to perform many of its tasks, as, for example, with tax collection

- **satisfying client requirements** – as far as possible, clients should be offered services which correspond to their particular situation. 'One-size-fits-all' services are no longer appropriate nor are they necessary as the new flexibility in the public sector allows services to be matched to requirements

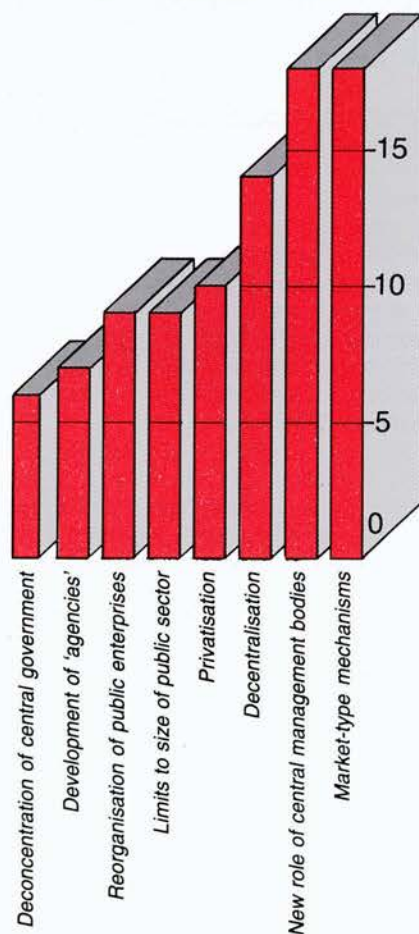
- **accessibility** – clients should have easy physical access to administration at convenient hours and be offered information in plain language. 'One-stop shops' or the Canadian 'co-location' initiative – where several government services are housed in one place – are examples of making contact with public services more user-friendly and less time-consuming.

1. **Administration as Service: The Public as Client**, OECD Publications, Paris, 1987.

sibilities and tasks to municipalities and regional bodies appears to have delivered substantial savings for central government. In France the focus has been on 'deconcentrating' administration by strengthening and clarifying the role of local branch services in relation to their head offices in ministries. But savings in cost are not the only motivation. Bringing services closer to the people, or improving responsiveness (box), is an important goal.

Within core government administrations, many countries are experimenting with new forms of organisation to improve the provision of services. The 'agency'

Figure
REFORM OF THE SIZE AND STRUCTURE OF THE PUBLIC SECTOR, 1989–92
number of countries reporting important initiatives



Source: OECD



Value for money? Taxpayers throughout the world are becoming more articulate in what they expect from government.

model, which keeps ministries small and focussed on policy functions while separating off (and giving considerable managerial freedom to) their operational arms, an approach already well established in Nordic countries, is now being adopted by other OECD governments. Denmark has established state institutions called 'contract agencies' which receive by 'contract' four-year budget allocations and freedom over budget and personnel matters in return for specified results related to quality of service, productivity and economic performance. In the United Kingdom, over 300,000 civil servants – over half the total – are now working in semi-autonomous agencies, each headed by a chief executive reporting directly to a minister, with whom performance targets have been agreed.

Although changes in size and structure have perhaps been the most visible aspects of reform, and hence may seem

the most dramatic, there has also been a radical transformation occurring in the way the business of government is conducted.

From Rules to Performance

Substantial reform programmes are underway in many OECD countries to improve the performance of public-sector institutions by both letting and making managers manage. Managers in ministries and departments are being encouraged to shed their old operating styles, shifting their focus from mere compliance with rules and other controls towards seeking ways of achieving the best possible results. This is not to say that rules designed to ensure probity, fair treatment, or other important public sector values are removed; rather, it recognises that there is in most cases

scope to review and reduce the rules by devolving more authority to managers. In reality some 'old' rules added little to genuine control and may even have imposed inefficiencies. The 'bottom line' is that managers are being asked to do more, better and differently, with less money and fewer staff. And they are being held accountable for results.

The trend is unmistakable. Institutional incentives have been much expanded. Within organisations in some countries, considerable discretion is left with operational managers to choose inputs, time their spending, re-allocate funds between programmes or activities, charge users and retain the proceeds. Savings beyond centrally determined limits are left with institutions and not automatically re-appropriated by the budget office.

Flexibility has also been given to managers in personnel matters. With variations from country to country, managers may now have authority for some or all of industrial relations and negotiations over pay, as well as for individual staff appointments, promotions and transfers. First results from countries, such as Australia, New Zealand, and the United Kingdom, show that most managers quickly rise to the challenge, and develop a taste for new-found freedoms.

These changes are underpinned by the realisation that, as in the private sector, the key to effecting reforms rests with the most important resource in the public sector – its people. A highly trained, motivated, flexible and committed workforce is essential for achieving the cultural shift necessary for changing the way the public sector is managed.

This 'human dimension' has put the performance of individuals high on the agenda. Countries are experimenting with incentives such as performance-related pay³ and personalised con-

3. **Private Pay for Public Work: Performance Related Pay Schemes for Public Sector Managers**, OECD Publications, Paris, 1993; Maria Maguire and Robert Wood, 'Private Pay for Public Work?', *The OECD Observer*, No. 175, April/May 1992.

tracts. Better career-planning, increased mobility and training, and the development of an organisational culture which encourages leadership and learning are other important developments. In some countries, codes of 'best practice' have been remodelled to encourage professionalism. Again the shift in emphasis from rule-bound procedures to discretion in the pursuit of results constitutes in itself a reward, which offers a more fulfilling work context for managers.

The emphasis on performance – both institutional and individual – has been accompanied by efforts to develop meaningful indicators which can measure the quality of public services, such as those used in the Citizen's Charters in the United Kingdom, or which can guide assessments of effectiveness and efficiency in government action. Often formal performance agreements are established – between ministers and their chief executives, as in New Zealand, or chief executives and their staff – designed to bring about the desired volume of output and standard of performance. These agreements formalise the obligations of the organisation, chief executive or staff member, and are often backed up by rewards or sanctions. Developing systems for performance measurement and monitoring will be an ongoing challenge, but is an essential part of ensuring a performance-based culture.

Improving Policy Instruments

As governments have shifted their focus from controlling inputs to seeking cost-effectiveness and quality outputs, they have also examined their policy 'tools', the means by which public services are provided. Many countries have turned to the private sector, either

as a partner or for inspiration. There has been increasing use of 'market-type mechanisms' (MTMs) – such as internal markets, user-charges, vouchers, franchising and contracting-out. Importing market discipline into the public sector is seen as a way to improve competition and choice, thereby increasing governments' capacity to re-allocate resources in tune with changing priorities, as well as allowing them to control public expenditure. Subjecting public activities to the test of competition in a market can expose a wide range of services to competitive pressures to help determine which supplier – in-house or external – can give the best combination of quality of service and production cost.

The Public Management Service of the OECD has carried out an analysis of selected experiences with MTMs in OECD countries.⁴ The results reveal that MTMs hold significant potential to economise resources and generate reliable indicators of performance. But they are quite sensitive to the manner of their implementation: the benefits can quickly disappear if they are inadequately designed or under-funded. At the risk of over-simplifying, the bigger the number

of market features incorporated, the higher the gains, the fewer the surprises and the easier the control. Fears that MTMs could entail substantial distributive costs have to be borne in mind, and systematically assessed, but the study's analysis shows that to date the distributive effects seem to have been less than expected.

Regulation as an instrument of public policy is also being reviewed.⁵ The volume and complexity of new regulations from all tiers of government reached unprecedented volumes in the 1980s. The dilemmas stemming from a strong tendency to over-regulate have no single answer. One obvious response is the development of a new management framework to discipline and control the number of regulations coming on stream. Success among various approaches has differed dramatically with Canada, Sweden and the United States, for example, having developed far-reaching programmes and procedures. An important determinant of success – as in all reform initiatives – is sustained political backing. Regulatory reform seems especially vulnerable to waning support because

In the late 1960s the French government moved a part of the administrative services of the Ministries of Foreign Affairs and of Justice to Nantes – a radical experiment for a country with a centralist tradition.



Joubert/R.É.A.

4. **Market-type Mechanisms: Synthesis of a Programme of Studies**, OECD Publications, Paris, forthcoming 1993; François Lacasse and Alison McGlynn, 'A Market for Government Services?', *The OECD Observer*, No. 176, June/July 1992.

5. Scott H. Jacobs, 'Controlling Government Regulation: A New Self-Discipline', *The OECD Observer*, No. 175, April/May 1992.

G. Monico/Rapho



Many government services are being sub-contracted to the private sector.

of the complexity of the decisions involved, the sheer number of interests woven into regulatory systems, and the weakness of institutional bases for regulatory management.

Good programme design, particularly through careful construction of incentives for regulators to behave differently, is another key to success. Administrative structures for reform are inescapably linked to the political, bureaucratic and legal traditions of individual countries, so there is no 'model' design. Yet some elements of success and failure are repeated across countries, such as use of decision-taking techniques, capacity to forecast costs, planning of compliance mechanisms or developing procedures through which to consider alternatives to regulation. Taken together, they suggest a framework that can improve effectiveness.

Maintaining Momentum

Disappointingly, few OECD countries to date report formal or systematic assessment of their reforms of public-sector management. Evaluation tends to remain largely *ad hoc* although major reports have recently been undertaken in Australia and New Zealand. In France, the Council of State reports annually to

the President. In Canada there is now an obligation to report annually on the state of the public sector in general and, for the next five years, specifically on progress in implementing the reform initiative 'Public Service 2000'.

Delays and other obstacles to reform have occurred often because of difficulties in building political consensus. The division of responsibilities between politicians and managers for the implementation of reform, too, is sometimes unclear. And there is often tension between short-term pay-offs and longer-term objectives which can reasonably be expected to be achieved only beyond the average term of political office. Finding the means to keep an agenda alive across political cycles is a challenge for all countries. Reform strategies have to be coherent, with mutually reinforcing goals and objectives, since piecemeal reforms will have only limited effects and may even turn out to be counter-productive. Recent experience has shown that a crucial factor in maintaining the momentum for reform is visible and consistent support from the highest tiers of government.

■ ■

There is no single best model for public management in democratic societies – which is an important message for the

countries of central and eastern Europe. Nor is there any single best strategy for revitalising public institutions. Current experiments and reform programmes have to be monitored over time and evaluated thoroughly, if countries are going to learn from their mistakes and build on their successes. The scope for mutual learning is considerable. What is clear is that the pressures for cost-effectiveness and for more responsive delivery of services are unlikely to disappear. Citizens and businesses alike will continue to demand quality and value for the taxes they pay. So the reform of the public sector must be seen as a dynamic process and not a destination. ■



OECD Bibliography

- **Public Management Developments: Survey 1993**, forthcoming 1993
- **Managing with Market-type Mechanisms**, forthcoming 1993
- **Flexible Pay**, forthcoming 1993
- **Private Pay for Public Work: Performance Related Pay Schemes for Public Sector Managers**, 1993
- **Public Management: OECD Country Profiles**, 1993
- Edwin Bell, 'Social Policy and Economic Reality', **The OECD Observer**, No. 183, August/September 1993
- **Public Management Developments: Update 1992**, 1992
- Maria Maguire and Robert Wood, 'Private Pay for Public Work?', **The OECD Observer**, No. 175, April/May 1992
- Scott H. Jacobs, 'Controlling Government Regulation: A New Self Discipline', **The OECD Observer**, No. 175, April/May 1992
- **Public Management Developments: Survey 1990**, 1990
- **Flexible Personnel Management in the Public Service**, 1990
- **Administration as Service: The Public as Client**, 1987.

The Net Effects of Over-fishing

Carl-Christian Schmidt

Traditional practices in the management of fisheries have proved ineffective in containing over-exploitation of fish stocks. As a result, fishermen's incomes have shrunk and stocks are reaching unsustainably low volumes, jeopardising their reproductive capacity. What alternative arrangements might allow fisheries to be managed more efficiently?¹

Gripe/Jerrican

Fisheries are a resource of considerable economic importance in many OECD countries, both regionally and locally (Table). But many fish stocks are close to collapse. The stock of Canadian northern cod has been so run down that the fishery has had to be closed: a moratorium has been declared to prevent fishing for cod on the east coast of Canada. The Pacific halibut fishery has been reduced to a one-day, half-yearly event: fishing is so intense that the fish available can be taken by the fleet in two 24-hour periods; in 1975, by contrast, the season lasted 120 days. The situation in Europe is not much better: many quotas for its member states have been cut drastically

during the last decade. In 1983, for example, EC fishermen were allowed to take more than 500,000 tons of cod; ten years on, that figure has shrunk to less than 200,000 tons (Figure, p. 10).

Over the past two decades intermittent and, unfortunately, ineffective attempts have been undertaken by the international community to try to contain the increasing over-exploitation of fisheries. The implementation of 200-mile fishing zones was the most important outcome of the United Nations Law of the Sea Conference of 1982 – one of few concrete measures taken internationally. Regional management bodies have been dealing with some of the management problems – but both in halting over-fishing and in making fisheries efficient they have been largely unsuccessful.

Fishing fleets have been allowed to increase their capacity, often with the help of government money. As a consequence large portions of the fishing fleets around the world are now idle, sitting at anchor in their ports, waiting for their turn to fish. And time in harbour is often used to invest in the newest fishing technology despite the diminishing returns.

A number of studies have been made on the costs to society of pursuing present-day regimes by estimating the

lost potential income (what economists call the 'dissipated rent') that occurs when excess capital and labour cost are tied to excessive fishing. The Food and Agriculture Organisation of the UN has estimated the global revenue loss to be in the order of \$15–30 billion per annum.² More specific country or regional studies have also been undertaken. The Icelandic fishing fleet and number of fishermen, for example, could be reduced by 40%, and the Norwegian by two-thirds, and still catch the same amount of fish; indeed, in the 1980s it was estimated that the Icelandic gross national product could increase by 4% if economically efficient management regimes were introduced,³ and following this evidence a major restructuring of Icelandic fisheries policy has taken place. By contrast, the income forgone through sub-optimal fisheries management in the EC has been calculated at around 3 billion ECUs – or about \$2.5 billion – annually.⁴

The damage done by over-fishing, moreover, is aggravated by three other factors: the biology and behaviour of individual species of fish, technical developments and environmental factors. Some species, like mackerel, herring and sardines, are relative easy targets: they swim in large schools in the middle to the top of the water column. Cod, by contrast, are more widely dispersed and are thus less vulnerable

Table
CATCH OF MARINE SPECIES¹
thousand tons

	1960	1970	1980	1990
Australia	61	103	132	210
Canada	935	1,389	1,347	1,624
Denmark	581	1,227	2,029	1,517
France	734	764	789	897
Iceland	593	733	1,515	1,508
Japan	6,207	9,366	10,434	10,354
Norway	1,543	2,980	2,409	1,747
United Kingdom	924	1,099	902	804
United States	2,815	2,777	3,635	5,856
Total	14,392	20,439	23,192	24,517

1. Fish, molluscs, crustaceans and all other living marine resources.
Source: FAO

1. **The Use of Individual Quotas in Fisheries Management**, OECD Publications, Paris, 1993.

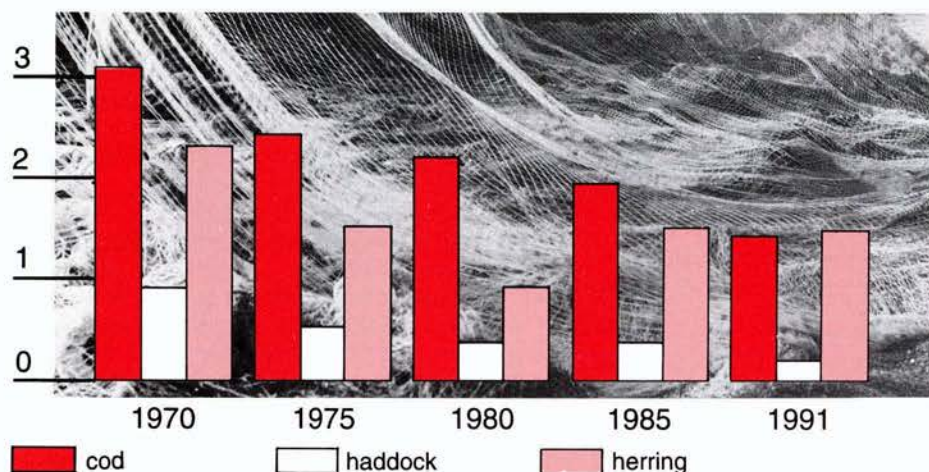
2. S. M. Garcia, 'Ocean Fisheries Management: The FAO Programme', in Paolo Fabbri (ed.), *Ocean Management in Global Change*, Elsevier Applied Science, London and New York, 1992.

3. Thorvaldur Gylfason, 'Iceland on the Outskirts of Europe: The Common Property Resource Problems Revisited', paper given at a conference on the occasion of the 30th Anniversary of EFTA, Geneva, November 1990.

4. *Report from the Commission to the Council and the European Parliament on the Common Fisheries Policy*, EEC Commission, Brussels, December 1991.

Carl-Christian Schmidt specialises in fisheries in the Fisheries Division of the OECD Directorate for Food, Agriculture and Fisheries.

Figure
NORTH ATLANTIC CATCH OF SELECTED SPECIES, 1970-91
 million tonnes



to being fished out. Spawning behaviour and other biological characteristics also contribute to the capacity of fish to sustain heavy fishing.

Technological developments, often encouraged by fishermen who want to be first and best on the fishing grounds, are equally important. Modern fleets are equipped with high-tech equipment including 'fish finders', which virtually spot the fish for them and determine the amount and the species, echosounders and a wide range of fishing gear, the efficiency of which in harvesting almost exceeds the imaginable – and it is constantly increasing. Government responses to try to stem the use of such high technology have been few, and what regulations have been introduced have proved difficult to enforce. Surveillance and enforcement are very costly and fishermen, like all other economic agents, soon find ways of slipping through the regulatory net. Governments have helped in this vicious circle through various types of assistance, to improve gear technology or buy fuel, for example.

Environmental factors may also seriously affect the fish stocks. Weather and oceanographic conditions, including salinity and the oxygen content of water, can affect migration patterns. Fish stocks may simply disappear, as happens when the current known as El Niño in the South American Pacific

prevents the upwelling of nutrient-rich cold water on which fish feed. Changes in salinity and temperature in the strait between Iceland and Greenland have made cod stocks move back and forth between the two islands.

But the underlying reason for the continued deterioration of fish stocks is that they are common property. Fish are owned by nobody and can be pursued by everyone who wants to fish, so that neither individual fishermen nor anyone else have an incentive to conserve them, or exploit them in a way that is economically efficient, since the gains from such behaviour will probably be taken by the other fishermen. This 'natural' behaviour is often referred to as the 'tragedy of the commons'. And the fishermen's logic cannot be faulted: each is trying to be first on the fishing ground, netting as much as he can of the overall allowable catch before his colleagues. This 'race for fish' ties up financial resources and puts enormous pressure on the fisheries.

Conflicting Objectives

Nor are there, indeed, collective incentives for fishermen, for politicians or for administrations to correct the imbalances produced by current management practices. Each group has different interests and different

objectives, which reflect biological, social and economic considerations and constraints.

The aim of the biologists who work in fisheries management has traditionally been based on extracting the maximum amount of fish from the stock over the long run. Setting total allowable catches (TACs) – a yearly quota – according to such objectives would therefore be set at a 'maximum sustainable yield', one which would not endanger the reproductive ability of the fish. A TAC can be established administratively or following political considerations – and is often set on biological grounds which may protect the stocks from disappearing completely. Many countries follow such a practice, combining it to various degrees with other conservation measures: restrictions on fishing gear, the mesh size of nets, and so on. Though straightforward, this approach will not necessarily take account of short-term fluctuations in the resource base.

The politician, and the bureaucracy that caters to the politician, perceive the fishing industry, and often also the fish stocks, in a different light. With a term of office, and therefore with a shorter-term perspective, there is considerable pressure to support fishermen's incomes – which are low, since overfishing has reduced returns and increased the resources tied to the venture. And there are often few, if any, alternative employment opportunities in scarcely populated and remote coastal areas. Direct

Efficient chips – technological advance is putting growing pressure on fish stocks.



income-subsidies and help towards the improvement of fishing techniques and gear are often made available. Unfortunately, this approach can increase the effort devoted to fishing and eventually makes the position of the fishermen even worse. Political action could more usefully enhance regional development and increase local employment opportunities, thus providing viable alternatives to idle fishermen.

'Privatising' Fish

In short, traditional management schemes have been shown to be inadequate in containing over-fishing, and it is clear that a new approach is required. One approach is the use of individual quotas which not only return to the individual fishermen incentives to exploit his known or planned catch in an economically efficient manner but by the same token will vest the fishing community with an interest in seeing that the resource survives.

Although a limitation of the overall harvest to within biologically safe limits may still be necessary, economic efficiency will be fostered by allocating quotas to specific individuals, boats or firms, and by making them transferable. Under such a regime fishermen are allocated the right to harvest a part of the total fish stock, and they know from the beginning of the season the amount of fish they may take. These quotas thus 'privatise' the fish to individual fishermen, who in exploiting their allocation will seek to maximise the returns, through proper economic steering of their enterprise and long-term planning of the fishing. They will harvest the fish, attempting, at the same time, to lower their fishing costs and maximise the prices they receive.

By transforming common property into quasi-private property, the incentives that individual fishermen face are dramatically changed. Pressure to increase fishing effort in competition with colleagues will be sharply diminished or eliminated since the fisherman knows in advance how much catch is available

to him. By the same token, the amount of capital and labour tied in the fisheries will be determined by what fishermen consider necessary: the individual fisherman is in a much better position to optimise his use of capital (his boat and fishing gear, for example) and labour than is the visible regulatory hand of administration. Another feature is that

are freely transferable among fishermen, profound restructuring has followed. It has included cuts in fleet capacity and a reduction in the number of fishermen – both factors providing evidence that fishing capacity had been excessive. The introduction of individual quotas imposes a burden of adjustment which has been the main reason for resent-



Throughout the world fishing fleets are being forced to sit idly at anchor.

the fishing community – small, individual investors each with a private quota – will have a vested interest in seeing that no others 'steal' part of the available harvest. Enforcement costs, which put a heavy burden on governments, may thus be reduced.

Individual quotas may or may not be transferable, or could be transferable to some extent – within the same local fishing community, for example. With the introduction of quotas, the traditional benefits of the market may be reaped: an individual transferable quota (ITQ) allows a fisherman to supplement his allocation by buying from other fishermen who have rights to more fish than they would like or are able to catch, thus directing the resource to its most highly valued use.

Where individual quotas have been introduced, especially when the quotas

ment – but failure to change traditional management regimes will result in costs to the society as a whole. And should agricultural reform lead to lower food prices on agricultural produce, it is very important that the profitability of the fisheries sector be regained: with the lower consumer prices for meat and poultry that can be expected after reform, there will inevitably be downward pressure on fish prices, since fish are substitute products.

Consumers, indeed, form an interest group that is often neglected in discussions of food production. Rebuilding fish stocks should increase the availability of supplies, thus adding to the downward pressure on prices. And by making fisheries profitable, some leeway for flexibility in price-setting will be introduced. Finally, by releasing the excess capital tied to fisheries under traditional

Cordier/Explorer



Gripe/Jerrican

Tipping the scales: with the advent of agricultural reform, fish and fish products will have to compete with lower prices for meat and poultry.

management regimes, more and cheaper capital could become available to other sectors.

Many arguments have been raised against the introduction of market-based management mechanisms – and usually the proponents against their introduction are fishermen and politicians. The four main objections are:

- many fisheries are based on a variety of species, which makes the management, surveillance and enforcement of individual quotas difficult, and of questionable practicability
- the traditions of fishing communities should be respected
- quotas under market-based management systems tend to become concentrated in the hands of a few large firms
- it is politically or socially unacceptable to privatise a common property.

Although each of these arguments may carry some weight, it still remains true that, from the perspective of economic efficiency, market-based individual quota systems are the best choice. But interest-group pressure has proved so strong that inefficiency is preferred to a prosperous fishing sector.

The OECD countries that have introduced management schemes based on individual quotas – for some or all of their fisheries – include Australia, Belgium, Canada, Iceland, the Netherlands, New Zealand, Norway, and the United States, and many other countries have explored the possibility of introducing this kind of market-based management mechanism. The systems vary in the extent of their application for both fisheries and species, and in the extent to which the quotas are transferable. They have in most cases been implemented after thorough consultation with the various groups interested in the fishery.

The experience of these countries shows that there are some features that require particular attention when introducing individual quota management systems. Among these, the degree of transferability of the quotas and limits on quota holdings are especially important in determining the time and scale of the restructuring of the fishing industry and the concentration of quotas. Another important feature is the initial working environment of the industry, including

the types and size of vessels, the extent to which fishermen can move to other fisheries, and the opportunities of alternative employment.

■ ■

No change is costless. And problems will inevitably occur when new management systems such as ITQs are introduced in fisheries. They nevertheless remain a valid and effective response to the problems of 'tragedy of the commons', the over-use of a common property resource. Continuing the policies of the last decades may very well lead to the near-extinction of species – not least haddock in the North Sea and Pacific halibut – and continuing pressure for a constant increase in subsidies. It may be easier in the short-term to bow before sectoral interests. But more far-sighted fisheries management will require bold political action and institutional initiatives to combine economic efficiency with environmental responsibility.

Recognition by the international community of the fundamental problems facing the exploitation of renewable natural resources came in 1992 with the United Nations Conference on Environment and Development. The so-called 'Agenda 21', laying out important issues to be addressed in the 21st century, tackles explicitly the sustainable use and conservation of living marine resources, both under national jurisdiction and on the high seas. It remains to be seen which concrete steps countries will take to fill out the agenda. ■



OECD Bibliography

- **Review of Fisheries in OECD Member Countries, 1993**
- **The Use of Individual Quotas in Fisheries Management, 1993**
- **Fisheries Issues: Trade and Access to Resources, 1989.**

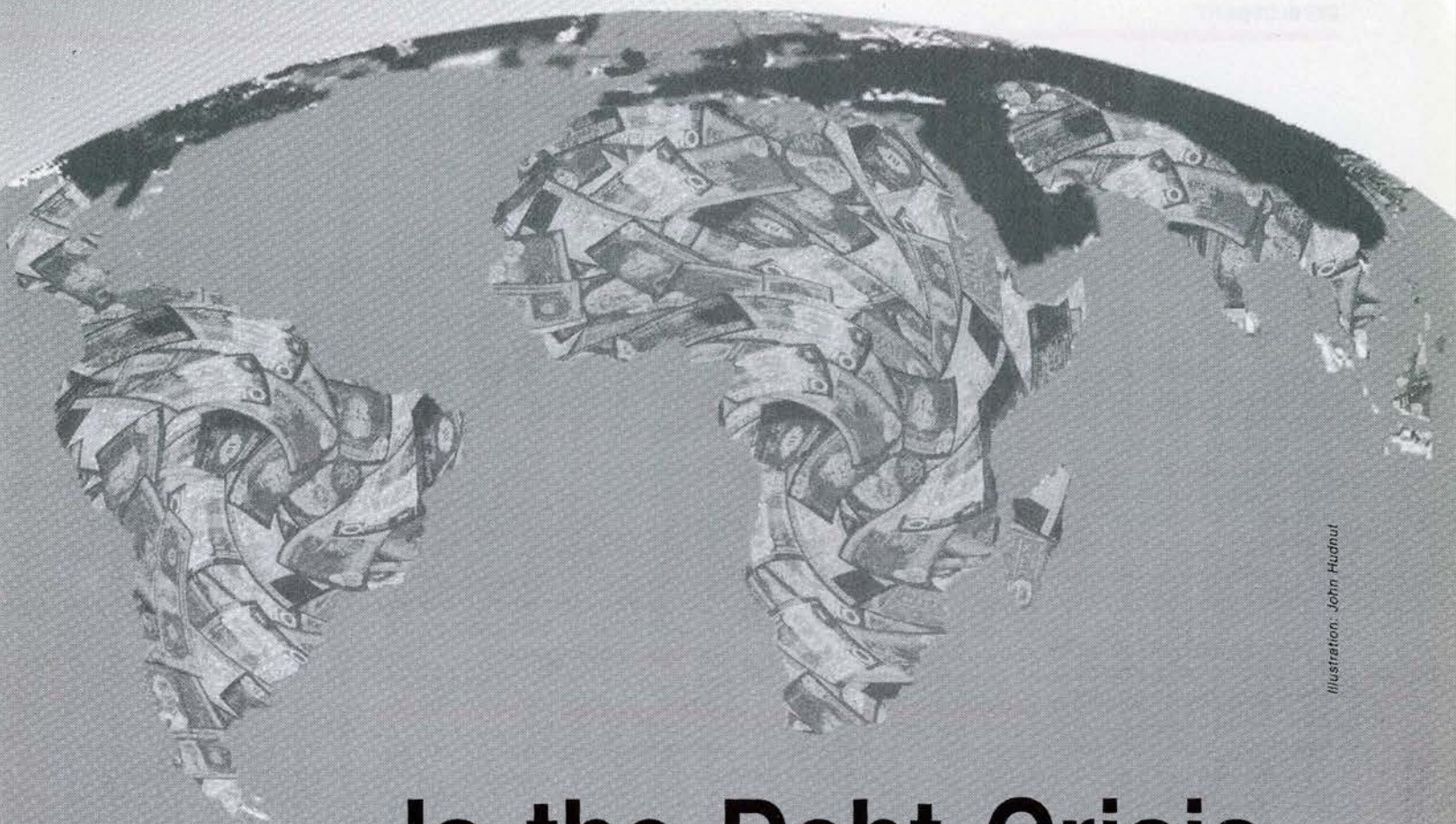


Illustration: John Hudnut

Is the Debt Crisis Coming to an End?

Raundi Halvorson-Quevedo and Isabelle Jourard

***Do recent developments herald the end of the debt crisis?
Can it be assumed that developing countries will soon recoup
the volumes of external finance to which they had access beforehand?***

Ten years have passed since Mexico first announced its inability to continue servicing its mounting external debt, presaging what was soon to become a widespread phenomenon among most, though not all, severely indebted developing countries.

It took several years for all the institutions and organisations involved in what swiftly became known as the 'debt crisis' – developing-country governments, private international banks, bilateral donors and multilateral financial institutions – to come to grips with the inability of debtor countries to service their debt. Bi- and multilateral agencies stepped up funding to debt-distressed

nations, filling the breach created by the wholesale retreat of the banks. The *ad hoc* fora established in the 1950s and '60s by creditors – public (the Paris Club) and private (the London Club) – to deal with the intricacies of sovereign debt renegotiation with debtor countries became institutionalised and moved into full gear.² Several financial instruments and arrangements (buying back or swapping debt and debt-reduction plans, for example) were designed and co-ordinated to facilitate more normal creditor/debtor relationships. And a large number of debtor countries re-oriented

their development strategies to emphasise market mechanisms, competition and support for private initiative, thus creating more hospitable and attractive conditions for both domestic and foreign private capital.

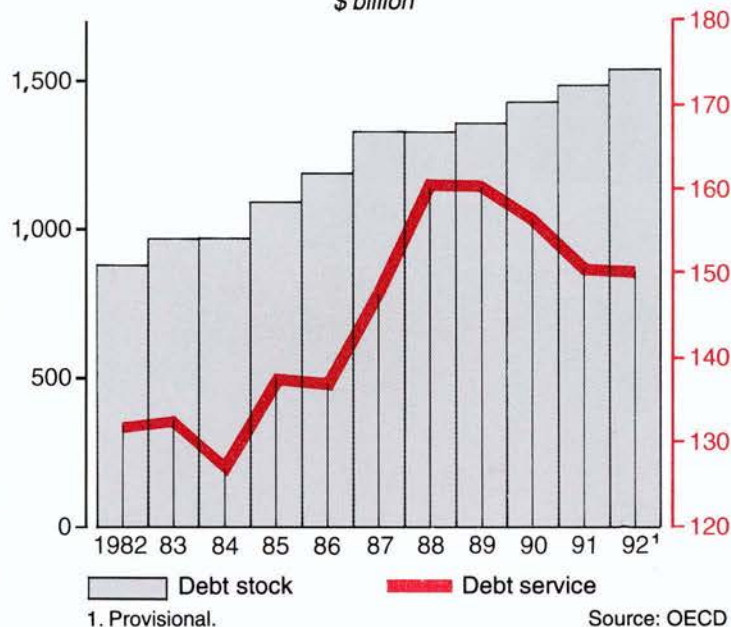
These moves appear to be paying off (Figure 1). Debt-servicing obligations have been declining since the beginning of the 1990s. In 1992, moreover, total net resource flows to the developing world from both private and official

1. *Financing and External Debt of Developing Countries*, OECD Publications, Paris, forthcoming 1993.

2. External debt takes one of two forms: sovereign debt (extended to or guaranteed by governments) or private debt (extended to private banks, enterprises or individuals).

Raundi Halvorson-Quevedo and Isabelle Jourard work in the OECD Development Co-operation Directorate.

Figure 1
LDC DEBT AND DEBT SERVICE, 1982-92
\$ billion



sources – at \$176 billion – substantially regained the volumes that had prevailed in the years preceding the debt crisis. Bank finance – which shrunk after 1982 – soared from \$11 billion to \$40 billion in 1992, accounting for the largest share of external finance made available from private sources.

The growth of external debt of developing countries has sharply declined over the past decade. After rising more than 20% per year on average throughout the 1970s, the rate of growth of external debt fell to approximately 9% between 1982 and 1987 and has decreased further to an annual 2.8% since 1988 – a consolidation that was necessary in view of the high and unsustainable volumes of debt prevailing at the beginning of the 1980s. Prospects for some severely indebted developing countries (Argentina and the Philippines, for example) eventually to become solvent appear more promising now: GDP and export growth rates today exceed that of debt. Although the outstanding debt of some Asian countries (such as China, Indonesia and Malaysia) has increased considerably, their solid economic performance should prevent them from facing solvency or liquidity problems.

The drop in the growth rate of debt has been accompanied by major changes in the terms on which it is issued. In particular, a growing proportion of long-term debt contracted by developing countries has been extended on concessional terms (over 50% for the least developed countries in 1991). This change helps to explain the gradual decline in debt-service payments in absolute terms since 1989.

Surging real interest rates and falling prices for raw materials in the early 1980s were central factors precipitating the debt crisis in countries such as Argentina, Brazil and Mexico which had not established a strong and resilient debt-servicing capacity. Conditions have

changed in the interim: along with the higher proportion of concessional loans, the gradual decrease in international interest rates since the mid-1980s has led to a reduction in debt-service payments. The efforts of developing countries to implement structural adjustment and diversify their tradable products have also enabled them to improve their export performances substantially – and thus secure the foreign exchange with which to service their outstanding debt – in spite of the continuous fall in the prices of some raw materials.

Debt Restructuring

Creditors have also done their part, collaborating with debtors to help relieve the debt burden. Some debt-restructuring agreements now include mechanisms for reducing debt and debt service. For example, the implementation of 'Brady Pact' agreements, a debt-restructuring arrangement between private commercial banks and debtor countries, has allowed countries such as Mexico to clear outstanding arrears, revise their repayment schedules and regain access to international capital markets. Indeed, most developing countries which have improved their debt-service ratios (Figure 2) have benefitted from similar arrangements (although the debt ratios of some have improved due to substantial accumulated arrears). A recent innovation sponsored by the World Bank – the

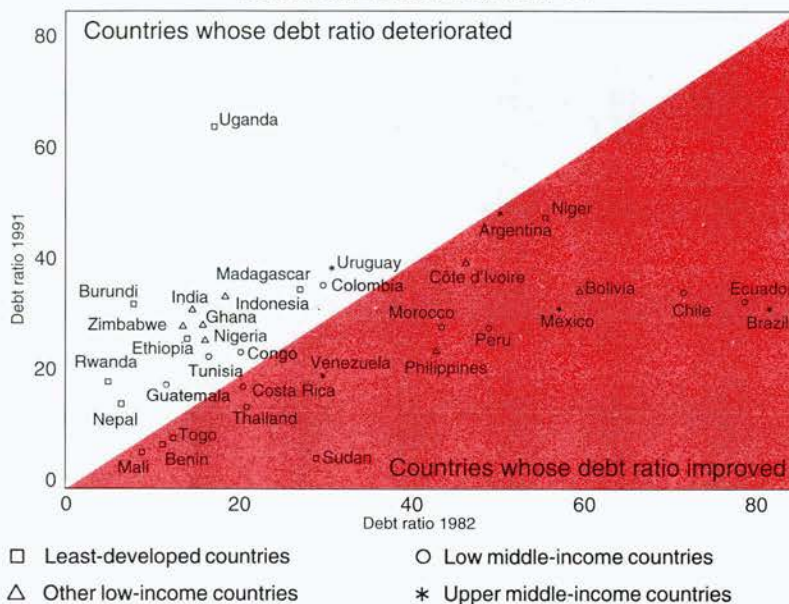
'International Development Association (IDA) Debt Reduction Facility' – has created the possibility for the poorest countries to buy back their commercial bank debt at a discount by giving them access to grant funding. Debt 'forgiveness' granted by OECD countries within the Paris Club framework or, more importantly, on a bilateral basis outside the Paris Club framework grew to \$8.5 billion dollars in 1990-91.

In spite of these promising trends, some of the more recent developments in the term structure (such as the maturity and interest rate) of new debt signal repayment pressures. Short-term debt has been growing rapidly: in 1992, almost two-thirds of net bank flows to developing countries were short-term. To the extent that it goes beyond trade financing in support of expanded export activity, this trend will lead to an increase in future obligations in debt-servicing which may ultimately render long-term development planning and related investment financing much more difficult. Moreover, the increasing incidence of accumulating arrears suggests that numerous developing countries still face financial difficulties. Outstanding arrears also delay or may even impede the disbursement of new loans.

Similarly, the recent upsurge in bank lending – largely to developing countries that are showing rapid economic growth (China, Indonesia and Mexico, for example) – will have implications for related debt service, although the more efficient economic policies and demonstrated export capabilities that characterise these countries will go far towards ensuring that they can meet new debt obligations.

In spite of significant advances achieved in the latter half of the 1980s in developing-country debt restructuring, progress has nonetheless been insufficient in a number of respects, as the growing number of repeat reschedulings demonstrates. Although negotiations in

Figure 2
CHANGES IN DEBT RATIOS¹
BY INCOME GROUPS, 1982–91



1. Service of long-term and IMF debt, and interest payments on short-term liabilities, divided by value of exports.

Source: OECD

the Paris Club have provided for reductions in official debt stocks and debt-servicing obligations since 1988 (where relief was previously confined to rescheduling or refinancing), its current scope remains too limited. Debt-forgiveness within the Paris Club benefits only the poorest countries and never applies to total debt stock – only to loans falling due in the near future. Some official creditors still do not exercise the concessional options available under the 'Enhanced Toronto Terms'.³ In addition, the Paris Club deals only with official bilateral debt owed to its member countries (mainly OECD countries) which, for some developing countries, accounts for a rather small share of their total debt stock. For the least-developed countries, debt owed to both non-OECD countries and a variety of international financial institutions – which do not fall within the purview of the Paris Club – accounted for almost two-thirds of their total debt in 1992.

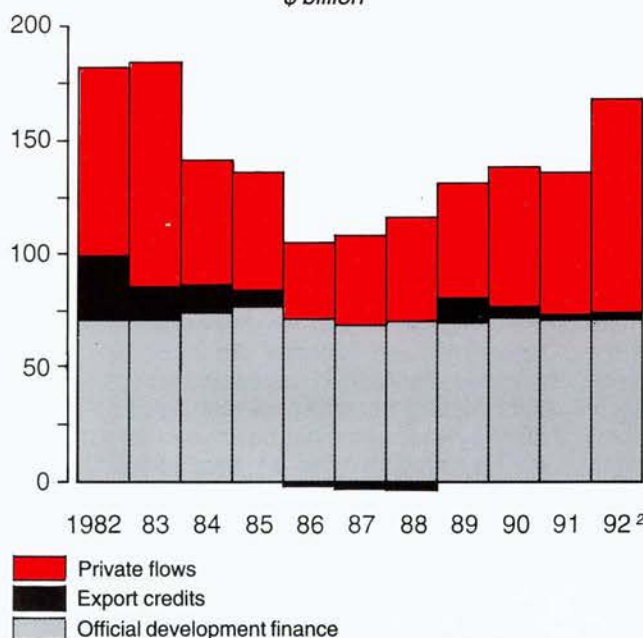
The financial difficulties of the New Independent States of the former Soviet Union (NIS) and other central and eastern European countries (CEECs) will doubtless affect those developing countries which previously received concessional finance from the Communist world: financial flows from the NIS and CEECs to developing countries have more or less dried up since 1989. Outstanding debt obliga-

tions are still in force, but the scope for restructuring such claims is limited by the urgent financial requirements of the NIS and CEECs. While the NIS have requested official and commercial creditors to consider rescheduling their own outstanding debt obligations, it is far from

clear at this point how – or even whether – developing countries will be able to obtain relief from their obligations to ex-Communist nations. Improved growth prospects for a number of developing countries, in combination with steady progress in debt management and the salutary effect of debt forgiveness, has galvanised the providers of private capital. For the first time since the outbreak of the debt crisis, the bulk of total net resources flowing to the developing world last year came from private sources (Figure 3). Further, solid growth was registered across all the different categories of private capital flows (foreign direct investment (FDI), bank lending and equity and bond issues), affirming the rising confidence of international investors.

The outcome for 1992 also suggests the end of the downturn in overall flows experienced over the past decade and consolidation of new trends evident over the same period. Private flows have recovered from the lows of the mid-1980s. Commercial bank lending to the developing world is on the rise: its share of total net resource flows has grown from a low of 8% in 1987–88 to 23% in 1992, a figure more closely approximating volumes of international bank finance that prevailed before the debt crisis. Nevertheless, bank flows account for a much smaller share of overall private flows now (Figure 4) because developing countries have been able to diversify their funding base by tapping international securities markets and attracting foreign investment. Thus, despite the sharp spurt in bank lending that occurred in 1992, resource flows

Figure 3
TOTAL NET RESOURCE FLOWS TO LDCs, 1982–92
\$ billion¹

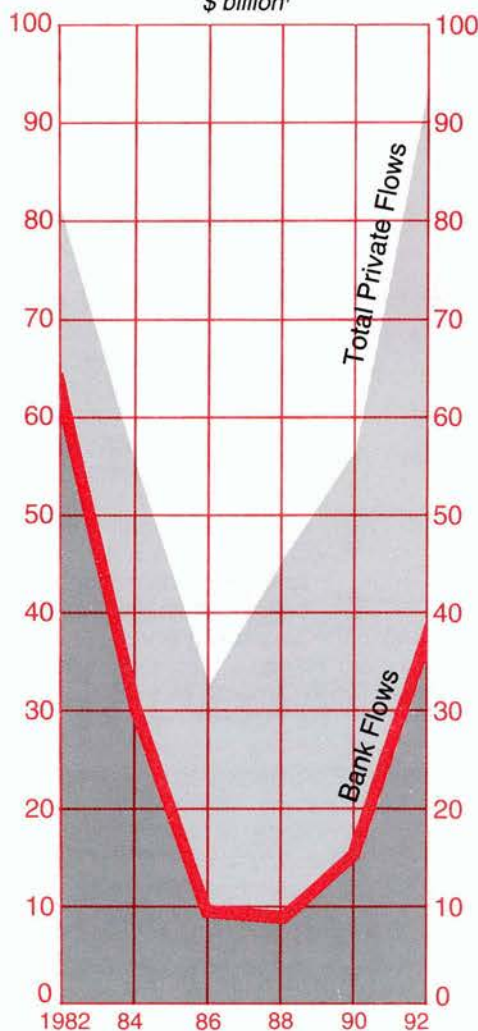


1. 1991 prices and exchange rates.

2. Provisional.

3. In an effort to provide more extensive debt relief to developing countries within the framework of the Paris Club, a number of arrangements providing successively more scope for easing LDC debt burdens have been developed. The most recent of these arrangements, the 'Enhanced Toronto Terms', refer to a menu of options available to reduce debt and debt service.

Figure 4
BANK FLOWS
IN TOTAL NET PRIVATE
RESOURCE FLOWS
TO LDCs
\$ billion¹



1. At 1991 prices and exchange rates.

Source: OECD

to developing countries are increasingly based on 'risk-sharing' rather than 'risk-transfer': private banks and investors (both direct and portfolio) now more frequently base their decisions on the financial merits of the proposed investment rather than back-up guarantees or collateral – and adjust risk premiums and expected rates of return accordingly.

The rebound of private flows in 1992 is an important development, since renewed commercial bank finance and international capital market acceptance of developing country securities has

been slow to materialise and hard-won. Further, if access to such alternative sources of funding is maintained, it will ultimately result in a more balanced and diversified external financing base for the countries concerned.

Yet it remains to be seen whether private flows – especially on the scale registered in 1992 – will prove to be stable and sustainable. More importantly, only a few Asian and Latin American countries have benefitted from the bulk of the growth of private flows, although some low-income countries (China, India and Indonesia) have received substantial amounts of capital. For the vast majority of developing countries – especially poorer countries – 1992 saw a continuation of well-entrenched trends in net resource flows. For these countries aid provided the bulk of external resources and dependence on these flows grew: access to bank and bond markets remained out of reach or very expensive; debt repayments consumed large amounts of foreign exchange; and private flows in general were scant and often limited to grants from non-governmental organisations and to some FDI.

In view of the recent improvements on the debt front and the return of private capital – including bank lending – to the developing world, is it possible to conclude that the debt crisis is over?

For Asian countries the question simply doesn't apply: apart from the Philippines they never experienced the liquidity crunch that affected many developing countries in the early 1980s, and most of them have maintained good working relations with international commercial banks. In Latin America the outcome is varied. For Mexico it appears that the debt crisis is becoming something of a memory: the country has been reinstated as fully credit-worthy on international capital markets, corroborated by the large syndicated credit facility provided in 1992. The same applies to Chile, where normal international commercial banking relationships have been operative for several years. For other Latin American countries that are now successfully tapping international capital

markets (such as Argentina, Brazil, Uruguay and Venezuela), it is too soon to tell. Memories are slow to dissipate. Concerted efforts to carry structural reforms further and sustain economic and political stability will be important factors in determining decisions on lending and investment.⁴

On a more sombre note, it is clear that the debt crisis is far from over for a large number of developing countries, especially those located in sub-Saharan Africa where over-indebtedness, aid dependence and uncertain growth prospects cloud the future. For these countries, more decisive and far-reaching efforts to provide further debt relief are imperative.

■ ■

Although it is highly desirable that developing countries reduce their debt burdens, for many of them debt problems will clearly continue for some time to come. In the face of rising budget deficits and competing demands on ever-scarcer public revenues, official creditors – especially OECD countries – find it increasingly difficult fully to accommodate debtors' requirements through debt forgiveness. And for purposes of market discipline, continued financial solvency and moral hazard, private creditors are unlikely quickly and comprehensively to write off non-performing loans to developing-country borrowers. The end of the debt debacle appears to be nowhere in sight. ■



OECD Bibliography

- **Financing and External Debt of Developing Countries**, forthcoming 1993
- Jean-Claude Berthélemy and Ann Vourch, **Debt Relief and Growth**, forthcoming 1993
- **Financial Market Trends**, 1993
- Linda Likar, 'Trade and the Transformation of Latin America', **The OECD Observer**, No. 183, August/September 1993.

4. Linda Likar, 'Trade and the Transformation of Latin America', **The OECD Observer**, No. 183, August/September 1993.

Infrastructure for Rural Schools



Giry/R.É.A.

Martine Safra and Richard Yelland

School facilities in rural areas have been the subject of debate, and frequently sensitive political issues, for more than a decade now. Local papers headline the closure of small schools, and ask for the reasons. In France, for example, the annual allocation of primary teaching posts is a recurrent source of anguish: groups of mayors and local councillors publish leaflets on how to have ministry decisions to close schools reversed. The reason for such concern is obvious – closing a school itself contributes to the problems of the surrounding area. How can this process be halted without excessive cost?¹

The characteristics of rural areas are now becoming more clearly identified in the OECD countries.² The position in Australia, where some families may live hundreds of miles from their nearest neighbours, is quite different from western Europe, where one small village may have half-a-dozen similar villages within a ten-mile radius. The contrasts are clear, but the general demographic context in the OECD countries is similar and goes some way to explain concern over the depopulation of the countryside and, indeed, over the possibility of rural areas simply being abandoned as people move to already over-populated towns.

Between 1945 and 1975, the urban population of the OECD countries rose considerably: predominantly rural countries became predominantly urban ones. But the move away from the countryside, which is traditionally raised in every discussion, now has to be qualified. In Italy the population of rural communes rose by nearly 3% during the 1980s, and upland areas regained what they had lost in the previous decade. In England and Wales the population of remote districts has risen by 11% over the last ten years.

This partial revival of the countryside covers very different circumstances, with some areas in sharp decline and others

1. The proceedings of a seminar, arranged by the OECD Programme on Educational Building (PEB), are to be published later. PEB promotes the international exchange of ideas, information, research and experience in all aspects of educational building. Its overriding concerns are to ensure that maximum educational benefit is obtained from past and future investment in educational buildings and equipment and that the stock of facilities is planned and managed in the most effective and efficient way, to improve the quality and suitability of educational facilities, and to give early warning of the impact on educational facilities of trends in education and in society as a whole.

2. Christian Huillet and Richard Long, 'Policy Issues in Rural Development', *The OECD Observer*, No. 178, October/November 1992.

Martine Safra is Director of Education Services for the French département of Haute-Saône, and a consultant to the OECD; Richard Yelland is head of the Programme on Educational Building in the OECD Directorate for Education, Employment, Labour and Social Affairs.

FRANCE:**8,084 RURAL COMMUNES**

France has 8,084 rural communes, 22% of the national total of communes, with over 120,000 children of primary-school age – 2% of the total. The peri-urban areas have 21% of all children, and the towns and cities 77%.

The education structure in rural areas, and even in the peri-urban ones, is marked by a predominance of small schools: 36% of French schools (or 13,351 schools) have one or two classes, and take in 9% of French children of primary-school age.

There are relatively few schools with very small enrolments: 13 have from one to five pupils, 193 have from six to eight, and 8,300 have nine or more. In many cases, single-class schools are part of an intercommunal network, the *Regroupement pédagogique inter-communal* (RPI): of the 8,506 single-class schools, around 5,000 belong to a group of this kind. That means that the remaining 3,500 have a single class for children of all levels, from age five (and sometimes four in special cases) to age 11. Everywhere else, the individual villages in the RPI group still have a school, with one or two classes. For instance, one village may have the kindergarten classes, another the children aged six to eight, and a third village the oldest children. The structure of schooling may be adjusted from one year to another. To establish a RPI network, the communes have to be prepared to work together under a formal agreement.

These arrangements, which have been extended substantially since the early 1970s, have generally been viewed as a way of preserving the village school, while avoiding a return to the single-class system which is increasingly difficult to staff.

coping comfortably. European Community policies towards the most disadvantaged regions, for instance, take due account of these contrasts. In France 60% of rural communes are growing; but the 40% that are declining are all in larger areas which face a more general crisis. The main feature is no longer the dichotomy between town and country, but the disparities between regions.

3. Dimitris Diakosavvas, 'Structural Adjustment and Farm Employment', *The OECD Observer*, No. 182, June/July 1993.

Population movements, in whatever direction, necessarily raise questions about the number of schools available. But changes in the nature of rural areas are occurring at the same time. Agricultural employment is falling sharply with the decline of the family farm and the rise of large mechanised holdings;³ the proportion of retired people, industrial and service workers and white-collar employees is accordingly increasing. The residential function of rural areas and small country-towns is developing, in part through increased mobility, meaning that people can increasingly live in one place and work in another. All these changes are bound to affect the demand for education.

Schooling is compulsory for at least nine years, as a general rule, in the OECD countries. Virtually all children of school age receive an education, with the exception of a few minorities and some children in the most backward rural areas.

With those exceptions, the OECD countries have managed, in various ways, to educate their young people in rural areas. Most commonly there are small schools, with one to three teach-

ers. In Greece, for instance, there were nearly 2,000 primary schools with a single teacher in 1991; in Finland, most schools had only two or three teachers; in Portugal, although over 2,200 primary schools had closed between 1980 and 1990, nearly 40% still have only one teacher.

France and Sweden: Two Approaches

To counter the drawbacks of the very small school, countries basically apply one of two methods. The first is to combine schools. Sweden has schools covering the first two cycles of compulsory education (up to around age twelve), with about a hundred pupils drawn from a fairly wide area. The second method is to introduce local authority co-operation. In some cases this, as in France or Switzerland, is simply a matter of a central commune catering for children from adjoining communes where the schools have closed. Elsewhere a school network is formed, as in Wales, where one school may operate on three sites, with the same management. There are also cases, in Germany and the United

Many rural areas cope with low school populations by having single-teacher schools.



Christian Ferrare/R.E.A.

Mario Fourmy/R.É.A.



A school that takes in children from a number of villages can lower its operating costs, though transport remains an expensive item.

States, for example, where several authorities agree to close their own schools and join forces to provide a multi-class school in one place.

In France, to prevent the disappearance of single-class schools, they have often – since the early 1970s – been networked in an intercommunal education grouping (box, left). But this course has a number of drawbacks. It involves a series of small schools that are expensive to keep up, with little scope for introducing diversified teaching equipment, or for the teachers to work together. In addition, the separation of pupils by age-groups means that they lose the benefits of mixing with younger or older children.

The French Education Ministry now favours a different kind of arrangement: establishing a concentrated intercommunal school on a single site, with a kindergarten and several elementary classes, for children from a number of communes. For the local authorities concerned this means taking a bold and politically difficult step, closing their own school and assuming a share of the considerable capital outlay. A merger of this kind is reckoned to allow provision of the necessary education facilities

(library, documentation centre, computers, for instance) and ancillary services (day-care outside school hours, canteen). The challenge is to keep the children in what will still be a village school (even if it is further away), one which draws on the traditional strengths of rural schools while providing the normal range of services found in urban areas.

In Sweden, by comparison, most rural areas are already served by schools with an enrolment of at least 90 or 100, combining kindergarten classes and the first two levels of compulsory schooling (ages seven to 12). Only a few small schools remain in the most isolated areas in the far north. Even there, larger school complexes are planned: work is nearing completion, for instance, on a school for 110 pupils aged between seven and 15 in the village of Karesuando, 200 km from the town of Kiruna. The new school will consist of the present facilities, rehabilitated, together with a new building designed to meet educational requirements and climatic constraints. The complex is also designed to serve as a cultural centre: a meeting hall for adjoining villages, a municipal library operating alongside the school library,

a historical research centre and, during the holidays, a showroom for local arts and crafts.

This extension of the school's functions is not exceptional. Many of Sweden's rural schools serve a variety of activities: kindergarten, day-care after classes, municipal library, talks and meetings, cultural events, adult education, sport, and so on.

The forms of government in the two countries have to be considered here. In France, responsibility for schools is shared between the central government, which controls teaching and teachers, and the local authorities, responsible for school buildings and their operation. It should be noted that France has 36,000 local authorities (communes), and co-operation among them is not always easy to arrange. As a result, it is by no means easy to apply consistent planning over a sufficiently large area, since any change entails lengthy negotiations with numerous individuals and institutions. In Sweden the local authorities have very broad powers, taking in education. The size of these territorial units (there are now only 286 local authorities in Sweden) accordingly facilitates education planning.

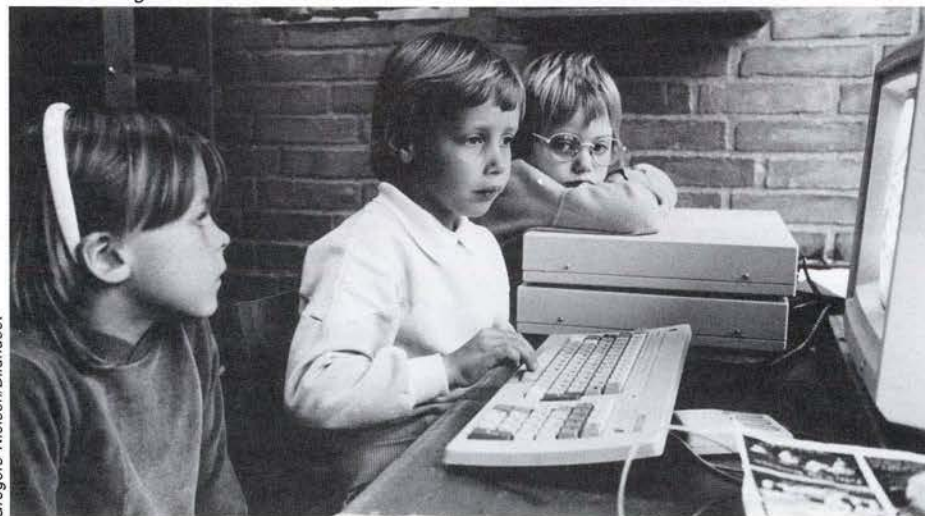
Does the Rural School Exist?

Comparing the positions in France and Sweden raises one fundamental question: over and above the differing definitions of rural areas or indeed schools, is there something special about a rural school? Or is it simply a projection, on a smaller scale, of an urban model?

From the standpoint of the objectives of the rural school, two main approaches can be identified. One sees the rural school as a way of keeping the countryside alive; the other focuses more on the children's development. With the first approach we find concern that the children should feel that they belong to their region, are in touch with their roots, while – as in any school – receiving affective, social, physical and cognitive education. >

The second approach lays emphasis on the importance of the child's learning to co-operate with others, to feel that he belongs to a wider world. This approach seems to some extent torn between the hope that the children will stay in their rural area and the sense that they are part of a more mobile world that calls for common learning objectives. All the same, the methods employed draw upon the rural environment.

New technologies can liberate rural schools.



Gregers Nielsen/Bildhuset

Analysis of the way the school is – or should ideally be – organised brings this indecision into the open. A small, isolated school encourages life in the village and, to some degree, is in the child's interests. It rules out long and tiring journeys, and the child will benefit from the mixture of ages. A school taking in children from a number of villages reduces the isolation of the teachers, who can work with their peers, provides pupils with opportunities for more specialised subjects (music, technology, languages) and its managers can hope for lower operating costs, although transport is an expensive and unavoidable item. In between small isolated schools and formal mergers, there is frequent networking among small schools, arranged either officially (core and satellite schools closely interlinked, or schools of similar sizes under single manage-

ment) or by more informal means (teacher exchanges, sports matches and shared cultural events).

In all these cases the use of new technology, though not common at present, can help overcome the isolation of small schools. The 'read-only memory' compact disc (CD-ROM) offers low-cost information resources which until quite recently would have been the envy of many large schools. The fax system

opens up opportunities for exchanges and communication with schools elsewhere in the country, and indeed abroad.

There are several ways of broadening the functions allocated to the school – in Sweden, for instance, towards ancillary activities and adult education. Far more than urban schools, indeed, rural ones seem likely to become integrated units providing a whole range of services.

Turning to the architecture of rural schools, given the demographic uncertainties, the new buildings should allow for change, more so than in towns. If enrolment in a school declines, the building can then be converted into housing or used for a range of community purposes. It can also be extended, if need be. In any case, flexibility allows scope for various forms of teaching and a range of class sizes. This is particularly necessary in rural areas where classes

combining several levels are frequent.

Again more so than in town, the facilities have to be designed to break down cultural isolation. If a school is attractive, becomes part of the children's world, and gives them a sense of belonging, it will, both through the standard of school work and the standard of the building, help to keep the local population in place. But the choice of design is not neutral, and entails identifying requirements, and hence close consultations with users – teachers, pupils, parents.

■ ■

A school can have a positive impact on its surroundings if it is particularly attractive to the families who use it, provides the community with additional services and – by offering opportunities for adult education, for example – helps to preserve and expand employment. For these developments to occur, the school must cease to be an aloof, single-purpose unit, and comprehensive policies for it must be defined. The school also has to be ready and willing to work with those policies. ■



OECD Bibliography

- **PEB Exchange**, 1993
- Dimitris Diakosavvas, 'Structural Adjustment and Farm Employment', **The OECD Observer**, No. 182, June/July 1993
- **Decentralisation and Educational Building Management**, 1992
- **New Technology and Its Impact on Educational Building**, 1992
- Christian Huillet and Richard Long, 'Policy Issues in Rural Development', **The OECD Observer**, No. 178, October/November 1992
- **New Ways of Managing Services in Rural Areas**, 1991
- Christian Huillet, 'New Management for Rural Services', **The OECD Observer**, No. 172, October/November 1991.

Education and Care in Early Childhood

Mary Ann McGovern

Countries are under growing pressure to maintain industrial competitiveness in the global economy. Thus they are increasingly concerned about one of the most important resource bases that underlies it – human capital. As a result they are being forced to re-examine the assumptions on which their education and training policies have been based – a trend which has been extended to the earliest years of education.



Pitchai/R. É. A.

In many instances, failure at school can be traced back to the early years of childhood. Several countries – France, Sweden and the United States are examples – have developed programmes to help young impoverished pre-school children overcome educational disadvantage. These programmes ('Headstart' in the United States, 'Zones d'Éducation Prioritaires' in France and 'Rinkeby' in Sweden) are based on the premise that early education and enrichment are important for all children, not merely for the more affluent whose parents can afford to send them to private pre-schools. Their aim is to provide for the child's health and development of physical skills as well as his or her emotional, social and cognitive development. Language acquisition and interaction with others is also very important, with some programmes providing instruction in the child's native language as well, where it is not the dominant language in the country involved.

Across the OECD countries, child psychologists are realising the social and intellectual advantages of pre-school

experience for children from 2–6 years of age, as are parents from all economic backgrounds. In pre-schools, a child is able to learn language, literacy and numeracy skills, and has the occasion for physical, sensory and social development and creative expression. These experiences have been shown to not only give the child a better start in compulsory school, but to also have lasting effects.

A recent argument for sustained benefits from a high-quality pre-school programme for children from impoverished homes comes from the High/Scope Education Research Foundation in the United States: 'adults born in poverty who participated in a high-quality, active learning pre-school program at ages 3 and 4 have fewer criminal arrests, higher earnings and property wealth, and greater commitment to marriage'.¹

Another reason for the unprecedented growth in demand for child care over the last several decades has been the increasing numbers of mothers of young children in the labour market. Several factors have encouraged women to seek paid employment: emerging educational

and career opportunities, rising age of marriage, more effective contraception, the advent of equal-opportunity legislation, the declining standard of living for one-income families, and the rising number of divorces resulting in large numbers of single-parent families being headed by women. Since child care has traditionally been a woman's responsibility, the mother must find substitute arrangements.²

As a result, OECD governments are beginning to see that the appeals for child care will not go away and that they must assist parents in the rearing of children if they want to show a serious commitment to helping their future citizens develop. There is thus a growing interest in improving provisions for young

1. Lawrence J. Schweinhart, David P. Weikart, and Rita Toderan, *High Quality Pre-school Program Found to Improve Adult Status*, High/Scope Educational Research Foundation, Ypsilanti (Michigan), 1993.

2. *Breadwinners or Child Rearers: The Dilemma for Lone Mothers*, Labour Market and Social Policy Occasional Papers, No. 12, available free of charge from the OECD Directorate for Education, Employment, Labour, and Social Affairs.

Mary Ann McGovern worked until recently in the OECD's Centre for Educational Research and Innovation.



Interaction with other children is an important element in a child's social development.

portunity for professionals to detect developmental problems early in a child's life. And early detection and intervention can eliminate or reduce the call for more extensive treatment that might be necessary if diagnosed later. These new demands spur questions about the adequacy of present policies and practices.

In many countries – Greece, the Netherlands and the United Kingdom, for example – there still exists a social and cultural tradition which prefers that care for the youngest children, especially those from 0–3 years, be met within the family rather than by an institution. These countries tend to have minimal provisions for very young children, and those often only for children who are deemed to be 'at risk'. But the changing demands of society (not least the wishes of working mothers that their young children should have good-quality care) are breaking down these attitudes.

Even in countries with established arrangements for child care outside the home (say, Italy and Spain), some questions are being raised. One concerns the qualifications and pay of staff.

Pre-schools allow children to acquire a range of language, literacy and numeracy skills.



(Continued on p. 23)

children of 0–6 years of age. With what results?

If one takes the percentage of children enrolled in pre-school (Table, p. 23), it is obvious that France has the highest rate for 4-year-olds (as also for 3-year-olds). Unfortunately, no data is yet available for Belgium, but it too has a high rate of school enrolment among pre-school children. Of the 16 countries covered here, ten have 50% or more of their pre-school children enrolled in some sort of programme. Of these ten, only three have enrolment rates above 75%. The countries with higher enrolment rates tend to have more universal, publicly funded programmes for all young children, whereas the countries with lower enrolment rates may have publicly funded programmes only for those who are considered to be at risk, educationally or economically.

Diversity in Demand and Supply

Child-care services include not only the collective child-minding arrangements available to working parents but also a whole range of services, such

as pre-school for young children, kindergartens, occasional-care centres, playgroups, and child-minders in the home (either the child's or the minder's). Some offer a full-time service and others part-time (sometimes only several hours a week), allowing provision for mothers who have to leave their child periodically to attend appointments, run errands or pursue other interests.

The requirements of young children are likewise various: they include health care and physical development, the acquisition of language and communication skills, experiences in 'socialisation', the formation of identity, and stimulation essential for cognitive and emotional development. Since the child is a member of a family, consideration must be given to the importance of involving family members in these services. Educators and child psychologists are increasingly insisting that child care be not merely custodial but that it should ensure the child's well-being and healthy development – intellectually, socially and emotionally, and physically. Although not all adult citizens require that child-care be provided, it is widely believed that such programmes provide an op-

A. Keler/Sygma

OECD

Who pays for child care? Governments are under increasing pressure to provide a service for all their citizens.

(Continued from p. 22)

Table ENROLMENT RATES FOR AGES 3-6, 1989/1990 ¹ % of age group				
	Age 3	Age 4	Age 5	Age 6
France	98.1	102.0	101.9	101.6
Netherlands	n.a.	98.1 ^a	98.3	97.4
Spain	21.5	92.4	101.2	106.0
Germany	33.2	73.0	85.5	120.4
New Zealand	45.9	72.9	102.8	101.4
Austria	29.6	65.4	95.8	24.9
United Kingdom	37.2	59.1	125.3 ^b	98.5
Japan	18.8	57.4	64.9	100.7
Ireland	1.0	53.0	97.8	97.8
United States	27.3	50.7	91.9	105.8
Norway	37.8	49.7	58.9	71.3
Sweden ²	40.8	46.6	58.0	97.8
Canada	n.a.	43.7 ^a	101.9	104.2 ^c
Switzerland	5.5	25.0	74.5	96.6
Portugal	8.6	13.1	17.6	83.6
Turkey	n.a.	0.3	1.7	12.4

n.a. not available.
In some cases the numbers may add up to more than 100% because of discrepancies in data collection.
a. Includes pupils younger than 4.
b. May include pupils younger than 5.
c. Includes pupils older than 6.
1. In descending order of 4-year-old enrolment. Pre-primary education is defined as education provided on a full-time or part-time basis, in nursery schools, kindergartens or similar institutions or in sections attached to primary schools, excluding play-groups, day-nurseries, creches, child-care centres or similar organisations that have no sustained educational purpose; the distinction is sometimes difficult to make.
2. Children from day nurseries, recreation centres and nursery school groups.
Source: OECD

In many countries the remuneration for people who work with very young children is quite low, which attracts low-quality staff and can cause rapid turn-over if these workers find higher-paying jobs. People who work with children aged 0-3 years often have lower educational and training requirements – and correspondingly lower pay – than do teachers and other staff who work with children of 3-6 years of age. Many authorities and educators are currently examining the balance of both academic and practical training as they plan for sub-

3. *Employment Outlook 1990*, OECD Publications, Paris, 1990.

sequent education and training for child-care workers.

Another common issue is defining 'quality' in child care: what is it and how is it determined? Is it the composition of the group of children (of the same or mixed ages) and qualifications of the staff (advanced education or vast experience)? Or is quality determined by the type of setting (small groups versus large centres) and the stability of staff (some have rapid turn-over due to low pay)? Is it determined by the social interaction of the child with the staff and peers, or the child's daily experiences, including the activities of story-telling, arts and crafts, singing and meal-sharing? What constitutes an appropriate programme and curriculum for children of 0-6 years? How does a child-care programme ensure a balance between structured learning activities and the kind of play that provides experience? How should a programme or its participants be evaluated? These are examples of issues that many authorities and early-childhood researchers and educators are currently debating.

There is also concern about a variety of associated issues: access to and equity in child care, parent education and support programmes for families who live in rural areas; provision of care for children outside normal school hours; the transition to and linkage with elementary education; the dearth of programmes for minority children and children whose mother tongue is not that of the country in which they live; the roles of parents, employers, health and social-service authorities, as well as educational authorities; and the co-ordination and collaboration of the various public authorities to ensure that policies are established and services are delivered.

Clearly, and despite the trend in other social policies from universal to selective benefits across OECD countries, universal pre-school for children from the age of 2½ years to compulsory school age is emerging as the goal for a number of industrialised European countries (Belgium, France and Spain). Because



Brigitte Cavanagh

of the socialisation and learning experiences it provides, pre-school is viewed by parents and educators as being 'good' for a child's development, regardless of the standing of the parents' occupations. Even parents who do not require child-minding services are therefore requesting pre-school programmes. Where pre-school is universal, programmes are often heavily subsidised but they may not be as accessible and available as primary school. Provision for younger children of 0-3 years has been much slower to develop and as a result it is often inadequate. Even in a country like France which has an established network of creches for children under 3, provision exists for only about 20% of the population; other children are in family day-care.³



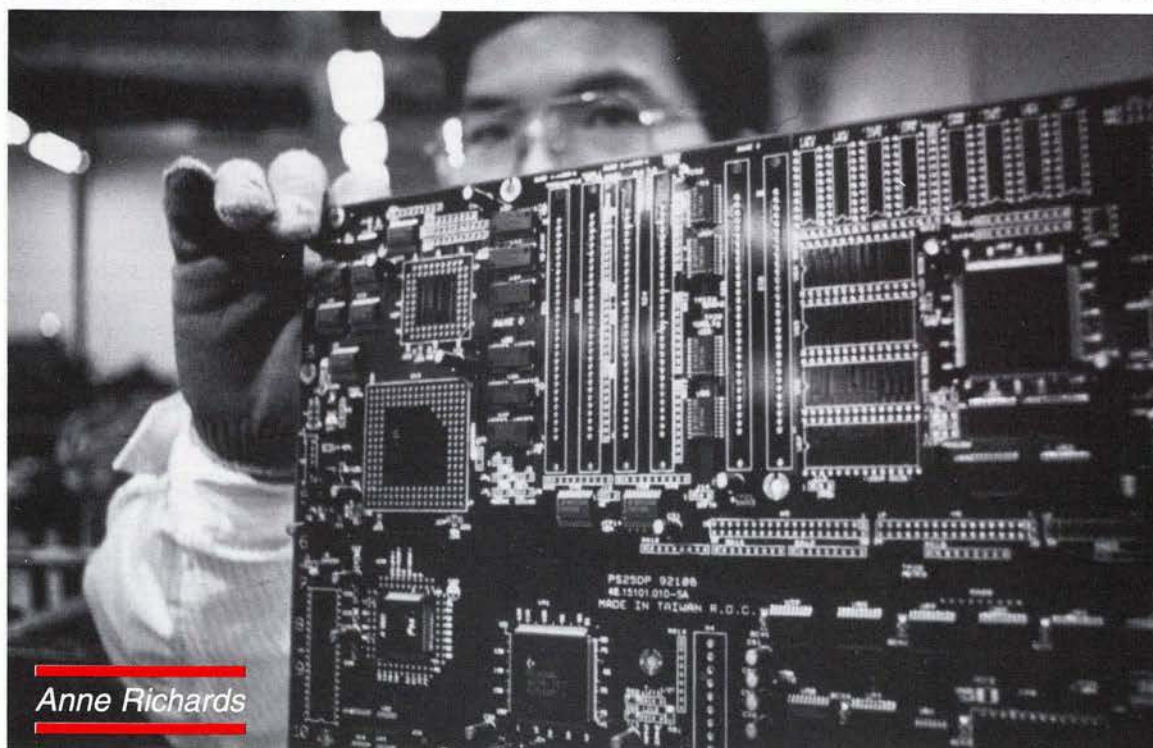
It is generally agreed that when child care is publicly funded, well planned, resourced and regulated, its quality is higher and more consistent than in some private arrangements where there can be considerable variations in quality. Continuing examination by educators and psychologists will help enhance the quality of the programmes that are offered to all children, and not only those whose parents are in upper-income brackets. ■



OECD Bibliography

- *Education in OECD Countries 1988-89*, forthcoming 1993
- *Employment Outlook 1990*, 1990.

Korea, Taiwan and Thailand: Trade Liberalisation and Economic Growth



Anne Richards

Bellavia/R.E.A.

The progress made by South Korea, Taiwan and Thailand in liberalising their trade regimes has been durable, in contrast with nearly all of the earlier attempts made by other developing countries since the Second World War – with the exception of the three other Dynamic Asian Economies (DAEs), Hong Kong, Singapore and Malaysia. Yet when the three larger DAEs initially chose a trade-oriented course to economic development – in the early 1960s for Korea and Taiwan, and in the early '70s for Thailand – they shared many features common to the bulk of third-world countries: a large and fast-growing population, a low volume of investment, and an economic structure that was predominantly agricultural.

The experiences of Korea, Taiwan and Thailand in trade liberalisation offer valuable lessons for other countries. These three largest of the Dynamic Asian Economies have been pioneers in pursuing export-led industrialisation and growth, attracting attention for their extraordinary economic performance.¹

Change since then has been dramatic, as is illustrated by the striking increase in their share of trade of OECD countries with all developing countries (Figure, p. 27).

An immediately evident explanation for their success is that the three governments have systematically applied consistent trade liberalisation, conservative fiscal and monetary policies, and market-oriented structural policies. There is another reason, less instantly obvious: their governments have deliberately encouraged the adaptability of human resources. Governments in all three DAEs have vigorously promoted universal education and training. Raising the standard of education has improved

1. **Sustaining the Trade Liberalisation Process: Experiences in East Asia and Latin America and the Role of OECD Countries**, OECD Publications, Paris, forthcoming 1993.

Anne Richards is a senior economist in the OECD Trade Directorate.

the technical efficiency of the labour force, amplified the impact of policy changes on the growth of productivity, and enhanced the flexibility of labour to cope with changes in business decisions.

Korea and Taiwan began their export-oriented drive towards industrialisation with a head-start over other developing countries in universal primary education. This lead increased even further over the next two decades, mainly in secondary education. Thailand still lags in secondary schooling, but has begun to catch up in higher education (Table). In all three DAEs there are high numbers of students in tertiary education studying science and engineering – Korea, indeed, has caught up with the OECD average.

In combination, their openness to the world economy and the adaptability of their labour force have been mutually reinforcing, making the process of trade liberalisation a lasting one as well as

a central component of rapid development.

Durable trade liberalisation has also been influenced by the long-standing trade relationship with OECD countries, in two important ways. The first concerns the orientation of policy. Although the details of trade policy have been formulated by governments in the three DAEs, and the timing largely determined by domestic economic conditions, the thrust of policy change has been directly related to pressures from OECD trade partners expressed in bilateral negotiations.

The second reflects the character of the trade regimes adopted by OECD countries towards the DAEs which were loosely applied and monitored. In designing and implementing trade-policy instruments, governments in OECD countries have deliberately opted to build in a flexibility which has tended to preserve the competitive process for OECD and DAE firms alike. It has also

reinforced the ability of DAE firms to adapt their activities to domestic strategies of economic development by rapidly adjusting production in keeping with the best international technologies.

Policy Coherence

Getting the fundamental policy signals correct right at the start of a programme of trade liberalisation – avoiding conflicts between trade liberalisation and domestic economic policies, such as inflationary fiscal policies or continuous price and wage controls, or on the structural side, moving away from state support of inefficient state-owned enterprises and monopolistic industrial structures – is vital. Otherwise, resources will not shift away from unproductive sectors to increasingly competitive ones. But making sure that decisions on investment and employment promote adjustment may not be enough to ensure the highest growth of productivity. Institutions can make all the difference, bringing together changes in policies and in business decisions in a way that encourages resources to shift from lower- to higher-productivity sectors – for example, from industries that require heavy subsidies to survive and don't use the talents of the people they employ, to profitable enterprises that use fully the best skills available.

In Korea and Taiwan, credible government commitment has been a firm feature of the institutional environment. Policies that are coherent across different sectors of the economy have been formulated in close collaboration with private business – in Korea through a tightly integrated structure of corporations and government institutions, and in Taiwan, through a looser network of domestic and overseas businesses, mainly small-scale and predominantly Chinese.

In Thailand, government efforts tended to be less credible – and policies less coherent – until the early 1990s, when institutional reform (particularly of the tax system) will, when completed, remove

Table
EDUCATION INDICATORS FOR 17 LDCs

	Literacy % of total population 1990	Secondary-school enrolment % of age groups			Tertiary-school enrolment % of age groups	
		Total 1965	Total 1989	Female 1989	Total 1965	Total 1989
South Korea	95 +	35	86	84	6	38
Taiwan	95 +	38	85	83	7	33 ^a
Thailand	93	14	28	n.a.	2	16
Hong Kong	95 +	29	73	75	5	13 ^a
Malaysia	78	28	59	59	2	7
Singapore	95 +	45	69	71	10	12 ^a
Argentina	95	28	74	78	14	41 ^a
Brazil	81	16	39	45	2	11
Chile	93	34	75	78	6	19
Mexico	87	17	53	53	4	15
China	73	24	44	38	0	2
India	48	27	43	31	5	n.a.
Indonesia	77	12	47	43	1	n.a.
Philippines	90	41	73	75	19	28 ^a
Egypt	48	26	81	71	7	20
Nigeria	51	5	19	16	0	3 ^a
Pakistan	35	12	20	12	2	5

n.a.: not available.

a. 1985.

Source: World Bank

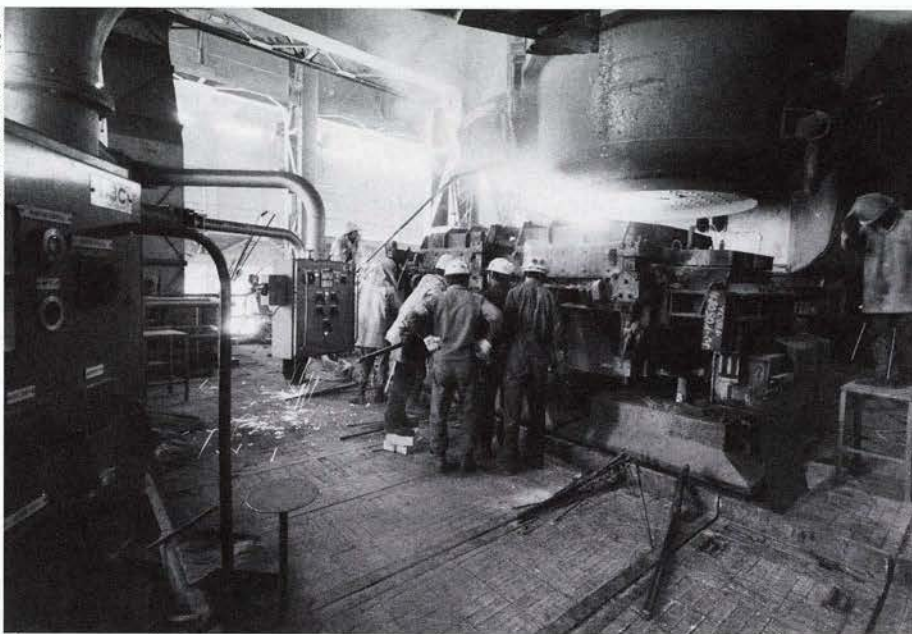
a substantial degree of discretionary government intervention. But in part because of Thailand's geographic location, which exposes Thai businesses both to ideas and pressure from businesses in Japan and the other DAEs, and in part because of its relative openness to foreign direct investment (FDI), patterns of resource allocation (especially in the export sector) have corresponded more to the export-promoting strategies of the largest foreign investors than they otherwise would have, drawing skilled professionals and FDI into competitive exporting industries. In the end, external influences substituted for the credible commitment of government.

Policy Management

Government intervention to allow the institutional environment to respond to adjustment and growth is part of the story. Good policy management is another. The three DAE governments have complemented trade liberalisation with macro-economic and structural-policy adjustments over four roughly drawn periods.

From the early 1960s to early '70s Korea and Taiwan started to orient economic policies to promote rapid industrialisation and growth, above all by stimulating exports.² A host of incentives were made available to firms producing light manufactures (textiles, clothing and shoes) for export; exchange-rate reform deterred imports and encouraged both exports and import-substitution; and fiscally content macro-economic policies assisted their international competitiveness.

Jean-Pierre Laffont/Sygnia



Government policy has moved away from the support of inefficient state-run industry.

Decisions about targeting the recipients of subsidies were generally correct, for three reasons, all of which are related to the favourable trade relationship between the DAEs and OECD countries. First, the technologies that were being successfully deployed in the United States, Japan and Europe were applied in the DAEs. Second, adjustment took place according to market forces (inefficient firms were not given help, subsidies going instead to profitable ones). Third, government decisions were taken systematically in co-ordination with firms, mixing funding with strictly applied performance criteria.

In the early 1970s, economic crisis – balance of payments deficits and slow economic and export growth – spurred the governments in all three DAEs to shift the course of policies. Korea and Taiwan turned away from promoting light manufactured exports (chiefly textiles and clothing) to build up domestic industrial capacity in heavy machinery, not least in steel, petrochemicals, robotics. Trading companies in Korea and Taiwan were nonetheless still obliged to meet strict performance requirements.

Thailand, set back in addition by the end of the Vietnam War (which reduced government revenue), took initial steps to encourage industrial production and

export, with the aim of reducing the concentration of economic activity in agriculture. But conflicting policy signals, which subsidised exporting firms and then taxed their products, resulted in a crowding-out of efficient firms by protected (state-owned) enterprises, handicapping export promotion from the start.

World-wide recession and inflation in the early

1980s dealt a severe blow to all three economies. But instead of raising import barriers, as most other countries did, all three DAEs sought vigorously to boost export earnings as quickly as possible. The policy was a success. Economic performance was turned around – almost immediately in Korea and Taiwan and a few years later in Thailand.

The second half of the 1980s was characterised by exceptionally strong economic growth in all three DAEs – close to 10% over 1985–91. Buoyant exports and substantial inflows of foreign capital, particularly from Japan, provided the principal sources of growth, but they also contributed to a widening of bilateral trade imbalances with practically all OECD trading partners. In subsequent negotiations with the United States and the European Community, Korea and Taiwan re-oriented policy incentives to stimulate domestic demand and lessen reliance on exports as the main source of growth. In Thailand, for the first time, control over the government budget marked a turning point in the export-orientation of economic policies, resolving the conflict between export subsidies and taxes.

2. Martin Bloom, 'Technological Change in Korean Electronics', *The OECD Observer* No. 175, April/May 1992.

Since the early 1990s, a slowdown in the world economy and inflationary pressures at home have led all three governments to call into question the policy of stimulating domestic demand. At the same time, the pulling-back of government involvement in economic activity has coincided with a renewed emphasis on liberalisation, and policies have begun to be shaped more than before by market forces.

Trade Relations with OECD Countries

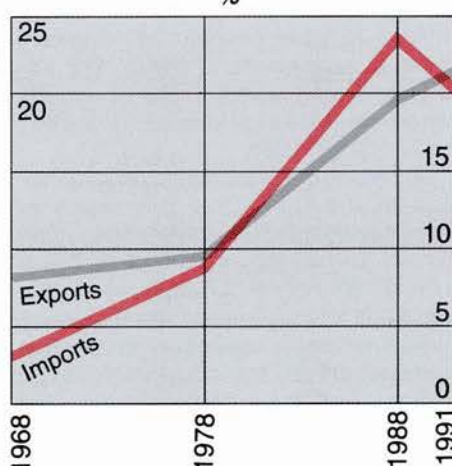
Over the course of a 30-year relationship, the trade regimes applied in OECD countries towards the DAEs have been characterised by policies and practices that have tended to be defensive, temporary and industry-specific – while implementation has tended to be *ad hoc* and incomplete. Trade regimes have not been based on coherent strategies to combat unfair competition, nor have they been formulated as part of an integrated package for industrial adjustment. Rather, they have generally been compromises reached through bilateral and multilateral negotiation among varying domestic and international interests.

The short-run, compromise nature of decision-making in trade matters, underpinned nonetheless by a strong political commitment to a liberal international trading system and world growth, led to a deliberate building-in of flexibility – in both the design of and implementation of instruments – that allowed trade to expand. The relative competitiveness of DAE firms, in turn, placed them in a position to exploit these opportunities, both in traditional export markets and in products with higher value-added – largely because of the policy choices made by their own governments.

It may seem paradoxical, but the fact that trade measures and practices applied in OECD countries towards the DAEs have tended to be increasingly shaped by bilateral negotiations has amplified the beneficial impact of trade on competition and growth – for both

groups of countries. But there are some good reasons for this result. Above all, negotiation has permitted governments on both sides to make best use of the politics of trade to mutual advantage. In the OECD area, governments have used the negotiating process to accommodate domestic political constituencies that press for protection, and preserve the ability of markets to function efficiently. Because the forms of protection adopted were not permanent or impenetrable barriers to trade but were deliberately designed in most cases to be transitional, they did little to impede the ability of firms in OECD and DAEs to adapt to changing market conditions and compete with international prices.

Figure
**SOUTH KOREA, TAIWAN, THAILAND:
SHARE IN
OECD TRADE WITH ALL LDCs
%**



Source: OECD

In the DAEs, governments also relied on negotiation to push forward with the goals of rapid industrialisation and growth established in their own policy strategies. Borrowing tactics learned from earlier Japanese experience, the DAEs bargained for flexibility in bilateral agreements by, for example, fostering ambiguity in product definitions and creating loopholes in import limitations. Even though they already had plans to upgrade

industry, the negotiations helped DAE governments overcome domestic resistance to adjustment. Domestic policies to promote job creation and improve education and training supported the accelerated adaptation of labour to the changing patterns of demand.

The ability of DAE firms to take advantage of the opportunities for expanding trade with OECD partners is shown most clearly by the empirical evidence. What is striking is the simultaneous upgrading of exports – to higher technology and products with higher value-added, not least computers, cars and pharmaceuticals – and rapid expansion of exports in these as well as in more traditional product categories (shoes, furniture, dishes, glassware, consumer electronics, clothing), even those covered most extensively by non-tariff measures (chiefly textiles, clothing and consumer electronics).

The integration of DAE firms in world-wide industrial linkups has been proceeding more rapidly than for any other firms. In fact, multinational companies are beginning to turn first to DAE suppliers to obtain intermediate and final inputs into their global production operations – for example, imports of intermediate and final products by global computer companies (based, for example, in Canada, France and Germany) grew, over 1970–87, by over 25% per annum from the DAEs, compared to declining rates from OECD suppliers.

The Effects on OECD Countries

Sustained trade liberalisation in the DAEs, and the growing prosperity it has underpinned, is having an important effect on OECD countries. As time goes by, this influence could be magnified dramatically by corresponding achievements in other liberalising countries. It is particularly important for OECD export performance in DAE markets and the functioning of the multilateral trading system.

For OECD countries, trade with the three largest DAEs has become possi-



P. Zachmann/Magnum

bly the most important stimulus to intra-OECD trade. Since the DAE governments first put the emphasis on trade, not only has export growth outperformed flows to other destinations but, in addition, OECD export performance has improved as DAEs have grown larger in the world economy. Since 1985, OECD exports to the three DAEs have grown by around 20% each year. And this vigorous expansion has concerned the full range of products, heavy and light manufactures as well as primary products. In both 1991 and '92, the volume of trade between OECD countries and the three largest DAEs alone contributed a phenomenal 8% to total world trade and accounted for a good part of its growth.

Affiliates of OECD-based companies have tended to integrate all stages of production in their DAE operations – unlike their still fragmented operations in most other developing countries. And affiliates of DAE companies are moving operations to North America and Europe in even larger numbers than to south-east Asia. Some of the effects on OECD/DAE trade of the increasingly dense

two-way traffic, as affiliate DAE firms move to North America and Europe and American and European companies move to the DAEs, include a fast-rising share of intra-industry trade (especially in high-tech industrial goods) and a release of trade covered by 'voluntary restraint agreements' (VRAs). For Korea, for example, the share of exports covered by VRAs fell from 39.9% in 1983 to 17.8% in 1991.

Sustained trade liberalisation in Korea, Taiwan and Thailand is also having an impact on the multilateral trading system, contributing to the stability of the institutional environment within which the decisions of consumers, trading companies and entire nations are made. This is felt not only by the increasingly liberal character of their trade regimes, but also – and perhaps even more importantly – by the bond between OECD countries and DAEs that is becoming even tighter as the DAEs quicken their steps towards full integration in the GATT.

Current efforts by the three largest DAEs in liberalising their trade regimes are being concentrated more narrowly in areas where progress has tended to lag: for Korea and Thailand the binding of tariff reductions in the context of the GATT; the liberalisation of agricultural imports and the opening of many service sectors; and improving the protection of intellectual property.³

There has been a rapid expansion of exports to OECD countries, both of traditional products, like textiles, and of higher-technology ones, such as computers and pharmaceuticals.

But aspects of the DAEs' trade regimes are beginning to resemble those of OECD countries in less desirable ways: there is an increased reliance on anti-dumping measures in place of traditional import restrictions, and a growing influence of government-to-government bilateral agreements with major OECD trading partners.

■ ■

There is nonetheless every reason for optimism. Above all, the bond that has been formed between OECD and DAE governments can be counted on to contribute to freer trade in the future – for example, in the formulation of new rules and disciplines during a future round of multilateral trade negotiations. And durable trade liberalisation in the DAEs will only bring staunch reinforcement to the commitment of OECD countries to a liberal international trading system and world growth. ■

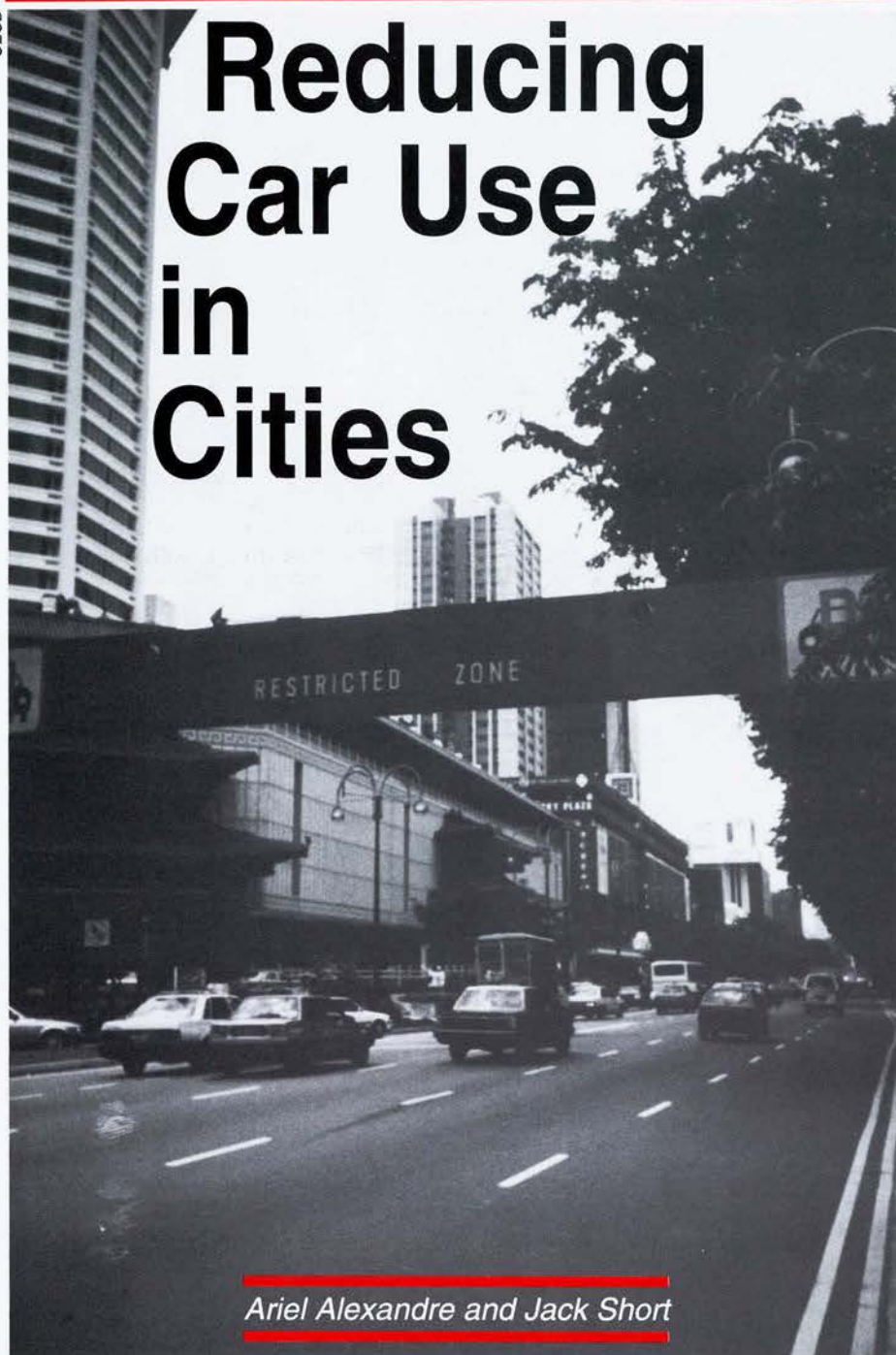


OECD Bibliography

- **Sustaining the Trade Liberalisation Process: Experiences in East Asia and Latin America and the Role of OECD Countries**, forthcoming 1993
- **Intra-Firm Trade**, forthcoming 1993
- Linda Likar, 'Trade and the Liberalisation of Latin America', **The OECD Observer**, No. 183, August/September 1993
- **Regional Integration and Developing Countries**, 1993
- Nicholas Vanston, 'What Price Regional Integration?', **The OECD Observer**, No. 181, April/May 1993
- **Emerging Bond Markets in the Dynamic Asian Economies**, 1993
- S. Ghon Rhee, 'The Emerging Bond Markets of South-East Asia', **The OECD Observer**, No. 181, April/May 1993
- **Technological Change in the Korean Electronics Industry**, 1992
- Martin Bloom, 'Technological Change in Korean Electronics', **The OECD Observer**, No. 175, April/May 1992.

3. **Regional Integration and Developing Countries**, OECD Publications, Paris, 1993; see also Nicholas Vanston, 'What Price Regional Integration?', **The OECD Observer**, No. 181, April/May 1993, and Linda Likar, 'Trade and the Liberalisation of Latin America', **The OECD Observer**, No. 183, August/September 1993.

Reducing Car Use in Cities



Ariel Alexandre and Jack Short

In the 20 years since pedestrian areas began to proliferate in the cities of OECD countries, professional and public opinion on the presence of cars in cities has changed considerably. The car was once a symbol of freedom that gave the individual citizen command over time and space and a degree of mobility hitherto unattained. It is now increasingly seen as a major source of congestion and pollution, accused of reducing the attractiveness and efficiency of the city itself, and generating a long list of economic, social and environmental costs.

It would be an exaggeration to claim that policy-makers everywhere are currently seeking ways of adapting cars and traffic to cities. But there is a growing awareness that adapting cities to cars is proving impractical, and that a constant expansion of urban road capacity to match demand is simply impossible.

Traffic problems are usually most severe in the largest cities – as a rule, it is only in cities with fewer than 500,000 inhabitants that congestion is confined to central streets and peak-periods. And yet the political will to find solutions is very often found in smaller and medium-

The number of cars in use in OECD countries is rising. Cities are continuing to spread, and the distances of journeys are lengthening. The unwanted side-effects of the resultant growth in motorisation have triggered a mood for change, leading governments, central and local, to consider ways of reducing the importance of traffic in the city.¹

sized cities that have taken determined, far-reaching decisions and successfully put them into practice. Usually, too, these cities are places of exceptional historical interest, and have a strong sense of community and less complex political and financial constraints.

In Lübeck, in Germany, for instance, which has only 215,000 inhabitants, the municipality began to exclude visitors' cars from the city centre in 1989 and gradually extended the area to take in all of the city's medieval streets. Similar measures are being taken or envisaged in Strasbourg, Bologna, Bath, Aachen and Geneva. In most German cities, zones where traffic speed is limited to 30 kilometres per hour have been introduced in an effort to put people before cars. The experience gained from these practices could help urban and transport planners in larger cities where the problem is more complex.

Car ownership has changed living patterns. Cars have given people more choice in where they live, allowing them to travel to work from suburbs that were virtually inaccessible in the days when they had to travel by bus and train. Zurich offers a striking illustration. In 1950, the

¹ *Urban Travel and Sustainable Development*, ECMT/OECD Publications, Paris, forthcoming 1994.

Ariel Alexandre is Head of the Urban Affairs Division of the OECD Environment Directorate and Jack Short is the Deputy Secretary-General of the European Conference of Ministers of Transport, based at the OECD.

city attracted commuters from only 14 outlying municipalities; by 1960, workers were travelling in from 39 municipalities, and in 1980, from over 80.

As a result of this trend, an increasing amount of land has been given over to the construction of motorways and parking space, and fuel consumption and emissions have increased. The related costs cannot be measured solely in financial terms; there is also the time and fuel wasted in congested traffic, the number of accidents and injuries on urban roads, the diminished travel and employment opportunities for people without cars, damage to the environment through air pollution, noise and oil spills, and finally, the risk of climatic change through the increasing quantity of CO₂ emitted by motor vehicles. Although new cars are 'cleaner' than old ones, the growth of traffic in busy city streets frequently causes pollutants to exceed safe concentrations.

Appraising these costs accurately is not easy. One OECD study on the environmental costs of road transport – noise, air pollution and casualties – estimates that they account for between 2.5 and 3% of GDP.² In the United States, it has been estimated that the environmental costs of road transport have reached \$100 billion per year and that the costs of congestion on US roadways totals also \$100 billion per year.³

These figures will probably rise. If current trends continue, the amount of traffic per kilometre of road will increase. And since urban road capacity cannot expand indefinitely, despite some ingenious methods of traffic management, there is a growing consensus among policy-makers in OECD countries that the daunting task of reducing the share of the car in urban transport has to be faced. If road supply cannot meet demand, demand must be matched to supply.

The Energy-Efficient City

Since cars are major consumers of energy, reducing the extent to which they



Lübeck was the first town of historical interest to ban cars from the city centre.

move unnecessarily can be an effective way of reducing energy consumption and CO₂ emissions. This approach implies policy initiatives in town planning as well as in transport management in an effort to make urban land-use patterns more compact, mixing homes, jobs and services. That would allow easier, safer and more convenient non-motorised methods of transport, not least walking and cycling. Such initia-

tives would also entail a move to public transport systems that are efficient, non-polluting, reliable and affordable – witness the renewed emphasis on buses in cities as different as Minneapolis and Oxford, or the trolley-buses, guided buses and trams in Nantes, Strasbourg and elsewhere.

In an energy-efficient city, there would be a higher density of development along bus routes and around railway stations

instead of an energy-consuming spreading pattern of development: indeed, this happened in Curitiba in Brazil 20 years ago and in Zurich more recently. Hospitals, colleges, offices and factories could be located in areas that were not dependent on access by car.

This kind of control of urban development is now going to be implemented in the Netherlands, where the travel demand of various types of workplace will be assessed and businesses then steered to locations suited to them. Goods-distribution depots employing few people but attracting heavy flows of trucks will be located near motorways, whereas offices and hospitals, which have large staffs and attract many visitors, will be steered to areas that are highly accessible by public transport.

Changing Places

The transformation of land-use patterns is obviously a long-term process. But although only 1–2% of the urban fabric in OECD countries is rebuilt every year, the use to which buildings are put can change more rapidly. In the United States, for example, major generators of traffic, such as drive-in shopping-centres, can be quite short-lived. Progress towards the mixing of land-uses could accordingly proceed substantially faster than is generally believed.

The city of Portland, Oregon, in the United States, offers a good example of how to achieve efficiency in urban travel patterns. Throughout the 1970s and '80s, the characteristic trend towards the spreading and dispersal of the city was firmly countered. A street-level car park was converted into a park by a non-profit trust; the municipality razed a riverside motorway and replaced it with another park and a promenade; and a project for a motorway around the city was stopped and replaced by

a tramway. The funds earmarked for the motorway were spent on converting two city-centre shopping streets into transit malls. Finally, the Mayor of Portland persuaded the city's major retailers to stay in the city centre and the construction of high-density residential buildings increased the number of city-centre inhabitants. Transport planners limited parking in new commercial developments to one space per 100 square metres, and the regional transport agency introduced free public transport in most of the inner city. Available sites in the city centre and along public transport routes were designated for higher-density constructions, while new or renovated buildings were required to install shops at ground level to make the city-centre streets more attractive for pedestrians.

The results speak for themselves. Since 1972, an additional 30,000 jobs have been provided in the city centre without appreciably increasing the number of parking spaces or travel by car. Two in five commuters to the city centre now use public transport, which has increased its overall passenger load by half. Sites near public-transport routes have attracted development worth \$800 million and another \$400 million is planned. Violations of national pollution emission standards have ceased.

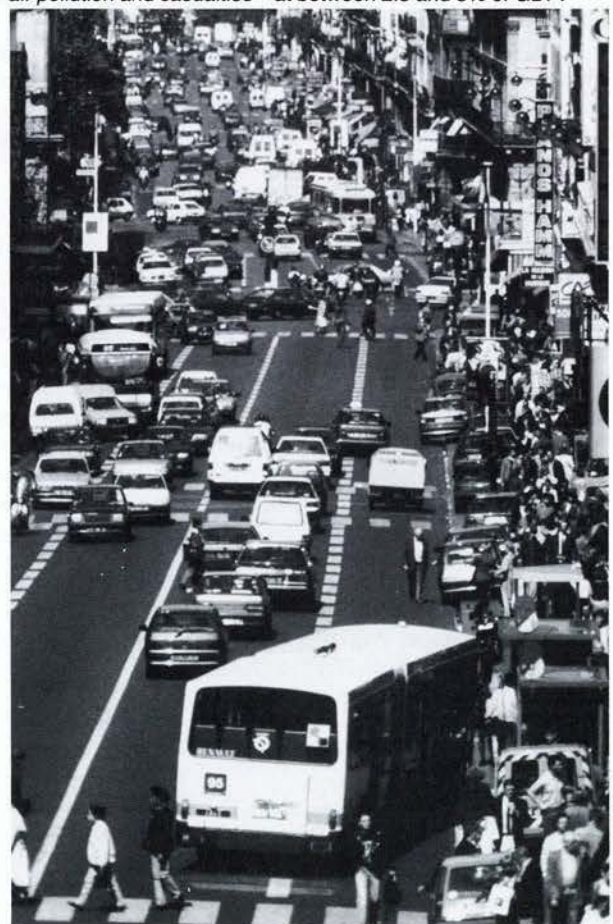
The municipality has also taken a political stand by deciding to stop the construction of motorways and to install six more tram lines. Local studies have revealed the energy implications for differing plans; one finding is that if the number of homes per hectare along public-transport routes is raised

from seven to 19, households will spend one-third less energy on travel.

The objective of the Portland city authorities now is to steer future peripheral developments to areas where residents will have access to public transport. Having turned the city centre into a lively area where people increasingly want to live, the municipality is now intent on bringing similar changes to the suburbs.

Although Portland is in the lead in reducing car travel, it is not alone. A clean-air plan in Geneva, Switzerland, calls for a reduction in driving from a 1990 figure of one million trips a day to 800,000 by the year 2002. In the United Kingdom, Avon County Council

One OECD study has put the costs of road transport – in noise, air pollution and casualties – at between 2.5 and 3% of GDP.



Mario Fourny/R.E.A.

2. *The Social Costs of Land Transport*, Monograph No. 32, available free of charge from the OECD Environment Directorate.

3. *The Going Rate: What It Really Costs to Drive*, World Resources Institute, Washington DC, 1992.

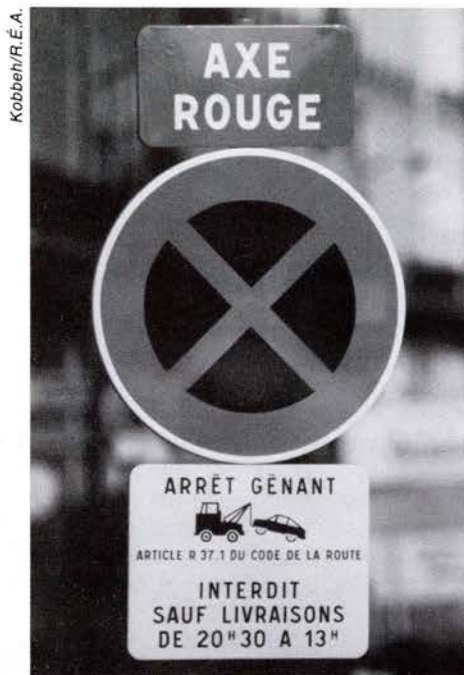
proposes to 'reduce the car share of total journeys throughout the county, and specifically to no more than 50% of all peak period journeys to central Bristol by 2013'.⁴

Fiscal Policies for the City

In many cities such ecological goals will be difficult to achieve through town-planning alone; the help of fiscal policies will also be required.⁵ They could take the form of fuel taxes, vehicle purchase taxes, road tolls and pricing to relieve urban congestion and reduce environmental degradation. Without the use of fiscal instruments in conjunction with town-planning policies, it is most unlikely that progress towards what is now called 'sustainable development' can be achieved.

Italy has already put two of these fiscal measures into practice. The highest fuel tax in Europe, coupled with purchase taxes which increase with engine size, has as yet had no adverse effect on car ownership, but it has led to increased vehicle occupancy and reduced mileage. Between 1970 and 1990, petrol consumption in Italy rose by 32%, compared with a 53% increase in France, 67% in Germany and 77% in the United Kingdom.

Other OECD countries have since adopted similar measures. In the United Kingdom, fuel taxes were recently increased by 10% and further annual increases of 3% have been announced in line with the government's stated objective that 'taxation should support health and environmental objectives'. In Canada, the Royal Commission on National Passenger Transportation, echoing policy advice offered by the European Conference of Ministers of Transport in



1990, declared in a recent report 'Travellers should pay the true costs of the travel services they use, including those for damages to the environment, and people who do not travel should not have to pay for those who do'.⁶

It is obviously equitable that prices charged for each mode of transport should be in accordance with the costs that they cause – financial, but also in terms of congestion or pollution. This logic suggests that car users should pay more for the space they use, the scarce energy they consume, the air they pollute, the noise they make. But, for the time being, motorists do not pay yet the full costs of their driving decisions. As a result, driving is cheaper to the individual driver than it is to society at large. If motorists had to pay the full social and environmental costs of driving in cities, not only would they be induced to drive less and therefore pollute less, but they would also provide financial resources which could be used for improving transport and the urban environment.

Yet the application of such a polluter-pays, even 'congestor-pays', principle to urban roads in OECD countries is still in its infancy. Drivers in Singapore, for 18 years, and in Trondheim, Bergen

and Oslo in Norway more recently, pay a fee to enter these cities, but charging for external costs is still considered difficult in most OECD cities for political reasons: how can one introduce charges for something which people are still accustomed to thinking of as 'free'?

Pricing for congestion and urban pollution may remain out of reach until public authorities devise ways of introducing it that will be considered acceptable to the majority of drivers as well as to urban citizens in general. One idea could be to allocate a third of the revenue which would be collected from urban road charges to investments in public transport, a third to motorway and traffic improvements and the remaining third to the improvement of the urban environment. This solution could make road pricing more acceptable to the bulk of interested parties.

■ ■

After several decades of urban planning and transport policies which took little account of travel growth, with the adverse results now observed everywhere – congestion, pollution, noise, car-dominated cities, lack of public space, and so on – municipalities should be given more independence to pursue in their own ways the goal of reducing the car's role in urban travel. Cities intent on providing a healthy environment, creating an efficient setting for business and reducing the risk of global warming will be first to get to grips with these problems. A few cities are already showing the way. ■



OECD Bibliography

- **Urban Travel and Sustainable Development**, forthcoming 1994
- **Taxation and Environment: Complementary Policies**, forthcoming 1993
- Jean-Philippe Barde and Jeffrey Owens, 'The Greening of Taxation', *The OECD Observer*, No. 182, June/July 1993.

4. *Transportation Plan 1993–2013: Consultation Document*, County of Avon, Bath, 1993.

5. Jean-Philippe Barde and Jeffrey Owens, 'The Greening of Taxation', *The OECD Observer*, No. 182, June/July 1993.

6. *Directions*, Final Report (Summary) of the Canadian Commission on National Passenger Transportation, Ottawa, 1992.



Esaías Baite/Gamma

Eastern Europe: What Benefits from the Brain Drain?

Anne de Tinguy and Catherine de Wenden

The statistics seem to show that the countries of central and eastern Europe are losing many of their most highly qualified people – precisely those with the skills that the former Communist countries require to rebuild their economies and to make the transition to western-type market structures. Will this exodus make it more difficult for the new regimes to carry out the reforms they have to tackle?'

As soon as they were able, people living in central and eastern Europe took advantage of a right they had been deprived of for decades, that of leaving the country. The dismantling of the Iron Curtain resulted in a surge in migration. Between 1987 and 1992, more than a million people left the former Soviet Union. Romania probably lost as many, although the authorities do not admit

it. Bulgaria lost several hundred thousand. There has also been migration,

Anne de Tinguy and Catherine de Wenden are researchers in the Centre d'Études et de Recherches Internationales (CERI), Fondation Nationale des Sciences Politiques, Paris. They were the rapporteurs for the 'Vienna-Laxenburg Conference on East-West Mobility of Scientists and Engineers', organised jointly in February 1993 by the Federal Ministry for Science and Research of the Republic of Austria, and the OECD Centre for Co-operation with Economies in Transition (CCET) and Directorate for Science, Technology and Industry.

if on a smaller scale and in varying degrees, from the Slovak Republic, the Czech Republic, Poland and Hungary, although not to the same degree in all of them. There has been less migration from the last three of these countries,

1. This article is based on contributions to the 'Vienna-Laxenburg Conference on East-West Mobility of Scientists and Engineers'. A report summarising the proceedings will be published by the OECD at the end of 1993.

which are more advanced on the path of political and economic reform. Poland, traditionally a country of emigrants, is a special case since there continued to be a large amount of emigration under the Communist regime, except during the period 1951–55.

The people who are leaving or who are thinking of leaving are primarily young people and the 'brains'. In 1991, one in every six emigrants from the ex-Soviet Union was a researcher, engineer or doctor. One in three was a white-collar worker. According to the most pessimistic estimates, 70,000 scientific workers have left Russia since 1989, or nearly 10% of the total number of researchers and specialists.² Admittedly, other, more optimistic, estimates put the figure at 7,000³ – a difference which shows how unreliable are the data on emigration. In 1990–91, 44,000 engineers and architects, 8,500 doctors and dentists, and 8,600 artists and journalists emigrated from the Soviet Union to Israel.⁴ In Bulgaria, the number of scientific workers fell by a half in three years, from 85,000 at the beginning of 1990 to 45,000 at the end of 1992, largely because of emigration; 40% of Bulgarian microbiologists and 30% of Bulgarian cyberneticians are currently working in the West.⁵

Dwindling Assets

This flight is disquieting. The countries of central and eastern Europe are losing



Western governments are beginning to worry that Russian nuclear scientists may be tempted by offers from 'rogue' states elsewhere.

the most dynamic elements of society at the very time they most need them. Their scientific potential, of which they used to be proud, runs the risk of suffering as a result, and they could find themselves trapped in a vicious circle. Scientific teams have been disrupted, prompting those who have stayed behind to start thinking in their turn about leaving. And the last thing young people want to turn to is research: 3,500 entered the Russian Academy of Sciences in 1989, 2,000 in 1990, and only slightly over 1,000 in 1992. In other words, if this trend is not reversed, Russian science will self-destruct. There are also other consequences to be feared. Many western governments are haunted by the possibility of nuclear scientists from the ex-Soviet Union accepting enticing offers of employment from 'rogue' governments in the Third World.

The authorities of the new states are also worried because, judging by the surveys, there seems little likelihood that the haemorrhage will stop in coming years. According to surveys carried out in November and December 1992 by the International Migration Organisation, 71% of the people questioned in Albania, 20% in Bulgaria, 18% in Russia and 21% in Ukraine said that they were ready to go and work abroad. And it always tends to be the same kind of

people – the young and the best-educated – who give this answer.

What are the causes of this flight? The roots of the problem are known. They have to do with the highly precarious economic and political situation in these countries. Throughout the region research and development has been cut back as budgets have been slashed, and scientists have been hit harder by the crisis than other categories of the population. Their standard of living and working conditions have deteriorated steadily since the collapse of communism. Their laboratories no longer have the money to buy equipment or to conduct experiments. They are poorly paid – in Russia a bus driver now makes more money than a researcher. There is growing uncertainty and the prestige of science has been tarnished. People are no longer leaving central and eastern Europe solely with a view to improving their working conditions and their standard of living and that of their children. What they are fleeing is failure and disorder; what they are seeking is new bearings and a brighter future.

In addition to those who try their luck in the West, there is another type of brain drain – the scientific workers who, in order to survive, quit science and go into what the Russians call 'biznes'. In Russia, more than a quarter of scientists and engineers have taken to commerce or some other activity since 1989. Sometimes the switch is successful, but often the consequences are dramatic. A linguist who quits research to work for a firm of publishers or a psychologist who gives up study to practise are placing their skills at the service of society in another way. But when a biologist has no other alternative than to become a garage mechanic, the sense of failure is total and the downfall dramatic.⁶

The Brain Drain as Mobility

Does this drain on the most valuable asset of the central and eastern European countries – their human capital – mean that that they will find it more

2. T. Valiukov and S. Simanovsky, in a paper given at the Vienna-Laxenburg Conference.

3. Unpublished data from the Centre of Science Research and Statistics, Moscow, 1993.

4. *Immigration to Israel*, Central Bureau of Statistics, Ministry of Immigrant Absorption, Jerusalem (annual publication).

5. Daniela Bobeva, Centre for the Study of Democracy, Sofia, in a paper given at the Vienna-Laxenburg Conference.

6. Anne de Tinguy with S. Kouprianova and T. Vichnevskaja, 'Les cerveaux de la CEI en France – Qui sont-ils? Que veulent-ils?', *Panoramiques*, Paris, forthcoming.

7. Sandor Bottka, Vice-President of the National Technological Development Committee of Budapest, in a paper given at the Vienna-Laxenburg Conference.

difficult to implement reforms? Serious as the problem is, it would, paradoxically, be wrong to answer 'yes'.

First, it is necessary to put the brain drain into perspective. The scientists who emigrate or those who go into business or some other activity are not always a loss. Under communism, the countries of central and eastern Europe had a highly developed scientific sector that was too large in relation to the potential of their economies. Quantity is not always synonymous with quality. Although the aptitude of some researchers was (and still is) exceptional, that of many others, recruited more for their political than scientific credentials, left a lot to be desired. The loss of such researchers will not handicap the restructuring of these economies. Quite the contrary: it is necessary.

Moreover, those who do leave are not necessarily emigrating. In Hungary, 50,000 academics went abroad in 1991, and 30,000 in 1992. But of these, only 600 in 1991 and 400 in 1992 asked to leave for good.⁷ Viewed in terms of mobility rather than a brain drain, the phenomenon looks quite different.

The right of return, now recognised by most countries in the region, has changed the whole significance of leaving the country. It allows people to come and go. It makes possible the reconciliation of two very understandable desires – to be able both to go abroad and to return to one's own country. Because they are now allowed to return if they do go abroad, central and eastern European scientists can travel and live abroad; they can escape unsatisfactory living standards and working conditions, and participate in stimulating international co-operative programmes. And they do not have to emigrate to do so.

This kind of mobility is beneficial. It enables researchers and students to acquire new knowledge, to establish networks of contacts and to develop co-operation with other scientific communities. It is a source of dynamism for science, the economy and society. Far from being lost for ever, those who do go abroad can make a positive



Will the corridors of Moscow University begin to fill again with scientists returning from the West, importing knowledge and experience?

Henri Cartier-Bresson/Magnum Photos

contribution to their country of origin. Some, too, will return when conditions permit.

For example, some researchers are already returning to Poland. But even before they do return, they establish links. Like other countries in the region, such as the Baltic states, Poland has a large diaspora with which contacts were very quickly renewed after the fall of communism. Some researchers who live in the West return to their homeland for a few weeks or months. Others establish links from abroad that enable their homeland to benefit from their knowledge and contacts.

Initiatives by OECD Countries

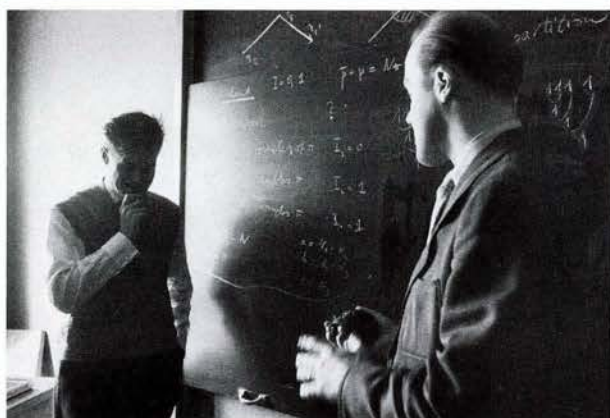
The OECD countries have taken, either individually or collectively – especially within the framework of the European Community (the PHARE, TEMPUS and TACIS programmes), but also under the auspices of NATO and UNESCO – a number of initiatives to promote the mobility of central and eastern European researchers with a view to developing their scientific potential while at the same time preventing a brain drain. These initiatives are all fairly similar.

The most common type is to award grants to enable researchers to attend

symposia or summer schools, or to spend a few months in a laboratory in an OECD country. To cite only one example, since 1990 France has awarded 50 'post-doctorate' grants for a period of ten to 18 months to junior researchers, and 500 grants for a maximum period of six months to senior researchers, a third of whom come from Russia and 20% from Poland. In 1992, the CNRS awarded 686 visiting research posts to foreign researchers, over 30% of whom came from central Europe. Austria has also started summer universities for central European scientists, and in 1991–92 Norway provided grants and exchanges for 607 such researchers.

Another type of initiative is the twinning of laboratories. This is particularly common in France, which has been doing it for three years. For example, a dozen researchers from the well-known Landau Institute in Moscow (specialising in mathematics and physics) are in Paris under a twinning arrangement with the École Normale Supérieure (Rue d'Ulm). The two institutes now organise a joint seminar. France also has twinning arrangements with Poland and Romania.

Centres of excellence are being set up, usually in the central and eastern European countries, to provide support to scientists. The Human Sciences Institute of Vienna, for example, is trying to reverse the brain drain by setting up such centres in these countries, and is encouraging students and researchers from these countries to return home. Several initiatives are under way; Austria is also trying to set up other types of research centres (to study demography, for example). The Netherlands has set up the Collegium Budapest to promote Hungarian science, and France has set up a science and technology foundation in Moscow to encourage researchers to stay in Russia. And the International Science and Technology Centre was recently set up in Moscow, following an agreement between the European Community, Russia, the United States and Japan, with the aim of helping Russian nuclear scientists find employment in civil sectors such as environmental



Marc Riboud/Magnum Photos

In the olden days of central planning, knowledge was valued as an end in itself; now it can be deployed according to the demands of the economy.

protection, power generation, nuclear safety, biology, chemicals and aerospace.

Efforts are being made to promote the mobility of central and eastern European scientists and researchers, ranging from the establishment of a shuttle service for university students between Austria and neighbouring countries, to programmes for promoting mobility and exchanges, such as the so-called 'hexagonal' initiative comprising Italy, Austria, ex-Yugoslavia, Hungary, the Czech Republic, the Slovak Republic and Poland. Under the numerous exchange programmes, there are certainly far more researchers coming to the West than vice versa. An effort is therefore being made to develop co-operative research programmes on topics of common interest or in one site or facility. An example of such a facility is the Lake Baikal Research Centre, situated on the edge of the lake of that name, which has a unique ecosystem. A centre of this sort can act as a magnet for researchers from all over the world. Space research is another area that attracts western scientists to Russia.

Different Types of Programmes

All the various national initiatives have one characteristic in common – that there are no centralised programmes but instead a wide range of initiatives by various ministries, research councils, specialised agencies, and so on, as well as by private foundations. For example, the Von Humboldt Foundation made it

possible for 688 young researchers to come to Germany in 1991, including 190 from the ex-Soviet Union and 152 from Poland. The Volkswagen Foundation enables students to do practical work. Numerous scientific institutions (academies, associations, learned societies) run programmes, often with public funds; the universities are also involved.

This wide diversity of programmes is partly spontaneous, partly deliberate. It reflects a preference for initiatives taken by the scientific community itself, which is the best placed to know who is doing what, and to appraise the quality of researchers and teams. It also reflects a desire to encourage direct links between researchers so as to by-pass structures which still survive from the former communist regimes.

Because there are so many different types of programmes – the result of a largely deliberate 'bottom-up' approach – it is very difficult for East European researchers to obtain sufficient, and even less so complete, information about the various types of schemes that exist to facilitate mobility and co-operation, all the more so in that they lived for a long time under a system in which the flow of information was 'top-down' and subject to political control. The existence of so many types of schemes also means that it is virtually impossible to form an overall picture of the efforts being made by the OECD countries.

A number of unresolved questions have to be examined more closely, and practical measures expanded. First, what is the best way to develop co-operation with a view to facilitating the application of science to the requirements of society and the economy, and industry in particular, in addition to co-operation on basic research? It is necessary to seek ways of creating stronger links between basic research and applications, and co-operation should be stepped up to this end. Co-operative programmes can also help to modify the mental legacy of a system in which science was cut off from industry and

the rest of the economy, except for the defence industry, and in which people knew virtually nothing about entrepreneurship and considered that knowledge was an end in itself.

Second, since it is necessary to go beyond the highly elitist aspect of current programmes (the so-called 'Noah's Ark' approach), what steps should be taken to develop education and training – which is essential both for training new basic research personnel and for preserving and strengthening the scientific and technological culture of industrial and other managers? Although countries such as Germany are making an effort in this direction, further efforts are required.

■ ■

Since the Iron Curtain came down, emigration is no longer tantamount to exile. It is no longer a rupture. On the contrary, it is one of the main ways in which the countries of central and eastern Europe can rejoin the international scientific community, and it enables their researchers to receive further training internationally. Admittedly, it deprives these countries of a valuable asset but at the same time it is a prerequisite for the success of their reforms.



OECD Bibliography

- **Industry in Poland: Structural Adjustment Issues and Policy Options**, 1992
- **Trends in International Migration: Continuous Reporting System on Migration**. SOPEMI, 1992
- **Reviews of National Science and Technology Policy: Czech and Slovak Federal Republic**, 1992
- **Migration: The Demographic Aspects**, 1991
- Daniel Blot, 'The Demographics of Migration', *The OECD Observer*, No. 163, April/May 1990
- **Research Manpower: Managing Supply and Demand**, 1989.

Erratum

In the table ('Trade of the Countries in Transition with the OECD Area') in the article 'Trade Liberalisation and the Move to the Market' by Blanka Kalinova, published in the last issue of *The OECD Observer*, the trade balance figures (\$ million) for Czechoslovakia should read 1991: 320; 1992: -1549. Our apologies.

✓ INDICATORS

	1992	1993	1994
AUSTRALIA			
Gross Domestic Product	1.5	2.9	3.1
Consumer Prices ^a	1.7	2.6	2.7
Unemployment Rate	10.8	10.9	10.8
Current Balance ^b	-3.6	-3.1	-3.1

	1992	1993	1994
AUSTRIA			
Gross Domestic Product	1.5	-0.6	1.5
Consumer Prices ^a	4.2	3.4	2.7
Unemployment Rate	3.7	4.8	4.8
Current Balance ^b	-0.2	0.0	-0.2

	1992	1993	1994
BELGIUM			
Gross Domestic Product	0.8	-0.7	1.2
Consumer Prices ^a	2.4	2.5	2.4
Unemployment Rate	10.3	11.9	12.9
Current Balance ^b	2.3	2.0	1.9

	1992	1993	1994
CANADA			
Gross Domestic Product	0.9	3.1	4.5
Consumer Prices ^a	1.2	2.3	2.0
Unemployment Rate	11.3	11.1	10.5
Current Balance ^b	-4.2	-3.7	-3.2

	1992	1993	1994
DENMARK			
Gross Domestic Product	1.1	0.7	2.8
Consumer Prices ^a	1.9	0.9	1.9
Unemployment Rate	11.1	12.4	11.7
Current Balance ^b	3.2	3.0	2.5

	1992	1993	1994
FINLAND			
Gross Domestic Product	-3.5	0.0	1.7
Consumer Prices ^a	3.9	3.5	4.0
Unemployment Rate	13.1	16.6	16.7
Current Balance ^b	-4.6	-2.2	0.9

	1992	1993	1994
FRANCE			
Gross Domestic Product	1.3	-0.7	1.5
Consumer Prices ^a	2.4	2.4	2.0
Unemployment Rate	10.2	11.2	12.1
Current Balance ^b	0.2	0.1	-0.1

	1992	1993	1994
GERMANY			
Gross Domestic Product	2.0	-1.9	1.4
Consumer Prices ^a	4.7	4.3	3.1
Unemployment Rate	7.7	10.1	11.3
Current Balance ^b	-1.3	-1.5	-1.5

	1992	1993	1994
GREECE			
Gross Domestic Product	1.4	1.1	1.7
Consumer Prices ^a	15.5	13.8	10.7
Unemployment Rate	9.2	10.0	11.0
Current Balance ^b	-2.6	-2.0	-2.0

	1992	1993	1994
ICELAND			
Gross Domestic Product	-3.3	-1.8	0.1
Consumer Prices ^a	4.0	3.2	1.2
Unemployment Rate	3.0	5.3	6.2
Current Balance ^b	-3.2	-2.5	-2.0

	1992	1993	1994
IRELAND			
Gross Domestic Product	2.7	2.6	3.4
Consumer Prices ^a	3.0	3.3	3.1
Unemployment Rate	17.2	19.5	20.0
Current Balance ^b	6.1	5.3	5.7

	1992	1993	1994
ITALY			
Gross Domestic Product	0.9	-0.2	1.7
Consumer Prices ^a	5.4	5.7	5.1
Unemployment Rate	10.7	10.9	11.0
Current Balance ^b	-2.1	-2.0	-1.7

Notes: Figures in *italics* are OECD projections
a. Private consumption deflator
b. Current balance as % of GDP (GNP for Turkey)

Source: **OECD Economic Outlook**, No. 53, June 1993;
for further information, contact **The OECD Observer**

✓ INDICATORS

JAPAN		1992	1993	1994
	Gross Domestic Product	1.3	1.0	3.3
	Consumer Prices ^a	2.0	1.4	1.3
	Unemployment Rate	2.2	2.5	2.6
	Current Balance ^b	3.2	3.3	3.3

NEW ZEALAND		1992	1993	1994
	Gross Domestic Product	0.6	3.1	3.5
	Consumer Prices ^a	1.0	1.4	1.5
	Unemployment Rate	10.3	10.0	9.7
	Current Balance ^b	-2.0	-1.4	-0.9

SPAIN		1992	1993	1994
	Gross Domestic Product	1.0	-0.6	1.7
	Consumer Prices ^a	6.2	4.9	4.1
	Unemployment Rate	18.4	22.5	22.4
	Current Balance ^b	-3.2	-2.7	-2.3

TURKEY		1992	1993	1994
	Gross National Product	5.9	4.5	3.5
	Consumer Prices ^a	70.0	66.0	58.0
	Unemployment Rate	11.8	12.7	13.5
	Current Balance ^b	-0.8	-1.9	-1.2

LUXEMBOURG		1992	1993	1994
	Gross Domestic Product	2.4	1.2	1.8
	Consumer Prices ^a	3.4	4.1	3.1
	Unemployment Rate	1.5	1.9	1.8
	Current Balance ^b	2.3	2.0	1.9

NORWAY		1992	1993	1994
	Gross Domestic Product	3.3	1.5	2.9
	Consumer Prices ^a	2.5	2.8	2.0
	Unemployment Rate	5.9	5.7	5.3
	Current Balance ^b	2.5	3.2	4.5

SWEDEN		1992	1993	1994
	Gross Domestic Product	-1.7	-2.0	1.4
	Consumer Prices ^a	2.5	5.7	3.6
	Unemployment Rate	5.3	7.3	7.4
	Current Balance ^b	-2.0	-0.4	2.0

UNITED KINGDOM		1992	1993	1994
	Gross Domestic Product	-0.6	1.8	2.9
	Consumer Prices ^a	5.0	3.4	3.8
	Unemployment Rate	10.1	10.7	10.4
	Current Balance ^b	-2.0	-2.8	-3.0

NETHERLANDS		1992	1993	1994
	Gross Domestic Product	1.5	-0.3	1.4
	Consumer Prices ^a	3.2	2.3	2.4
	Unemployment Rate	6.8	8.5	9.3
	Current Balance ^b	2.1	1.5	1.9

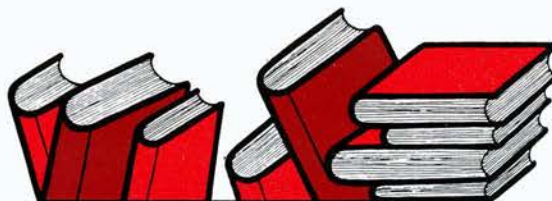
PORTUGAL		1992	1993	1994
	Gross Domestic Product	1.4	0.6	1.9
	Consumer Prices ^a	9.4	7.4	6.2
	Unemployment Rate	4.0	4.7	5.3
	Current Balance ^b	-0.1	-1.3	-1.9

SWITZERLAND		1992	1993	1994
	Gross Domestic Product	-0.6	-0.5	1.6
	Consumer Prices ^a	3.9	3.2	2.0
	Unemployment Rate	2.5	4.6	4.4
	Current Balance ^b	6.5	6.7	6.5

UNITED STATES		1992	1993	1994
	Gross Domestic Product	2.1	2.6	3.1
	Consumer Prices ^a	3.0	2.9	2.8
	Unemployment Rate	7.4	7.0	6.5
	Current Balance ^b	-1.0	-1.3	-1.4

Notes: Figures in *italics* are OECD projections
a. Private consumption deflator
b. Current balance as % of GDP (GNP for Turkey)

Source: OECD Economic Outlook, No. 53, June 1993;
for further information, contact The OECD Observer



New OECD Publications

SUE • FILL IN THE FORM WITH THIS ISSUE • FILL IN THE FORM WITH THIS ISSUE • FILL IN THE FORM WITH THIS ISSUE • FILL IN T

Economy

OECD Economic Surveys 1992-1993

FINLAND

September 1993
(10 93 31 1) ISBN 92-64-13960-5, 150pp.

GERMANY

August 1993
(10 93 15 1) ISBN 92-64-13953-2, 150pp.

GREECE

August 1993
(10 93 16 1) ISBN 92-64-13950-8, 150pp.

SWITZERLAND

August 1993
(10 93 26 1) ISBN 92-64-13951-6, 150pp.

Per issue:

France: FF80; elsewhere: FF105 US\$20 DM30

1992-1993 Subscription:

(17 to 22 Surveys to be published)

(10 00 00 1) ISSN 0376-6438

FF950 US\$195 DM360

1993 ISSUES: THE OECD RESPONSE

July 1993

When the Council of the Organisation for Economic Co-operation and Development met at Ministerial level on 2 and 3 June 1993, it considered a range of the most pressing international economic questions of today. The documents gathered in this book are central policy papers prepared for this meeting on: unemployment; international co-operation on trade; competition policies; trade and environment; and structural reform.

(03 93 05 1) ISBN 92-64-13944-3, 80pp.

France: FF50; elsewhere: FF65 US\$12 DM20

NATIONAL ACCOUNTS

Detailed Tables

Volume II, 1979-1991*

July 1993, bilingual

(30 93 03 3) ISBN 92-64-03876-0, 590pp.

France: FF530; elsewhere: FF660 US\$125 DM210

Centre for Co-operation with Economies in Transition

SHORT-TERM INDICATORS CENTRAL AND EASTERN EUROPE*

July 1993

This quarterly publication is a complement to the **OECD Main Economic Indicators**. It presents a wide range of monthly, quarterly and annual economic indicators – on, for example, industrial production, construction, employment, earnings, prices, domestic and foreign finance, interest rates and domestic and foreign trade – for nine countries of central and eastern Europe: Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and the Slovak Republic.

(07 93 03 3) ISBN 92-64-03884-1, 68 pp.

France: FF40; elsewhere: FF50 US\$9 DM16

1993 Subscription (4 volumes)

(07 93 00 2) ISSN 1019-9829

FF120 US\$28 DM52

ROMANIA – AN ECONOMIC ASSESSMENT

July 1993

This is the first comprehensive OECD study on Romania. It analyses the economic situation,

describes the reform effort so far, and identifies priority areas for policy action.

(14 93 08 1) ISBN 92-64-13939-7, 125pp.

France: FF100; elsewhere: FF130 US\$24 DM40

Agriculture, Fisheries and Food

MEAT BALANCES IN OECD COUNTRIES 1985-1991*

July 1993, bilingual

Presents international comparisons of production, trade and consumption for each category of meat for 1985-1991. It enables the commodity analyst to follow, for each OECD country, the flow of meat by category from the production to the consumption stage.

(51 93 02 3) ISBN 92-64-03878-7, 146pp.

France: FF150; elsewhere: FF195 US\$36 DM60

THE USE OF INDIVIDUAL QUOTAS IN FISHERIES MANAGEMENT

July 1993

See pp. 9-12 of this **OECD Observer**.

(53 93 01 1) ISBN 92-64-13940-0, 224pp.

France: FF110; elsewhere: FF140 US\$26 DM46

Development

ECONOMIC INSTRUMENTS FOR ENVIRONMENTAL MANAGEMENT IN DEVELOPING COUNTRIES

August 1993

A market-based approach to environmental management relies on the creation of incentives to producers and consumers to make better use of resources. Economic instruments together with regulations and voluntary agreements can all be part of this strategy. This report draws attention to promising policy experiences as well as to areas that require further analysis by aid agencies.

(43 93 04 1) ISBN 92-64-13952-4, 101pp.

France: FF50; elsewhere: FF65 US\$11 DM21

'Development Centre Studies' Series

AGRICULTURE, LIBERALISATION AND ECONOMIC GROWTH IN GHANA AND CÔTE D'IVOIRE 1960-1990

Robin W. L. Alpine and James Pickett

July 1993

This study provides a thought-provoking and lively analysis of reform options and experiences of two West African countries which faced broadly similar economic problems at independence. The conclusions drawn suggest that the public-private balance and market orientation are crucial to an explanation of the success or failure of economic policies.

(41 93 06 1) ISBN 92-64-13936-2, 144pp.

France: FF110; elsewhere: FF140 US\$27 DM46

ADJUSTMENT AND TECHNOLOGY

The Case of Rice

Robert Evenson and Christina David

July 1993

Rice is the major food staple and an important source of income for millions of people in developing

* Also available on diskette; catalogue of electronic publications free on request

♦ Also available on magnetic tape

countries. The increases in rice production required to feed expanding populations will imply even higher growth rates than those experienced during the 'Green Revolution'. Studies of rice research effectiveness and productivity gains show that the returns to investment in rice research are high.

(41 93 07 1) ISBN 92-64-13942-7, 145pp.

France: FF100; elsewhere: FF130 US\$24 DM40

Education

HIGHER EDUCATION MANAGEMENT

Vol. 5, No. 2, July 1993

- Staffing in higher education
- Scientific production
- Personnel policies for university teachers
- Performance appraisal
- Incentives and sanctions
- Funding systems

(89 93 02 1) ISBN 92-64-13948-6, 148 pp.

France: FF90; elsewhere: FF120 US\$21 DM38

1993 Subscription (3 issues)

(89 93 00 1) ISSN 1013-851X

FF235 US\$50 DM92

Energy

IEA (International Energy Agency)

ELECTRICITY INFORMATION 1992

August 1993

This annual publication brings together in one volume basic statistics compiled by the International Energy Agency on the electricity and heat production industries in OECD countries. The statistics cover annual OECD data for prices, production, consumption and trade. Detailed electricity and heat statistics are also presented for each OECD country. The annual data presented in this publication completed the IEA's monthly and quarterly statistical reports on electricity and heat. The year in the title corresponds to the latest year covered, not, as in earlier years, to the year of publication.

(61 93 17 1) ISBN 92-64-13961-3, 340pp.

France: FF280; elsewhere: FF350 US\$58 DM100

OIL AND GAS INFORMATION 1990-1992

July 1993, bilingual

A comprehensive reference book on current developments in oil and gas supply and demand. Contains country-specific statistics for OECD member countries on production, trade, demand and prices. Data on world production, trade and consumption of major oil product groups and natural gas are available in summary tables.

(61 93 10 3) ISBN 92-64-03872-8, 585pp.

France: FF550; elsewhere: FF715 US\$120 DM210

COAL INFORMATION 1992

July 1993

This volume is a comprehensive reference book on current world coal market trends and long-term prospects for over ten years. It contains analyses and country-specific statistics for OECD member countries and selected non-OECD countries on coal prices, demand, trade, supply, productive capacity and environmental policies on air quality and climate change. The year in the title corres-

ponds to the latest year covered, not, as in earlier years, to the year of publication.
(61 93 14 1) ISBN 92-64-13941-9, 500pp.
France: FF550; elsewhere: FF690 US\$125 DM220

ENERGY STATISTICS AND BALANCES OF NON-OECD COUNTRIES 1990-1991

July 1993, bilingual

Contains a compilation of energy production and consumption statistics for 85 non-OECD countries and regions, including developing countries, central and eastern European countries and the for-

mer Soviet Union. Data are expressed in original units and in common units for coal, oil, gas, electricity and heat.

(61 93 13 3) ISBN 92-64-03877-9, 445pp.
France: FF420; elsewhere: FF525 US\$95 DM170

NEA (Nuclear Energy Agency)

QUALIFIED MANPOWER FOR THE NUCLEAR INDUSTRY

An Assessment of Demand and Supply
July 1993

See Nicholas Zarimpas, 'Qualified Manpower for the Nuclear Industry', *The OECD Observer*, No. 181, April/May 1993.

(66 93 01 1) ISBN 92-64-13932-X, 100pp.
France: FF130; elsewhere: FF170 US\$30 DM54

'Disposal of Radioactive Waste' Series

LONG-TERM OBSERVATION OF THE GEOLOGICAL ENVIRONMENT Needs and Techniques

July 1993, bilingual

For site characterisation programmes aimed at determining the suitability of sites for the disposal of radioactive waste, attention must be given to collecting data over long periods of time for adequate understanding of certain processes in the geological environment (hydrologic conditions, seismicity, etc.). It is important for all national projects to carefully plan and implement programmes to observe the long-term behaviour of the geological environment in order to secure high-quality, reliable data for use in safety assessments.

(66 93 09 3) ISBN 92-64-03970-8, 220pp.
France: FF180; elsewhere: FF235 US\$43 DM75

Environment

TRANSFRONTIER MOVEMENTS OF HAZARDOUS WASTES

1989-90 Statistics

July 1993

See Harvey Yakowitz, 'What Trade in Recoverable Wastes?', *The OECD Observer*, No. 180, February/March 1993.

(97 93 10 1) ISBN 92-64-13943-5, 18pp.
France: FF40; elsewhere: FF50 US\$9 DM17

INFORMATION SYSTEMS FOR URBAN MANAGEMENT

July 1993

This publication gathers the main contributions and conclusions of a seminar which focused on the use of information systems to improve the management and monitoring of numerous urban services, particularly in urban planning, housing, environmental protection, public works, local taxation and finance. It illustrates national experiences with co-ordinated information policies, and includes recommendations which could lead to better urban functioning and management.

(97 93 08 1) ISBN 92-64-13935-4, 110pp.
France: FF50; elsewhere: FF65 US\$12 DM20

INTERNATIONAL ECONOMIC INSTRUMENTS AND CLIMATE CHANGE

July 1993

This volume contains summary papers from two OECD Workshops. It reviews experiences with tradable permits and taxes and outlines the principal problems which might arise if they were used on the climate change problem.

(97 93 09 1) ISBN 92-64-13937-0, 96pp.
France: FF110; elsewhere: FF145 US\$25 DM46

OECD ENVIRONMENTAL DATA Compendium 1993

August 1993, bilingual

Relates data on pollution and natural resources to such areas of economic activity as energy, transport, industry and agriculture.

(97 93 07 3) ISBN 92-64-03882-5, 330pp.
France: FF250; elsewhere: FF325 US\$60 DM100

Financial and Fiscal Affairs

REVENUE STATISTICS OF OECD MEMBER COUNTRIES 1965-1992

August 1993, bilingual

This annual publication first provides a conceptual framework with the purpose of defining which government receipts should be regarded as taxes and how the different types of taxes may be classified. It then presents a unique set of detailed and internationally comparable tax data in a common format for all 24 OECD member countries covering the period from 1965 onwards.

(23 93 04 3) ISBN 92-64-03885-X, 264pp.
France: FF220; elsewhere: FF285 US\$50 DM90

INSURANCE STATISTICS YEARBOOK 1983-1990*

July 1993, bilingual

This new annual publication gathers major official insurance statistics for the 24 OECD countries. It provides the reader not only with information on the various activities of this industry but also on trends in the international insurance market. The data, standardised as far as possible, are broken down under numerous sub-headings, and a series of indicators allows a better understanding of the characteristics of the national markets.

(21 93 07 3) ISBN 92-64-03881-7, 220pp.
France: FF240; elsewhere: FF310 US\$57 DM100

EXCHANGE CONTROL POLICY

August 1993

See Pierre Poret, 'Liberalising Exchange Controls: A Challenge for Central and Eastern Europe', *The OECD Observer*, No. 178, October/November 1992.

(14 93 12 1) ISBN 92-64-13945-1, 90pp.
France: FF75; elsewhere: FF100 US\$18 DM30

Centre for Co-operation with Economies in Transition

GLOSSARY OF INDUSTRIAL ORGANISATION ECONOMICS AND COMPETITION LAW

July 1993

This glossary of terms frequently used in the field of industrial organisation economics and competition law has been compiled for reading and training purposes. It is designed to help in understanding the basic concepts or the terminology of modern micro-economics and the theory of the firm.

(14 93 01 1) ISBN 92-64-13793-9, 96pp.
France: FF80; elsewhere: FF105 US\$20 DM33

TRENDS AND POLICIES IN PRIVATISATION

Vol. 1, No. 2

July 1993, bilingual

Special feature: institutional aspects of the privatisation process

Provides twice yearly reviews of recent developments in privatisation and a comparative analysis of experiences in central and eastern European countries and the New Independent States of the former Soviet Union. The ambitious programmes launched in these countries are unprecedented and, because of their difficulties and possible repercussions, benefiting from reliable data and analyses of developments is vital for their success.

(06 93 02 3) ISBN 92-64-03879-5, 165pp.

'10 BEST SELLERS'

(To order, please use the form inserted in this issue)

- 1. OECD ECONOMIC OUTLOOK No. 53**
(12 93 53 1) ISBN 92-64-13933-8
France: FF115
Other countries: FF150 US\$25 DM48
- 2. OECD ECONOMIC SURVEYS 1992-1993 Series PORTUGAL**
(10 93 23 1) ISBN 92-64-13921-4
France: FF80
Other countries: FF100 US\$20 DM30
- 3. COMMUNICATIONS OUTLOOK 1993**
(93 93 03 1) ISBN 92-64-13841-2
France: FF180
Other countries: FF230 US\$42 DM74
- 4. ENERGY STATISTICS OF OECD COUNTRIES 1990-1991**
(61 93 05 3) ISBN 92-64-03861-2
France: FF230
Other countries: FF300 US\$54 DM95
- 5. ENERGY BALANCES OF OECD COUNTRIES 1990-1991**
(61 93 06 3) ISBN 92-64-03860-4
France: FF180
Other countries: FF230 US\$42 DM70
- 6. ECONOMIC INTEGRATION OECD Economies, Dynamic Asian Economies and Central and Eastern European Countries**
(03 93 04 1) ISBN 92-64-13840-4
France: FF150
Other countries: FF200 US\$35 DM62
- 7. AGRICULTURAL POLICIES, MARKETS AND TRADE Monitoring and Outlook 1993**
(51 93 01 1) ISBN 92-64-13902-8
France: FF225
Other countries: FF290 US\$52 DM90
- 8. MAIN ECONOMIC INDICATORS Historical Statistics Prices, Labour and Wages 1962-1991**
(31 93 20 3) ISBN 92-64-03873-6
France: FF240
Other countries: FF310 US\$58 DM100
- 9. OBSTACLES TO TRADE AND COMPETITION**
(24 93 01 1) ISBN 92-64-13838-2
France: FF130
Other countries: FF170 US\$30 DM54
- 10. INDUSTRIAL STRUCTURE STATISTICS 1991**
(70 93 01 3) ISBN 92-64-03866-3
France: FF245
Other countries: FF320 US\$57 DM100

France: FF90; elsewhere: FF115 US\$21 DM37
1993 Subscription (2 issues)
(06 93 02 3) ISSN 1021-3287
FF150 US\$30 DM50

TRANSFORMATION OF THE BANKING SYSTEM Portfolio Restructuring, Privatisation and the Payment System

July 1993

The restructuring and privatisation of state-owned enterprises as well as the establishment of new enterprises require large amounts of capital and the efficient provision of basic banking services. This report focuses on various strategies to strengthen the banking system in the following areas: resolution of the large bad assets problem, privatising the banks, and modernising the payment system.

(14 93 09 3) ISBN 92-64-03880-9, 253pp.

France: FF175; elsewhere: FF230 US\$40 DM73

Labour Market and Social Issues

OECD EMPLOYMENT OUTLOOK/JULY 1993

July 1993

See centrefold of this *OECD Observer*.

(81 93 04 1) ISBN 92-64-13938-9, 260pp.

France: FF230; elsewhere: FF300 US\$54 DM96

'Health Policy Studies' Series

No. 3 OECD HEALTH SYSTEMS*

Volume I - Facts and Trends 1960-1991

Volume II - The Socio-economic

Environment

Statistical References

July 1993

The evaluation of health systems' performance and of their reforms also requires a robust information infrastructure in each country. Cross-national comparability across the OECD area remains an objective. The second generation of the OECD health accounts is the most comprehensive, consistent and systematic attempt at measuring the costs, inputs and outputs of the health systems of 24 industrialised countries from 1960 to 1991.

With 244 tables and 64 graphs

(81 93 05 1) ISBN 92-64-13800-5

Vol. 1 272pp./Vol. 2 163pp.

France: FF380; elsewhere: FF475 US\$89 DM150

Public Management

'Public Management Studies' Series

PAY FLEXIBILITY IN THE PUBLIC SECTOR

August 1993

See Maria Maguire and Robert Wood, 'Private Pay for Public Work?', *The OECD Observer*, No. 175, April/May 1992.

(42 93 02 1) ISBN 92-64-13949-4, 234pp.

France: FF180; elsewhere: FF235 US\$41 DM75

Science and Technology

'Reviews of National Science and Technology Policy' Series

SCIENCE, TECHNOLOGY AND INNOVATION POLICIES:

ICELAND

August 1993

Today, Iceland faces the challenge of finding new directions and laying the foundations for future growth. It has recently gained control of its long-standing and persistent inflation, but since 1987 has been facing an economic recession which is partly due to resource constraints,

diminishing fisheries, and worsening prospects for developing its unused energy resources. The question now is how the intellectual, scientific and technical resources of the country can best be stimulated to give the impetus required for continued growth. This report describes the Icelandic research and innovation system and proposes appropriate policy measures.

(92 93 04 1) ISBN 92-64-13947-8, 200pp.

France: FF150; elsewhere: FF195 US\$34 DM62

'Megascience: The OECD Forum' Series

MEGASCIENCE AND ITS BACKGROUND

July 1993

As the costs of advancing science increase, questions about how to undertake and to fund large-scale projects become more and more pressing. Governments must address extremely difficult issues in setting priorities among diverse disciplines and projects. Indeed, many of them now require resources that are beyond the financial capabilities of single nations and international collaboration is increasingly important.

This volume, the first in the series, presents an introduction to these large-scale scientific efforts. It describes the evolution of megascience and sets forth issues, definitions and the present state of affairs.

(92 93 01 1) ISBN 92-64-13926-5, 72pp.

France: FF70; elsewhere: FF90 US\$17 DM29

DEEP DRILLING

August 1993

In the context of the Megascience Forum, a group of experts in oceanic and continental drilling met to discuss the size and structure of current research in their field. They examined current programmes, including the Ocean Drilling Program, and discussed possibilities for extending international co-operation, particularly in the case of continental drilling. This volume presents the results of those discussions.

(92 93 03 1) ISBN 92-64-13956-7, 135pp.

France: FF170; elsewhere: FF220 US\$40 DM70

Transport

ECMT (European Conference of Ministers of Transport)

STATISTICAL REPORT ON ROAD ACCIDENTS IN 1991

August 1993, bilingual

This report records the trends in road accident statistics for 1991 in the ECMT member countries (Europe), four associate member countries (Australia, Canada, Japan and the United States) and one observer (Morocco). It also provides data on the trends from 1975 to 1991 in numbers killed, casualties (killed and injured), accidents causing casualties, and road vehicles in these countries.

(75 93 06 3) ISBN 92-821-0176-2, 72pp.

France: FF100; elsewhere: FF130 US\$23 DM42

Round Table 91

POSSIBILITIES AND LIMITATIONS OF COMBINED TRANSPORT

July 1993

One priority of European transport policy is to develop combined transport, a mode that is seen as providing a solution to the problem of road congestion while at the same time protecting the environment. But such transport is not developing as swiftly as might be hoped, and obstacles are arising in terms of, among others, productivity in multimodal terminals, terminal hauls, saturation of rail infrastructure, standardisation of equipment, and the cost of transshipment facilities.

(75 93 04 1) ISBN 92-821-1183-0, 140pp.

France: FF90; elsewhere: FF115 US\$21 DM37

OECD
- EMPLOYMENT OPPORTUNITIES -

OECD HEADQUARTERS, PARIS

Vacancies occur in the OECD Secretariat in the following activities:

Public Administration
Balance of Payments
National Accounts
Agricultural Economics
Development Economics
Energy Economics
Industrial Economics
Labour Economics
Monetary Economics
Econometrics
Environment
Urban Studies
Fiscal Policy
Nuclear Engineering
Macro-economics
Nuclear Physics
Education Policies
Social Affairs
Statistics
Computing and Communications

● Qualifications:

relevant university degree; at least two or three years' professional experience; very good knowledge of one of the two official languages of the Organisation (English and French) and ability to draft well in that language; good knowledge of the other.

● Initial appointment:

two or three years.

● Basic annual salary:

from FF 290,000 (Administrator) and from FF 416,000 (Principal Administrator), supplemented by allowances depending on residence and family situation.

Vacancies are open to both male and female candidates from OECD member countries.

Applications, in English or French (specifying area of specialisation and enclosing detailed curriculum vitae), should be marked 'OBS' and sent to:

Human Resource Management

OECD

2, rue André-Pascal
75775 PARIS CEDEX 16
FRANCE

OECD

OCDE

- EMPLOYMENT OPPORTUNITIES -

Where to obtain OECD Publications

FRANCE

OECD

Mail Orders:
2, rue André-Pascal
75775 Paris Cedex 16
Tel. (33-1) 45.24.82.00
Telefax: (33-1) 45.24.81.76
or (33-1) 45.24.85.00
Telex: 640048 OCDE

OECD Bookshop:

33, rue Octave-Feuillet
75016 Paris Tel. (33-1) 45.24.81.67
(33-1) 45.24.81.81

GERMANY

OECD Publications and Information Centre
August-Bebel-Allee 6
D-53175 Bonn 2 Tel. (0228) 959.120
Telefax: (0228) 959.12.17

JAPAN

OECD Publications and Information Centre
Landic Akasaka Building
2-3-4 Akasaka, Minato-ku
Tokyo 107 Tel. (81.3) 3586.2016
Telefax: (81.3) 3584.7929

UNITED STATES

OECD Publications and Information Centre
2001 L Street N.W., Suite 700
Washington, D.C. 20036-4910
Tel. (202) 785.6323
Telefax: (202) 785.0350

ARGENTINA

Carlos Hirsch S.R.L.
Galeria Güemes, Florida 165, 4° Piso
1333 Buenos Aires Tel. (1) 331.1787 y
331.2391
Telefax: (1) 331.1787

AUSTRALIA

D.A. Information Services
648 Whitehorse Road, P.O.B 163
Mitcham, Victoria 3132 Tel. (03) 873.4411
Telefax: (03) 873.5679

AUSTRIA

Gerold & Co.
Graben 31
Wien I Tel. (0222) 533.50.14

Jean De Lannoy
Avenue du Roi 202
B-1060 Bruxelles
Tel. (02) 538.51.69/538.08.41
Telefax: (02) 538.08.41

CANADA

Renouf Publishing Company Ltd.
1294 Algoma Road
Ottawa, ON K1B 3W8 Tel. (613) 741.4333
Telefax: (613) 741.5439

Stores:
61 Sparks Street
Ottawa, ON K1P 5R1 Tel. (613) 238.8985
211 Yonge Street
Toronto, ON M5B 1M4 Tel. (416) 363.3171
Telefax: (416) 363.59.63

Les Éditions La Liberté Inc.
3020 Chemin Sainte-Foy
Sainte-Foy, PQ G1X 3V6 Tel. (418) 658.3763
Telefax: (418) 658.3763

Federal Publications Inc.
Suite 103, 388 King Street W
Toronto, ON M5V 1K2 Tel. (416) 581.1552
Telefax: (416) 581.1743

Les Publications Fédérales
1185 Université
Montréal, QC H3B 3A7 Tel. (514) 954.1633
Telefax: (514) 954.1635

CHINA

China National Publications Import
Export Corporation (CNPIEC)
16 Gongti E. Road, Chaoyang District
P.O. Box 88 or 50
Beijing 100704 PR Tel. (01) 506.6688
Telefax: (01) 506.3101

DENMARK

Munksgaard Export and Subscription Service
35, Nørre Segade, P.O. Box 2148
DK-1016 København K Tel. (33) 12.85.70
Telefax: (33) 12.93.87

FINLAND

Akateeminen Kirjakauppa
Keskuskatu 1, P.O. Box 128
00100 Helsinki
Subscription Services:
P.O. Box 23
00371 Helsinki Tel. (358 0) 12141
Telefax: (358 0) 121.4450

FRANCE

See box above.
Documentation Française
29, quai Voltaire
75007 Paris Tel. 40.15.70.00

Gibert Jeune (Droit-Économie)
6, place Saint-Michel
75006 Paris Tel. 43.25.91.19

Librairie du Commerce International
10, avenue d'Iéna
75016 Paris Tel. 40.73.34.60

Librairie Dunod
Université Paris-Dauphine
Place du Maréchal de Lattre de Tassigny
75016 Paris Tel. 44.05.40.13

Librairie Lavoisier
11, rue Lavoisier
75008 Paris Tel. 42.65.39.95

Librairie L.G.D.J. - Montchrestien
20, rue Soufflot
75005 Paris Tel. 46.33.89.85

Librairie des Sciences Politiques
30, rue Saint-Guillaume
75007 Paris Tel. 45.48.36.02

P.U.F.
49, boulevard Saint-Michel
75005 Paris Tel. 43.25.83.40

Librairie de l'Université
12a, rue Nazareth
13100 Aix-en-Provence Tel. (16) 42.26.18.08

Documentation Française
165, rue Garibaldi
69003 Lyon Tel. (16) 78.63.32.23

Librairie Decitre
29, place Bellecour
69002 Lyon Tel. (16) 72.40.54.54

GREECE

Librairie Kauffmann
Mavrokordatou 9
106 78 Athens Tel. (01) 32.55.321
Telefax: (01) 36.33.967

HONG KONG

Swindon Book Co. Ltd.
13-15 Lock Road
Kowloon, Hong Kong Tel. 366.80.31
Telefax: 739.49.75

HUNGARY

Euro Info Service
POB 1271
1464 Budapest Tel. (1) 111.62.16
Telefax: (1) 111.60.61

ICELAND

Mál Mog Menning
Laugavegi 18, Pósthólf 392
121 Reykjavik Tel. 162.35.23

INDIA

Oxford Book and Stationery Co.
Scindia House
New Delhi 110001 Tel. (11) 331.5896/5308
Telefax: (11) 332.5993

17 Park Street
Calcutta 700016 Tel. 240832

INDONESIA

Pdii-Lipi
P.O. Box 269/JKSMG/88
Jakarta 12790 Tel. 583467
Telex: 62 875

IRELAND

TDC Publishers - Library Suppliers
12 North Frederick Street
Dublin 1 Tel. (01) 874.48.35
Telefax: (01) 874.84.16

ISRAEL

Electronic Publications only
Sophist Systems Ltd.
71 Allenby Street
Tel-Aviv, 65134 Tel. 3-29.00.21
Telefax: 29.92.39

ITALY

Libreria Commissionaria Sansoni
Via Duca di Calabria 1/1
50125 Firenze Tel. (055) 64.54.15
Telefax: (055) 64.12.57

Via Bartolini 29
20155 Milano Tel. (02) 36.50.83

Editrice e Libreria Herder
Piazza Montecitorio 120
00186 Roma Tel. 679.46.28
Telefax: 678.47.51

Libreria Hoepli
Via Hoepli 5
20121 Milano Tel. (02) 86.54.46
Telefax: (02) 805.28.86

Libreria Scientifica
Dott. Lucio de Biasio 'Aeioi'
Via Coronelli 6
20146 Milano Tel. (02) 48.95.45.52
Telefax: (02) 48.95.45.48

KOREA

Kyobo Book Centre Co. Ltd.
P.O. Box 1658, Kwang Hwa Moon
Seoul Tel. 730.78.91
Telefax: 735.00.30

MALAYSIA

Co-operative Bookshop Ltd.
University of Malaya
P.O. Box 1127, Jalan Pantai Baru
59700 Kuala Lumpur
Malaysia Tel. 756.5000/756.5425
Telefax: 757.3661

MEXICO

Revistas y Periodicos Internacionales S.A. de C.V.
Floresca 57 - 1004
Mexico, D.F. 06600 Tel. 207.81.00
Telefax: 208.39.79

NETHERLANDS

SDU Uitgeverij
Christoffel Plantijnstraat 2
Postbus 20014
2500 EA's-Gravenhage Tel. (070 3) 78.99.11
Voor bestellingen: Tel. (070 3) 78.98.80
Telefax: (070 3) 47.63.51

NEW ZEALAND

Legislation Services
P.O. Box 12418
Thorndon, Wellington Tel. (04) 496.5652
Telefax: (04) 496.5698

NORWAY

Narvesen Info Center - NIC
Bertrand Narvesens vei 2
P.O. Box 6125 Etterstad
0602 Oslo 6 Tel. (022) 57.33.00
Telefax: (022) 68.19.01

PAKISTAN

Mirza Book Agency
65 Shahrah Quaid-E-Azam
Lahore 54000 Tel. (42) 353.601
Telefax: (42) 231.730

PHILIPPINE

International Book Center
5th Floor, Filipinas Life Bldg.
Ayala Avenue
Metro Manila Tel. 81.96.76
Telex 23312 RHP PH

PORTUGAL

Livraria Portugal
Rua do Carmo 70-74
Apart. 2681
1200 Lisboa Tel.: (01) 347.49.82/5
Telefax: (01) 347.02.64

SINGAPORE

Information Publications Pte. Ltd.
41, Kallang Pudding, No. 04-03
Singapore 1334 Tel. 741.5166
Telefax: 742.9356

SPAIN

Mundi-Prensa Libros S.A.
Castelló 37, Apartado 1223
Madrid 28001 Tel. (91) 431.33.99
Telefax: (91) 575.39.98

Libreria Internacional AEDOS
Consejo de Ciento 391
08009 - Barcelona Tel. (93) 488.30.09
Telefax: (93) 487.76.59

Libreria de la Generalitat
Palau Moja
Rambla dels Estudis, 118
08002 - Barcelona
(Subscriptions) Tel. (93) 318.80.12
(Publications) Tel. (93) 302.67.23
Telefax: (93) 412.18.54

SRI LANKA

Centre for Policy Research
c/o Colombo Agencies Ltd.
No. 300-304, Galle Road
Colombo 3 Tel. (1) 574240, 573551-2
Telefax: (1) 575394, 510711

SWEDEN

Fritzes Information Center
Box 16356
Regeringsgatan 12
106 47 Stockholm Tel. (08) 690.90.90
Telefax: (08) 20.50.21

Subscription Agency
Wennergren-Williams Info AB
P.O. Box 1305
171 25 Solna Tel. (08) 705.97.50
Téléfax: (08) 27.00.71

SWITZERLAND

Maditec S.A. (Books and Periodicals)
Chemin des Palettes 4
Case postale 266
1020 Renens Tel. (021) 635.08.65
Telefax: (021) 635.07.80

Librairie Payot S.A.
4, place Pépinet
CP 3212
1002 Lausanne Tel. (021) 341.33.48
Telefax: (021) 341.33.45

Librairie Unilivres
6, rue de Candolle
1205 Genève Tel. (022) 320.26.23
Telefax: (022) 329.73.18

Subscription Agency
Dynamapresse Marketing S.A.
38 avenue Vibert
1227 Carouge Tel.: (022) 308.07.89
Telefax: (022) 308.07.99

See also:
OECD Publications and Information Centre
August-Bebel-Allee 6
D-53175 Bonn 2 (Germany)
Tel. (0228) 959.120
Telefax: (0228) 959.12.17

TAIWAN

Good Faith Worldwide Int'l. Co. Ltd.
9th Floor, No. 118, Sec. 2
Chung Hsiao E. Road
Taipei Tel. (02) 391.7396/391.7397
Telefax: (02) 394.9176

THAILAND

Suksit Siam Co. Ltd.
113, 115 Fuang Nakhon Rd.
Opp. Wat Rajabopit
Bangkok 10200 Tel. (662) 225.9531/2
Telefax: (662) 222.5188

TURKEY

Kültür Yayınları Is-Türk Ltd. Sti.
Atatürk Bulvarı No. 191/Kat 13
Kavaklıdere/Ankara Tel. 428.11.40 Ext. 2458
Dolmabahçe Cad. No. 29
Besiktas/Istanbul Tel. 260.71.88
Telex: 43482B

UNITED KINGDOM

HMSO
Postal orders only:
P.O. Box 276, London SW8 5DT
Gen. enquiries Tel. (071) 873 0011
Telefax: (071) 873 8200

HMSO Bookshop
49 High Holborn, London WC1V 6HB
Branches in: Belfast, Birmingham, Bristol,
Edinburgh, Manchester

VENEZUELA

Libreria del Este
Avda F. Miranda 52, Aptdo. 60337
Edificio Galipán
Caracas 106 Tel. 951.1705/951.2307/951.1297
Telegram: Librestre Caracas

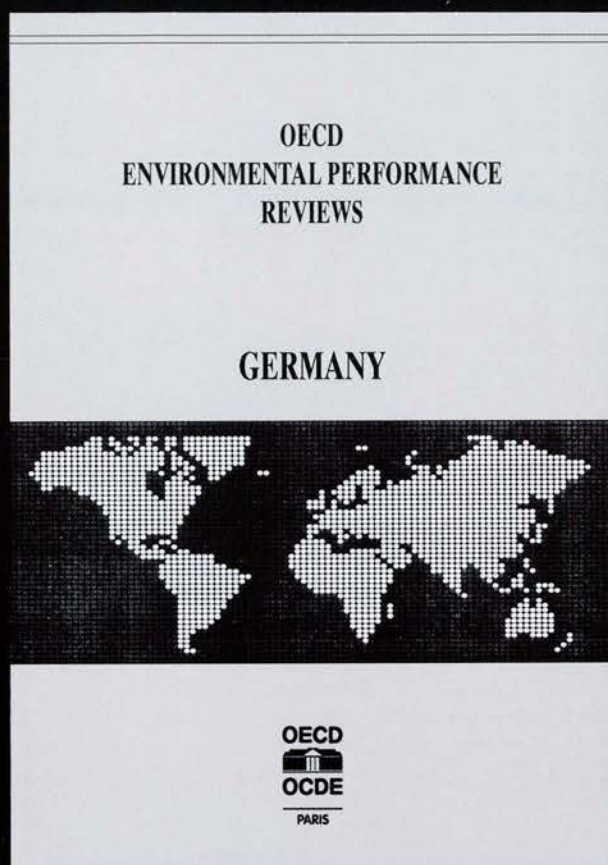
Subscription to OECD periodicals may also be
placed through main subscription agencies.

Orders and inquiries from countries where Dis-
tributors have not yet been appointed should be
sent to: OECD Publications Service, 2 rue
André-Pascal, 75775 Paris Cedex 16, France.

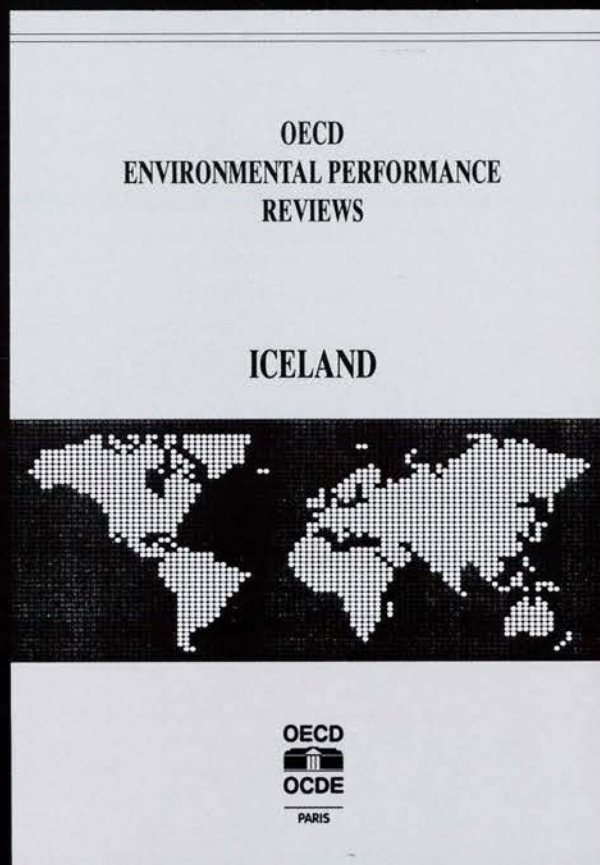
OECD ENVIRONMENTAL PERFORMANCE REVIEWS

The OECD has launched a new programme of environmental performance reviews for each member country.

Environmental performance is assessed in reducing the overall pollution burden and managing natural resources as well as in integrating environmental and economic policies and strengthening co-operation within the international community. Environmental performance is assessed with regard to the degree of achievement of domestic objectives and international commitments. Such objectives and commitments may be broad aims, specific qualitative goals of even more precise quantitative targets or measures for action.



(97 93 05 1) ISBN 92-64-13917-6 July 1993 227pp
FF130 US\$29 DM49



(97 93 04 1) ISBN 92-64-13920-6 July 1993 129pp
FF130 US\$29 DM49

OTHER ENVIRONMENTAL TITLES OF INTEREST:

Toward Clean and Fuel Efficient Automobiles

(02 93 09 3) ISBN 92-64-03868-X May 1993 Bilingual 620pp
FF280 US\$64 DM115

Agricultural and Environmental Policy Integration

(97 92 11 1) ISBN 92-64-13820-X February 1993 98pp
FF100 US\$24 DM41

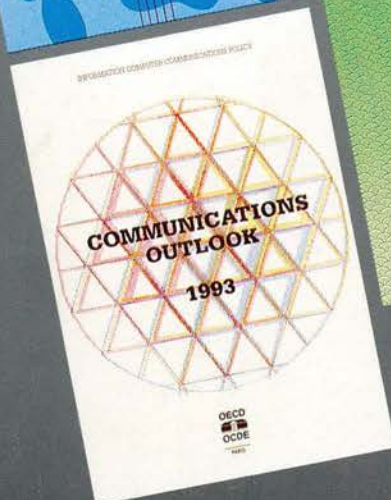
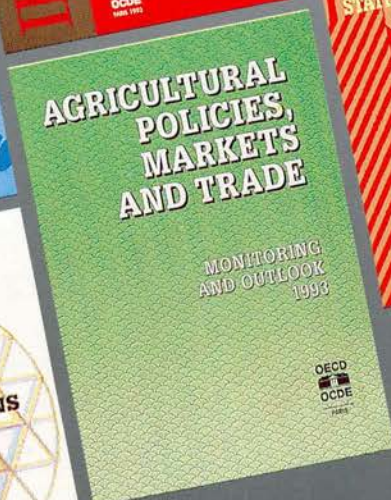
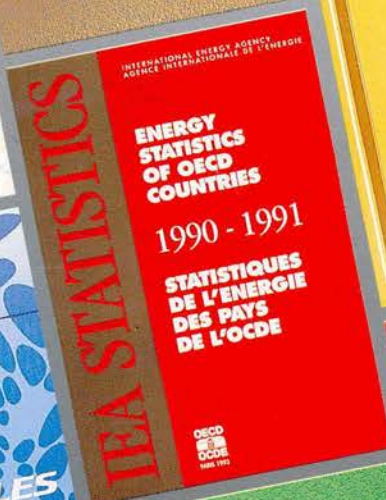
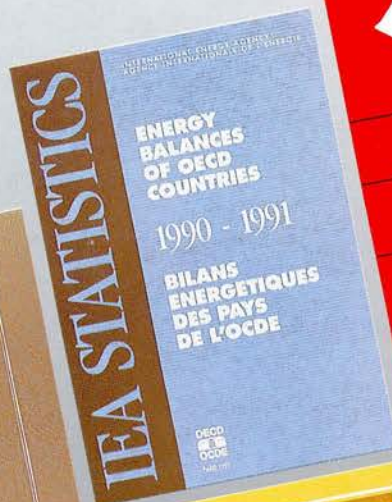
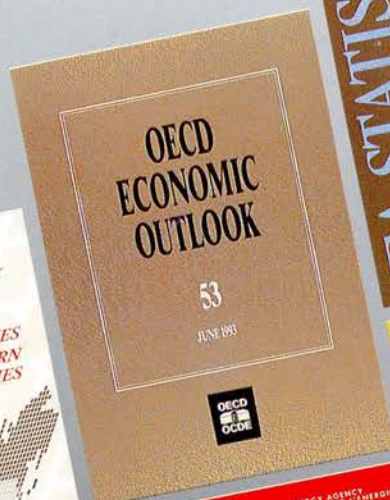
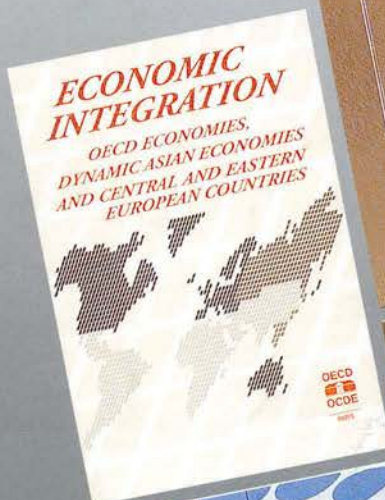
Benefits Estimates and Environmental Decision-making

(97 88 04 1) ISBN 92-64-13751-3 September 1992 60pp
FF55 US\$14 DM23

Climate Changes Policy Initiatives

(61 92 14 1) ISBN 92-64-13754-8 September 1992 184pp
FF150 US\$37 DM60

OECD Publications



the
10
best
sellers
of the
past
2
months

Fill in the
order form
with this issue

Growth and Employment

A Key Role for Human Resource Development

The near-term outlook for OECD employment and unemployment is bleak as the OECD economy enters its third year of low growth. A moderate recovery may get under way early in 1994, but the unemployment rate in the OECD area is likely to continue rising well into next year, equalling its previous post-war high of over 8¼%. In Europe, the unemployment rate could reach 12%.

A key goal for policy-makers must be to prevent the current steep cyclical rise in unemployment from ratcheting up into a higher level of unemployment that cannot be reversed quickly once recovery comes. Experience shows this to be a considerable risk for many continental European countries.

OECD countries also have to accelerate the upgrading of the knowledge and skill bases of their economies if they are to raise employment and living standards in the face of technological progress and the changing international division of labour.

In order to respond effectively to these challenges, policy has to exploit the complementarity between sound macro-economic policies, aimed at creating the right environment for economic agents to take long-term decisions about saving and investing, and structural policies aimed at making labour and product markets more adaptable. A prime requirement is that labour-market policies, social policies and education and training reinforce one another to encourage activity.¹

The Labour-market Outlook

OECD unemployment is projected to rise to 36 million by the end of the year, up sharply from the cyclical low of 24½ million in 1990. The corresponding OECD unemployment rate of 8¼% would equal the previous post-war high recorded in 1983. Reducing unemployment has therefore become a central goal of policy for OECD governments.

One encouraging element in this otherwise gloomy picture is that employment is expected to pick up slowly from the second half of this year, reflecting almost entirely gains in North America and Japan. Italy and the United Kingdom are also expected to record some growth in employment. The main area of continuing labour-market weakness would, in general, appear to be in continental Europe. A generalised OECD-wide recovery is not expected to get under way before the end of this year or early next year, although its timing

is uncertain. Even if the recovery develops as projected, it would take time for this to translate into lower unemployment in the OECD area: OECD projections show a slow decline in unemployment setting in only in the second half of 1994.

The gravity of the labour-market situation is heightened by the fact that the current cyclical rise in unemployment comes on top of already high levels of structural unemployment. In many countries, declines in unemployment during the expansion phase of the cycle have not been strong enough to lower unemployment rates to the previous cyclical low. This so-called 'ratchet' pattern – strong rises in unemployment in the recession allowed by only small declines over several years of expansion – is evidenced also by long-term unemployment. Although the proportion of long-term unemployed in the total fell in several countries in the late 1980s, it was higher in 1990 than in 1983 in a number of countries, principally in Europe. The persistence of youth unemployment is another indicator of structural difficulties – it remains stubbornly high in many countries, and has increased in several during the current downturn, despite the receding effects of the baby boom.

High and persistent unemployment is the most visible sign of labour-market slack. But unemployment is not, in itself, a comprehensive measure of labour-market slack and, in setting policies, a range of other indicators of labour-market performance must be considered. For example, taking account of discouraged workers would add significantly to measured unemployment. Similarly, policies to encourage early retirement reduce participation in the labour force of older workers. Measures of non-employment are therefore important indicators for policy-making.²

Similarly, two trends in the quality and nature of new jobs are important in assessing labour-market performance. First, earnings differentials apparently widened in many OECD countries in the 1980s, in contrast to the 1970s, and very significantly so in the United Kingdom and the United States. In the United States strong employment growth over the last decade has gone hand-in-hand with a fall in real wages for the lowest-paid workers. This has given rise to concerns over whether improved job performance can be bought only at wages which risk creating a class of working poor. Second, part-time and temporary jobs accounted for a large part of the job growth in the

1. *Employment Outlook*, OECD Publications, Paris, 1993.

2. *Employment Outlook*, OECD Publications, Paris, 1992.

1980s, especially in Europe. Many of these jobs can, directly or indirectly, provide good careers or future prospects, and are clearly a response to changing employer requirements and worker preferences. But there are concerns that some offer only sub-standard employment and income security and may not be pathways to rewarding careers. Between 20 and 30% of part-time workers, for example, would prefer a full-time job but cannot find one; in some European countries the proportion of temporary workers seeking permanent jobs is as high as 60 to 80%.

Policy Challenges and Responses

Against this background of below-trend growth and rising unemployment, policy-makers are facing a twin challenge in terms of improving labour-market performance in OECD countries. First, they must prevent the recent and prospective rises in unemployment from ratcheting up into a higher structural unemployment rate once a recovery gets under way – which has been the case over the past three cycles, especially in Europe. Second, they have, over the medium to longer run, to facilitate the on-going shift in production structures in the OECD countries – under the influence, *inter alia*, of technological change and the growing world integration of goods and factor markets – away from low-skilled, low-wage jobs towards high-skilled, high-wage jobs.

To respond to these challenges, a coherent approach is required to macro-economic and structural policies that seeks to exploit to the maximum the complementarities between them. Macro-economic policies have to provide a predictable non-inflationary environment so that wage- and price-setters, investors and savers can all take long-run decisions favourable to output and employment growth. In such an envi-

ronment, it will be easier to build a coalition in favour of pressing ahead rapidly with much-needed structural reforms. At the same time, structural reforms can enhance the leverage of macro-economic policies by making labour and product markets more flexible. In this way, a virtuous circle of mutually supporting reforms can be established, leading to better economic and employment performance.

One key link in establishing a virtuous circle is the development of a comprehensive strategy for the development of human resources. If such a strategy is articulated and implemented successfully, this will contribute to improved performance in a number of ways. It would:

- offset inflation pressures in the recovery phase by reducing mismatches and skill shortages
- assist the unemployed, especially key target groups such as young people and the long-term unemployed, to compete successfully for jobs
- lay the foundations for continuous improvement of the skills of the workforce.

There are several interrelated strands to such a strategy encompassing labour-market, social and education and training policies.

Active Labour-market Policies

The new framework for labour-market policies – which was endorsed by OECD labour ministers in 1992 – proposes a progressive shift of resources from passive income-support to active measures directed at three main goals – to mobilise labour supply, to develop employment-related skills and to promote efficient labour markets.

Economic theory suggests that active policies can lower structural unemployment through two main routes. First, they can enhance the ability of so-called 'outsiders' (for example, the long-term

unemployed or first-time job-seekers) to compete more effectively for jobs, thereby weakening the bargaining strength of 'insiders' in wage formation. Second, they can promote more efficient matching between job-seekers and available vacancies. There is some limited evidence in support of these hypotheses. But full assessment of the macro-economic impact of active labour-market policies is hindered by a lack of data and the difficulty in establishing robust causal links between the policies and labour-market outcomes.

There is more evidence on the impact of a wide range of active measures on future re-employment and earnings prospects for programme participants. A review of programme-level evaluation studies shows that several major labour-market programmes have helped to improve job opportunities and future earnings for participants. Many successful programmes share the characteristic of being targeted on specific client categories, or are designed to address specific labour-market problems. This applies, in particular, to training programmes. Less favourable results have been reported for certain broadly targeted programmes, such as training programmes offered to all the unemployed. Some of the most consistently positive results have been reported for intensified placement and counselling efforts, aimed at encouraging effective job-search by the unemployed. Such measures have proved to be very cost-effective, especially when targeted on particular groups, such as workers affected by plant closures or the long-term unemployed. All labour-market programmes are subject to some 'dead-weight' cost – part of the labour-market outcomes they are designed to encourage would have occurred even in the absence of the programme – and these effects are particularly strong for some job-creation programmes, especially those involving recruitment subsidies. It

is, however, possible to reduce dead-weight costs by tying the subsidies to incremental hires or by targeting them to particular groups.

Evidence from the last few years suggests that rhetoric does not match reality in many OECD countries in terms of the shifts in public spending away from passive income-support to active measures. Progress in the implementation of active policies has been only modest to date. It has inevitably been made more difficult by the current downturn. Only a few countries have shifted resources significantly into active policies. While there is evidence that these policies have had positive effects, they are hampered by problems of programme design, implementation and insufficient integration with other policies. The full potential of these policies has yet to be exploited.

A Coherent Approach to Labour-market and Social Policies

Labour-market and social policies have often been seen as intrinsically separate. In practice, however, many labour-market programmes have some social objectives too, and virtually all social programmes impinge on the incentive structure of the labour market. In many countries, the unemployment benefits system, rather than providing temporary income-support to job-seekers while they re-establish themselves in the labour market, has also become a means for longer-term income-support. Long, and in some cases virtually open-ended, unemployment benefits have added to the incidence of long-term unemployment in some countries. Long-term unemployment is a trap: people become marginalised and their job-search is not effective enough to restrain wage demands by the employed. These negative side-effects of unemployment benefits systems are ultimately costly both for

the long-term unemployed themselves and for society as a whole. A more positive approach would ensure that those out of work for more than a given period are guaranteed the opportunity to engage in activity, for example, through training or subsidised employment in either the private or public sectors, which would re-integrate them into the labour force. Some countries already invoke administrative sanctions to encourage take-up by the unemployed of such offers.

A key feature of programme design is the average level of compensation paid to participants. This varies widely depending on the programme. When setting the level of compensation, it is important to bear in mind its generosity relative to unemployment benefits or average earnings. The aim should be to encourage job-search by programme participants and maintain downward pressure on wages.

Another important interaction between labour-market and social policies involves tax and social transfer systems which in many countries interact so as to create 'dependency traps', whereby additional work effort leads to little or no increase in *net* (after-tax) income because incremental gross earnings are largely, or even fully, offset by marginal income taxes and the reduction, or complete loss, of benefit payments. The financing of social expenditure, which relies heavily on payroll taxes paid by both employers and employees, provides another example. By taxing the use of labour, payroll taxes may reduce employment and raise unemployment. While the empirical evidence is mixed as to whether or not these taxes raise structural unemployment in the long term, there is better evidence that they do raise it over the short to medium term. Moreover, there is also some evidence that the existing structure of payroll taxes acts as a disincentive to the hiring of unskilled, low-wage

workers. Switching the financing of social security systems away from payroll taxes to other taxes that have a less unfavourable impact on employment warrants serious consideration.

Government regulations concerning hiring and firing are motivated by the desire to protect workers against unfair dismissals and redundancy. However, these regulations, especially high dismissal costs, also have other labour-market outcomes. They are often cited as a factor which, by raising labour costs, tends to reduce employment opportunities. If dismissal costs are too high, employers may become unduly cautious about hiring new staff from the ranks of the unemployed or those with lower skills or experience. There remains considerable uncertainty over the relationship between dismissal costs and employment levels. However, there is some evidence that the severity of employment-protection legislation (as measured, for example, by severance payments and notice periods) is in some countries positively related to the rate and incidence of long-term unemployment. In southern European countries, in particular, dismissal costs and long-term unemployment are both relatively high by international standards. This relationship suggests that the benefits and costs of employment-protection legislation should be re-assessed.

These examples illustrate that treating labour-market and social policies as intrinsically separate is a false dichotomy. These policies are most effective when social provisions and labour-market incentives reinforce each other, rather than operating at cross-purposes. It is particularly important to avoid social policies imparting unnecessary rigidities to labour markets, while failing to achieve their basic distributional objectives sufficiently well to justify the efficiency losses. As a guiding principle, the labour-market and social policies that work best are those that jointly enhance

and encourage labour-force participation, thereby maintaining work incentives. No matter how successful societies may be in carrying out these policies, there will, however, always be some people who are unable to earn a decent income from work. All modern societies ensure at least a minimum level of income and social protection. In some cases, temporary or permanent subsidies (for the disabled, for example) may be necessary in order to achieve this.

Education and Training Policies

Only a well trained and highly adaptable labour force can provide the capacity to adjust to structural change and exploit the new high-wage employment opportunities created by technological progress. Systemic reform must be directed at improving coherence among the various parts of the learning system, with: sound initial education providing a solid basis for higher-level education and training; stronger linkages between academic and vocational studies; an improved flow of information between schools and work; and life-long learning through further training and retraining of adults.

Policies for initial education must aim at raising student performance, eliminating early school leaving, and improving the performance of under-achievers. Academic studies have to be broadened, orienting them towards work and working life. At the same time, for those students engaged in more vocational studies, further emphasis has to be given to acquiring general skills and competences to supplement more specific vocational qualifications. There are major problems in the transition from school to work in most countries, although some countries make good use of apprenticeship schemes, partnerships and other forms of linkage between schools and employers. Major efforts are required to improve

the articulation between learning and work through better flows of information and expertise between school and the world of work.

Education and skill-development is a joint responsibility of the private sector, education and labour-market authorities. Enterprises play a central role in skill-development. But the freedom of workers to take their skills to other employers creates a disincentive for some enterprises to train workers. At the same time, compressed wage differentials may reduce the incentive for workers to invest in enhancing their skills. Thus, markets do not always produce an optimal level of investment in skills. The government can help compensate for such imperfections by improving incentives to both workers and companies to invest in training. The establishment of frameworks for the assessment and recognition of qualifications, and of wage-structures flexible enough to reward skill enhancement, will improve incentives for workers. The creation of mechanisms for ensuring that the economic value of qualifications and the investment nature of training are reflected as asset values in company accounts will improve incentives for employers.

There is some evidence that the provision of skill training is linked to the length of job tenure within the firm. Excessive labour turnover is liable to reduce the firm's stock of specific skills, to discourage employers from investing in training and to disrupt the continuity required for on-the-job learning. There are very large differences in average job tenures across countries; those with longer employment tenures are also those where young people are likely to receive comparatively high levels of training. College-educated workers have longer job tenures than less well educated workers, on average, and there is a tendency for industries in which training is more intense to employ their

workers for longer. This general association of longer training with higher average tenures, both between industries and across countries, suggests that a strategy to foster enterprise-based training should attempt to promote longer-lasting attachments between workers and enterprises that are beneficial to both.

A Strategy for Growth and Employment

The role of a comprehensive human-resource development strategy as an integral part of a policy package to boost employment performance requires emphasis. Given the nature of the labour-market problems described above, even the best designed human resource development policies would provide only part of the answer. Recognising the complexity of the problems, the Organisation is preparing, at the request of its Council at Ministerial level, a comprehensive strategy to promote sustainable growth and employment for the 1990s. This work, to be completed in 1994, will have to consider action in a number of policy areas, in addition to those outlined above. The list includes: macro-economic policy and, in particular, its role in providing a stable framework for private-sector decision-making; the development and diffusion of technological change as the principal source of the new skill-intensive jobs; competition, both national and international, as a main mechanism impelling the development, introduction and diffusion of new technologies; wage and price flexibility as a means of widening job opportunities; and the encouragement of private-sector enterprise, in particular the creation of new firms or the transformation of existing ones, in order to reap the benefits from new technological opportunities and create viable jobs.

28 June 1993