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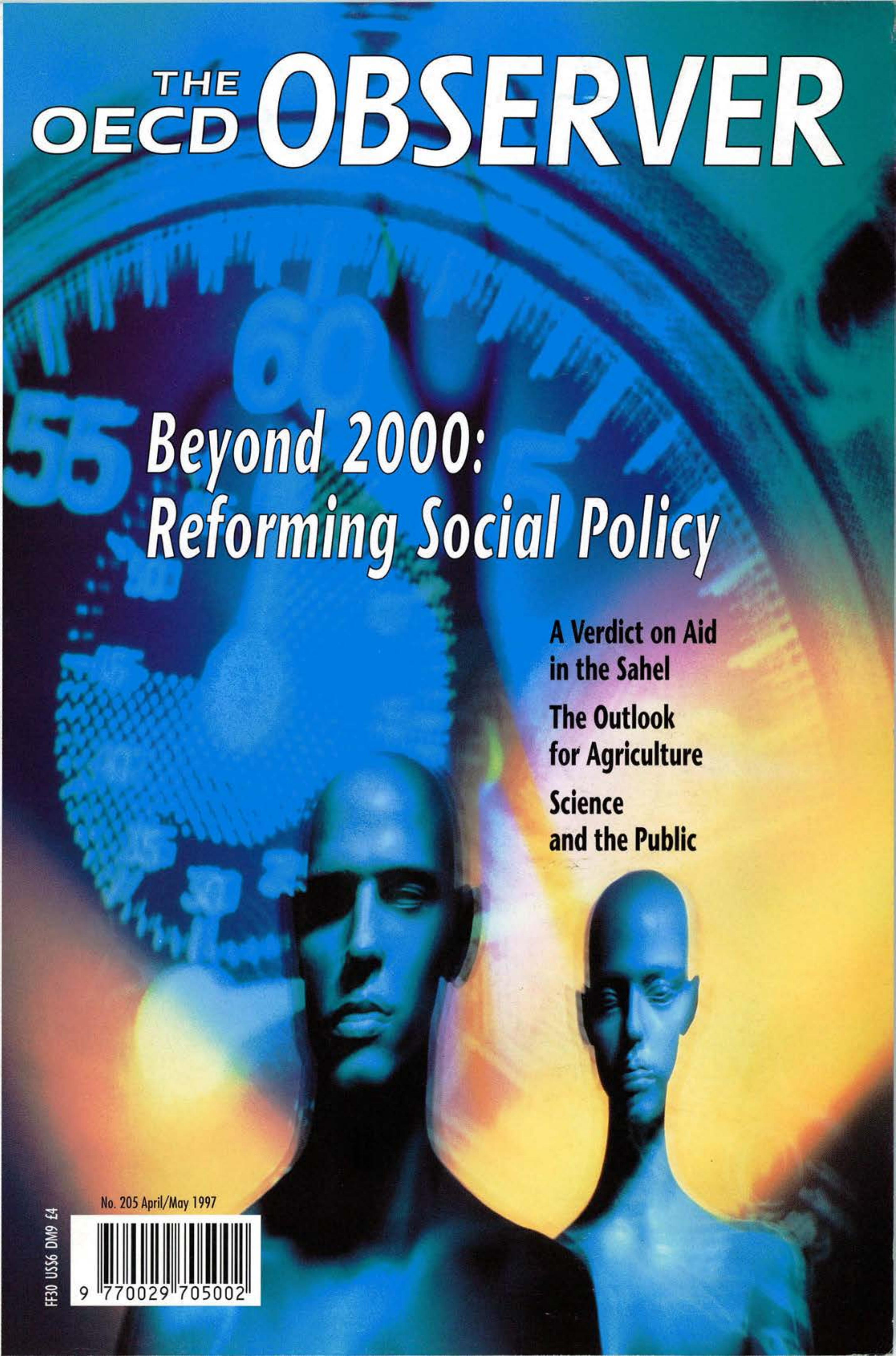

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(81 96 10 1) ISBN 92-64-15318-7,
November 1996, 100pp.
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See Peter Hicks,
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The OECD Observer,
No. 203, December 1996/
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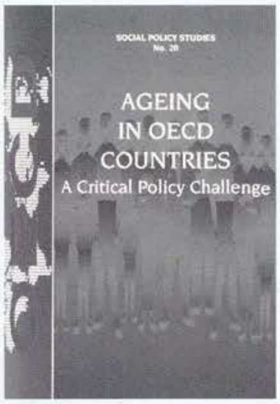

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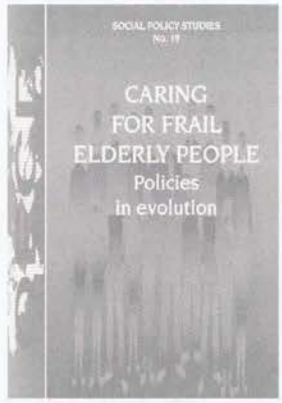
FF325 £42 US$64 DM95

See Patrick Hennessy
and Joshua Wiener,
'Paying for Care
for the Elderly',
The OECD Observer, No. 201,
August/September 1996.



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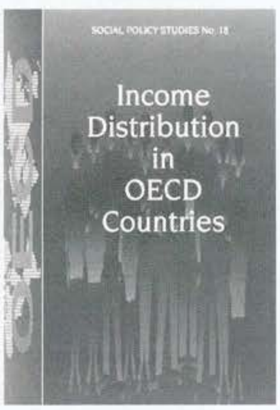

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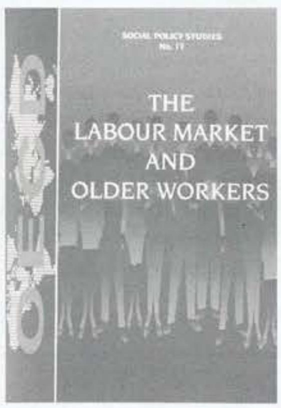

A companion volume (No. 16), **The Transition from Work to Retirement**, complements this information.

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With the approach of the 21st century, social policies are coming under pressure from high and persistent unemployment, aging populations, and the dissolution of traditional family structures. What will be the tenor of reform by the turn of the millenium?

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Editorial

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A New
for Social

Donald J. Johnston,
Secretary-General of the OECD

From its beginnings, the OECD has been committed to keeping in harmony and balance the objectives of maximising economic growth on the one hand and promoting rising standards of living, that is, social well-being, on the other. These twin objectives flow directly from the principle that every economic policy should have a social purpose.

In the wake of World War II, most OECD countries witnessed a migration of workers from farms into the major industrial centres where they were well equipped to work on factory production lines. Economic growth was generated very much by the marriage of capital, resources and labour, much of the latter being unskilled.

That model has been substantially altered in recent years, with the physical components playing an increasingly smaller role, largely because of amazing technological progress.

Before this shift in the industrial/manufacturing paradigm became fully appreciated, it was understandable that

'Mind Set' Policy

public policy should be divided conveniently into economic policy on the one hand and social policy on the other. And while governments and the OECD itself maintain this division in internal structures, it is now apparent that this differentiation is more and more irrelevant, as is the division between domestic and international policies.

We have moved into knowledge-based societies within the OECD area. This means that comparative advantage resides more in the flexibility and capacity of human capital than in the material resource base with which so many countries are endowed. Japan was a true pathfinder in establishing that comparative advantage could be 'engineered' through an investment in human capital. A change in 'mind set' is now necessary so that each of us see the investment in our people as being in our own best interests, even those who may not have children of their own.

I conclude from this that what we have traditionally regarded as social policy is in substance a part of economic policy – in fact, the most important part. Our intention must therefore be directed to the enhancement of human capital through wise investment strategies in education, health and social security. Those investments must indeed be well focused, and not wasteful, given the budgetary constraints that have bedevilled most of our economies. But there is no doubt that such investments will prove to be the most important for the future of our respective societies.

Balancing Security

Mark Pearson and Peter Scherer

Today's labour-market, social, macro-economic and demographic realities look starkly different from those prevailing when the welfare state was constructed.[1]

The difficulties faced by systems of social protection today – the increased numbers of elderly people, family instability, high and persistent unemployment – are often contrasted with the 'golden era' of the three decades after the Second World War. Social policies, it is argued, were designed for a period when there was full employment, when families were stable, and where the most pressing social concern was to ensure that elderly people could benefit from the fruits of economic growth by using taxes to transfer income to them from the working-age population.

Yet the 'golden era' was not recognised as such by its contemporaries. In the 1950s, conservatives criticised the welfare state for its inflationary effects. Ten years later the left attacked it for its inadequate egalitarian achievements. The pendulum swung once again to the right in the 1970s with backlash movements against high taxes and the adverse effects on the work ethic. Now, as Table 1 suggests, the crisis is derived from population aging, the decline of the nuclear family as a social unit and high and persistent unemployment. Not only is the pendulum in constant motion; the malaise seems always different. It sometimes seems that the welfare state has always been in crisis.

It is widely claimed, though, that the current crisis is deeper and more damaging than previous difficulties. The truth of that assertion depends on what is meant by 'the welfare state'. State pension systems may well be unsustainable,[2] but that is only part of the story. Welfare states, as a post-war construct, meant something more than the mere sum of social programmes. The ideal, when launched in the 1940s, was for nation-building and social integration in the face of totalitarian menace.[3] Full employment and redistribution and, more generally, the dismantling of class, ethnic or regional division, were seen as fundamental prerequisites for stable liberal democracy.

Judged by those objectives, the post-war welfare state was a success. To the extent that social security became more comprehensive, more people found jobs, and the capacity of the labour market and the family were harnessed to assure social welfare. The architects of the modern welfare state, such as Lord Beveridge in Britain or Gustav Möller in Sweden, were adamant that work and family, and not the state, should constitute the principal foundation of social welfare. The role of social insurance was to allow families to use part of the revenues gained through work to share risks, so that the typical life-cycle would no longer be interspersed with long periods in poverty.

The early history of the welfare state coincided with rapid growth and the near-elimination of unemployment, leading many observers to conclude that social insurance is viable only when economies are healthy. Per capita economic growth has continued steadily over the past quarter-century, and has been faster in the European region than in North America, where unemployment has remained lower. Although the structure of employment has changed extensively, the proportion of the working-age population in employment has not altered dramatically, in spite of the social developments – early retirement, increases in initial schooling – which might have been expected to reduce it. Female participation in the labour force has risen almost everywhere. There has, of course, been a shift to part-time employment: working time as well as employment itself has been re-arranged amongst the population. Labour markets in OECD countries show every sign of having successfully capitalised on the talents of the most educated and highly skilled parts of their populations. But this very process has 'selected out' other groups, not least those with low skills, leaving the welfare state in difficulty.

The uniqueness of the current crisis is that it springs from simultaneous changes in both the family and labour market (the very foundations of the welfare state upon which Beveridge and his contemporaries relied), compounded by the effects of population aging. Although employment rates in general have not fallen, job opportunities for young and low-skilled people are limited. To some extent, in response to these pressures, marriage and childbirth are being deferred, while divorce (combined with births outside wedlock) increases the number of single-parent families who are particularly at risk of poverty. These changes in labour markets and family formation threaten the equilibrium of welfare states whose social programmes were based on a wholly different risk-profile. Population aging asserts long-term pressure and intensifies demand, while the financial means to address either are diminishing.

The New 'Social Risks'

The welfare state has been relatively successful to date in providing income security for those already established in the labour force, both during their working life and after retirement. Becoming unemployed, sick, disabled or widowed are not seen as problems with which individuals (and their families) should cope on their own: because they are held to be social phenomena, government has taken some

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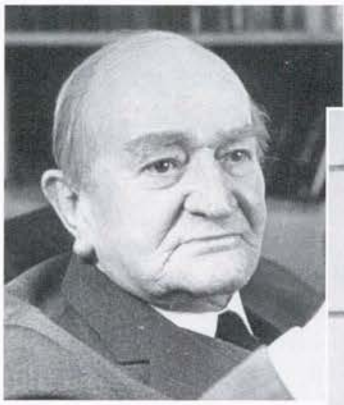
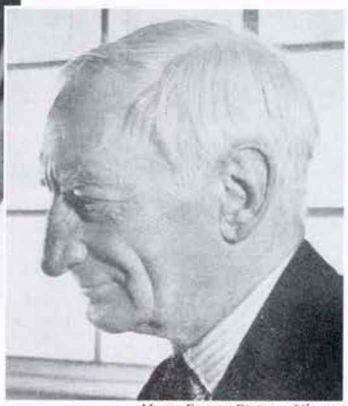
1. ***Beyond 2000: The New Social Policy Agenda***, *OECD Publications, Paris, forthcoming 1997.*

2. *See pp. 10–14.*

3. *These objectives were important factors in the earlier 'New Deal' of President Roosevelt in the United States.*

and Sustainability in Social Policy

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Gustav Möller and Lord Beveridge, founders of the modern welfare state: how would they have reacted to its latest crisis – caused this time by unemployment, the decline of the family as a social unit, and population aging?

responsibility for dealing with their consequences.

New social risks threaten people who fail to become established in careers. Long-term and youth unemployment are social problems to the extent that the individuals and families affected are not considered to be solely responsible for their condition. But the traditional response of the welfare state – income support – is clearly inadequate in meeting individual and social requirements. Lengthy spells of unemployment or low-paid and often insecure jobs result not only in low incomes or, worse, trap people in unemployment but also increase the stress on families and reduce incomes which can be expected in retirement.

The main risk that families now face is that their children will not be able to establish themselves in careers. The transition from school to work can be difficult and many countries are failing young people in this most crucial part of their lives. Perhaps as a result, the average age at which women have their first child has risen, and fertility rates have fallen sharply, permitting parents to pour more resources into the education of each child in a bid to ensure that he or she has the educational attainment necessary for a successful entry into working life.

Indeed, traditional social-insurance arrangements are powerless against the risk of failing to get established in the labour market or being excluded from reasonably paid jobs for extended periods. They are predicated on the assumption that each generation will make its own way into working life, will establish careers and, through income transfers, will support those who have retired or who are temporarily without work.

An alternative to insurance-based policies is to target help on people with low incomes. This approach guarantees coverage for people not integrated into the labour force, but it raises its own problems. For example, the differential between earnings in a low-wage job and basic income-support payments can be low, with the result that the financial gains from working are hardly large enough to justify the loss of benefits.

Growth in the proportion of the population in receipt of income support also saps public confidence, with recipients increasingly suspected of abuse, of making fraudulent claims or of making insufficient efforts to find work to support themselves and their families. And where recipients of such support are regionally concentrated, severe political pressures can result, as reflected in recent strains in regional policy in Belgium, Canada and Italy, where perceived imbalance between those paying for social welfare and those receiving it has exacerbated separatist sentiments. When benefits are concentrated on a particular group or geographical area, or recipients feel that they have to manipulate the system in order to make ends meet, the 'legitimacy' of the entire system can be thrown into jeopardy. It is therefore very important that social-protection systems be administered fairly but firmly: lax administration can undermine the very existence of the system itself.

Radical Reform – or Wait and See?

In the face of these trends policy has often been influenced by the argument that high and persistent unemployment is the result of economic disequilibria. In this view, it is labour markets which are at fault, and there is nothing fundamentally wrong with current systems of social protection as such. Limited reforms – such as reducing the reliance on employers' social-security contributions (which increase the cost of labour and may harm job creation) and ensuring that the scale and duration of benefits are limited (so

Table 1
Welfare States in Crisis, 1950s–90s

1950s	*1960s*	*1970s*	*1990s*
Too much state	Too little equality	Government overload	Family values decay
Inflation		Stagflation	Aging
		Unemployment	Globalisation Unemployment

Source: OECD

Balancing Security and Sustainability in Social Policy

FOCUS

Directions for Reform

A new approach to social protection will have a stronger emphasis on interventions earlier in life and more preventive (and less remedial) measures. The goal would be to re-define equity and security in terms of barriers towards life-course flexibility, and to avoid definitions which suggest that the goal of social policy is to provide protection against flexibility. For example, existing pension schemes can penalise those who leave their employers to enter new careers. Income support is often structured so as to leave individuals with little financial incentive to work, and those who are working with few returns to increased effort.

Employment opportunities are likely increasingly to favour people who show flexibility, whether through being from a household with other earners (so that short-term fluctuations in income are supportable) or because of their own adaptability. Income-support arrangements should therefore be structured to encourage those in receipt of support to be flexible and to take risks in finding new opportunities. Guaranteeing some degree of income support over the medium term may encourage individuals to take 'risky' jobs, or give them sufficient resources to support their families while they invest in new skills. The twelve-month period used when determining eligibility for family payment in Australia and the six-month period for Family Credit in the United Kingdom are examples of such provisions.

There is likely to be, for the foreseeable future, an excess potential supply of labour, and it makes no sense to insist that people requiring income support should confine their main activity to looking for work. Other activities attracting income support should nonetheless be based on improving employment prospects: training, community work and unpaid trial employment, for example. A number of countries (Australia and the Nordic lands) have modified the 'work test' for unemployment benefit recipients to an enlarged 'activity.

The principle of capitalisation of income security, which has been advocated as a very long-term solution to financing security of income in old age, might be more immediately applied to income support during working life. Those receiving income support (apart from the supplements payable for children and other dependents) could be expected to repay a given part of their receipts when and if their income is above a certain floor. Arrangements for providing income support to students of higher education in several countries (Australia and the United Kingdom, for instance) already have some of these features.

Active 'case-management' procedures should be developed. Rather than carefully controlling entitlements to income support on the basis of past contributions, the emphasis for working-age people should be on ensuring that income support (whether or not on a 'capitalised' basis) is linked to activities which are likely to lead to re-entry into employment.

Caring for others, including children and elderly or infirm relatives, should be recognised as 'active' participation and, where necessary, supported in its own right.

increasing the incentive to work) – are therefore desirable. Such measures apart, the only possible role for social policy, the reasoning continues, is to paper over the cracks in the social fabric and wait for the crisis to blow over.

Perhaps, instead, it is time to see current trends in labour markets as the basis on which social policy should be built, rather than as the scapegoat for its failures. That requires reform of social policy – not least in how it affords protection against distress – in ways which will enhance economic growth without increasing disparity in access to its fruits. The most promising directions for reform involve moving away from income transfers as the main means of providing for distress, to measures which improve the social and labour-market circumstances of the genuinely poor. Prototypes of such policies already exist in many countries (box, left).

Much discussion treats reform of systems of social protection as being synonymous with reductions in public expenditure. The short-run budgetary costs of the measures proposed in the box are unlikely to be less than those of the transfer payments they are intended to supersede. Indeed, they could easily be higher. In view of the primacy given to fiscal retrenchment as a policy objective in most OECD countries, can they afford reforms of the sort suggested?

Three observations are pertinent in answering this question. First, commentators often assume, somewhat naively, that the degree of social protection available in a given country can be measured by the amount which its government spends on social policy. In truth, spending is a poor indicator. Differences in the volume of social-protection expenditures across countries appear much larger than they actually are. Countries with apparently low social spending often do not tax income transfers, mandate employers to provide social benefits (pensions and sick payments, for example) or encourage private provision through tax subsidies. Table 2 illustrates how important these factors can be. Social-protection expenditures in Denmark, Germany and the Netherlands are not twice as high as a proportion of GDP as those in the United States: fully half of the apparent difference can be ascribed to alternative institutional arrangements. If private spending on health is included, the remaining difference is almost eliminated.

Furthermore, cutting government expenditure will increase the pressure on individual households to provide for themselves. In Sweden, for example, taxes paid by households are 37% of private household expenditure, compared with only 10% in the United States. But expenditures on private health, education, day-care and pensions are equivalent to almost 30% of consumer expenditure in the United States, compared with

4. *Gösta Esping-Anderson, 'Welfare States at the End of the Century: The Impact of Labour Market, Family and Demographic Change'*, in ***Beyond 2000: The New Social Policy Agenda***.

5. *See pp. 10–14.*

Divorce and births outside marriage are forcing up the number of one-parent families – which are particularly vulnerable to poverty.

an equivalent figure of just over 4% in Sweden.[4] Cutting public social expenditure will not necessarily lead to a reduction in the total resources which an economy devotes to 'social' ends – though it will alter the distribution of those resources across the population.

Second, most social expenditure is on pensions and health care, the two areas where political resistance to scaling back the role of the state is most intense and where changes inevitably have to be phased in over time. Perhaps the biggest achievement of the welfare state has been to almost eliminate poverty amongst the elderly in many countries. But whereas a large proportion of the elderly rely on public provision for most or all of their income, there are increasing signs of over-provision of public support for others. There is a strong case for reviewing the balance of provision of income support to the elderly[5] and refocusing expenditure on younger generations where social problems are growing in importance.

Table 2
Social Expenditure, 1993
% of GDP

	Denmark	Germany	Netherlands	Sweden	United Kingdom	United States
Gross direct social expenditure	30.5	28.7	30.6	38.3	23.4	15.0
Net current publicly mandated social expenditure	23.1	24.9	22.4	29.6	21.5	16.1
Non-public health expenditure	1.2	2.5	2.0	1.3	1.1	7.7

Source: OECD

The third reason for seriously considering pre-emptive, preventative policies, despite their cost, is that the alternative is so unattractive. Failure to prevent long-term exclusion from the labour market leaves OECD societies with the options either of continued high costs of paying income-support to a significant proportion of the population for prolonged periods, or of sharply reducing these payments, with possibly adverse consequences for social cohesion and transmission of disadvantage across generations.

One characteristic which successful economies of the future will have is that they will be inclusive, effect-ively exploiting the capacities of all individuals. Social expenditure must move towards underwriting social investment, helping recipients to get (re-)established in the labour market and society, instead of merely ensuring that failure to do so does not result in destitution. If social expenditure remains predominantly income support for the inactive, it will fail both society and the individuals it is purporting to help. ■

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Pension Policies and the Aging Society

Lans Bovenberg and Anja van der Linden

Can people in OECD countries afford to grow old? The rapid aging of the population expected in the near future will put enormous pressure on social-insurance, pensions and health-care systems, particularly in the second quarter of the next century. OECD governments should act on several fronts to meet this major challenge, involving both social-insurance and pension systems and economic policies more generally.[1]

There are three different kinds of pension system in operation in the OECD area, each with its own strengths and weaknesses, which contribute to the major uncertainties about their likely performance. It is easiest to define these systems according to how they are financed: pay-as-you-go (PAYG), defined-contribution (DC), and defined-benefit (DB) schemes.

PAYG systems pay retirement benefits out of premia collected on the labour income of the young. These schemes typically imply substantial intergenerational transfers. PAYG systems also generally redistribute resources within generations – the poor contribute less and the rich more than the actuarial value of their pensions. Some highly redistributive PAYG schemes provide flat benefits (but link premia to earnings); others are less redistributive, linking benefits to salaries or premia paid. Many larger OECD countries, including Germany, the United States, France and Italy have less redistributive PAYG systems than some smaller ones.

In contrast to PAYG plans, DC schemes are not redistributive – neither within nor across generations. Individual retirement benefits are directly related to individual contributions. At any point in time, accumulated capital corresponds to the discounted value of future retirement benefits.

DB schemes are a mixture of the other two. Like DC schemes, DB pensions employ capital funding but, in contrast, benefits are based on salaries in the period preceding retirement rather than on the discounted value of individual lifetime contributions. Indeed, besides accumulating capital, the funds levy premia on the younger working members of the scheme to finance the benefits of the older workers and the retired. In this way, they employ a mixture of capital funding and PAYG financing. They are typically provided as occupational schemes by firms.

Lans Bovenberg and Anja van der Linden, economists at the CPB Netherlands Bureau for Economic Policy Analysis, were contributors to the OECD High Level Conference, 'Beyond 2000: The New Social Policy Agenda', held in Paris recently.

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Pension Strengths and Weaknesses

All three systems of pension provision have advantages and disadvantages.

The very purpose of public pension systems was to protect the elderly against poverty by guaranteeing them an income.

Thion/Campagne, Campagne

Intergenerational risk

The main potential strength of PAYG and DB schemes is intergenerational risk-sharing in the face of major long-term macro-economic risks, including depression, war, natural disaster and financial crisis. These risks can in part be shifted to the young in the form of changes in the premium rate. This intergenerational risk-sharing, aimed at protecting the incomes of the elderly, can be efficient because the young are generally better able to adapt their behaviour to changes in wealth than are the elderly. In DC schemes, by contrast, the elderly are fully exposed to investment risks.

Political risk

Although PAYG systems are less vulnerable to investment risk than are DC schemes, they are likely to be more vulnerable to political risk, as governments are forced by changing circumstances to reduce actual pension payments below those expected. In particular, the implicit intergenerational 'contract' associated with PAYG schemes may break down as individualisation erodes intergenerational altruism and as aging makes intergenerational 'solidarity' more expensive to maintain. DC schemes are less vulnerable to political risk because they feature well-defined property rights on individual pensions. DB schemes may suffer from political risk, as individual property rights on assets tend to be ill-defined. Such schemes tend to feature implicit rather than explicit contracts, as the benefit promise is backed up not only by financial assets but also by the reputation and market power of the firm and solidarity shown by future workers.

Individual choice and administrative costs

PAYG, and to a lesser extent DB, schemes require compulsory participation under rather uniform conditions. If individuals were free to opt out or select their own pension packages, adverse selection – voting with one's feet – would erode intra- and intergenerational risk-sharing and redistribution. DC schemes leave more scope for individual choice and can cater better to the specific requirements and preferences of each participant. The disadvantage is that the contributions and assets accruing to each individual must be separately administered, leading to high transaction costs.

Insurance, alleviating poverty and incentives

The transfers associated with intergenerational risk-sharing imply that PAYG benefits are not actuarially fair. Policy-makers face a trade-off between efficiency (by redistributing less and keeping marginal tax-rates low) and intragenerational equity (by redistributing more and alleviating poverty among the elderly).

The extent of the conflict between the two objectives depends on income heterogeneity within generations compared with heterogeneity across them. These objectives do not conflict much if the old are a homogeneous group that is poorer than the young. Yet if incomes vary within (rather than across) generations, age is not a good indicator for poverty. As a result, the government has to supplement its information about individuals' age with information about their incomes to determine who is poor. That imposes additional administrative costs, may cause limited take-up because of stigmatising effects, and distorts saving and the supply of labour.[2] Alleviating poverty thus becomes more expensive.

Voluntary DC schemes distort neither saving nor the supply of labour because they do not redistribute across and within generations. DC schemes are particularly attractive if society does not attach a high priority to (intra- and intergenerational) redistribution and risk-sharing.

Employers often adopt occupational schemes of the DB type. Long vesting periods (the amount of time which a worker has to spend with a company before being entitled to a (full) pension), limited indexation of pension rights for people who stop their payments before they retire, and linking retirement benefits to the final wage motivate workers to apply themselves to their jobs, and binds them to the firm. This reduces costs associated with monitoring, training, hiring and firing workers.

These incentive effects come at a price. In particular, limited portability of pension rights impedes labour mobility across firms, thus rendering its allocation less efficient, and may discourage gradual retirement. DB schemes tend to favour the rich (who tend to have stable jobs and enjoy rapid career advancement) rather than the poor (who tend to have high rates of job turn-over).

Demographic shocks and funding pensions

The long-run return to PAYG schemes depends on the growth rate of labour income, which in turn determines the growth of the contribution base. The return on funded schemes, in contrast, depends on the rate of return on financial assets. In the long run, therefore, funding can offer higher retirement benefits only if the rate of return on financial capital exceeds the growth rate of labour income (that is, the sum of the growth rate of labour productivity and the growth rate of employment). During the 1970s and '80s, the return on equities substantially exceeded the growth rate of labour income.[3]

Aging of the population reduces the attractiveness of PAYG by decreasing the growth rate of employment. But it is also likely to make labour scarce relative to physical capital, thus raising its price and wage growth and depressing the rate of return on capital. Accordingly, the general effect of aging on whether PAYG schemes are more or less attractive than funded schemes is ambiguous.

*1. **Beyond 2000: The New Social Policy Agenda**, OECD Publications, Paris, forthcoming 1997.*

2. The increase in tax or contributions to pension systems as earnings rise is less than the increase in future pensions. The return to increasing earnings is thus reduced, so distorting the supply of labour.

3. H. J. Aaron, 'The Social Insurance Paradox', Canadian Journal of Economics and Political Science, *Vol. 32, 1996.*

Pension Policies and the Aging Society

Choice of pension scheme should depend on the objectives which public policy is trying to pursue. Old-age poverty is best alleviated by a nationwide public PAYG system that provides a minimum standard of living in old age. This welfare system would be mandatory, redistributive, and can be financed from current tax revenues. Those high-income workers who want to go beyond the mandatory amount of pension insurance can use supplementary private pension plans, which will tend to be of the DC type. These schemes will be particularly important in heterogeneous societies with diverse requirements.

Many OECD countries, including Germany, France and Italy, have integrated both alleviation of old-age poverty and income insurance into a single, comprehensive public pension system. In other OECD countries, including Denmark, the Netherlands, New Zealand and Switzerland, the insurance function is performed by private funded schemes.

Insuring Against Population Aging

Demographic trends can be foreseen with some degree of accuracy, even over the long term. But there is considerable uncertainty about the non-demographic trends (such as employment, wage growth, the return on capital, family formation and dissolution) that will affect systems of old-age insurance.[4] To spread these risks, policy-makers in OECD countries should take action on several fronts. The use of several policy instruments is attractive not only from the point of view of risk-sharing but also for political reasons: costs and benefits are spread over various groups. A package of measures may facilitate the building of consensus about reform (box, below).

Some policies are part of 'no regret' strategies because they work out well in all scenarios.

Higher effective retirement age

The most robust policy recommendation is that the effective retirement age should rise with life expectancy. A higher retirement age reduces the necessity not only for fiscal transfers but also for intertemporal transfers in the form of financial savings. Gradual retirement is consistent with a more uniform distribution of education, work and leisure over the life-cycle.

Broad-based tax system

Since older people now lead longer, healthier lives than when PAYG systems where established, they are in a position to be net contributors to national budgets for a longer time. Broadening the tax base by reducing tax privileges to the elderly and by making the tax treatment of their capital income more neutral would have this effect. Indeed, as the elderly population grows more heterogeneous, the net contribution to the budget should be based less on age and more on income. Old-age poverty relief could be financed through broad-based taxes paid by the entire population rather than through narrow-based taxes that hit only the wages of the workforce.

More efficient markets

Removing rigidities in capital and labour markets can increase the viability of pension systems. For example, by allowing older people to work part-time, they can induce them to delay retirement so that their human capital is not lost. Efficient markets can contribute to a higher participation rate of both older and younger people, thereby mitigating the decline in the

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Policies to Counter Population Aging

Investing in People

Human capital in general

Alleviating moral hazard in social security

- *tighten requirements for disability and unemployment*
- *enhance efficiency of social-security administration*
- *reduce social security-benefits*
- *reduce marginal tax wedge on labour income*
- *strengthen link between contributions and benefits by reforming PAYG and DB pension schemes or by moving to multi-pillar systems with a larger role for DC schemes*
- *reduce perverse redistribution in pension schemes*
- *shift tax burden to those outside the labour force (by shifting to consumption taxes, for example)*
- *maintain cash-flow income-tax treatment of pension saving*
- *broaden the tax base by reducing tax privileges for the more affluent elderly*
- *mitigate tax arbitrage through a more neutral system of capital-income taxation*

Improving the labour market for older people

Raising effective retirement age

- *make pensions more actuarially fair*
- *encourage life-long learning*
- *reconsider age-related pay schemes and final-pay pension schemes*
- *deregulate labour markets and sheltered sectors*
- *alleviate moral hazard in social security*

Improving the labour market for young people

Raising participation rate of women

- *enhance child care*
- *reduce disincentives to work originating in the tax system*

Investing in Physical Capital

Public saving

- *cut budget deficit*

Private saving

- *provide tax incentives*
- *(gradually) reduce the relative importance of PAYG benefits*
- *make pension saving compulsory*
- *issue indexed government bonds*

Investment inside the OECD

- *develop stock markets*
- *improve corporate governance*
- *enhance competition*
- *pursue stable macro-economic policies*

Investment outside the OECD

- *enhance efficiency of financial sectors in non-OECD countries*
- *improve accounting standards*
- *promote trade liberalisation*
- *relax regulatory constraints on foreign investments in the OECD area*

Table
Strengths and Weaknesses of Three Pension Systems

	Pay-As-You-Go			
	Flat Benefits	Benefits Based on Contributions or Salary	Defined Benefit	Defined Contribution
Insurance against:				
intergenerational inequities	+	+	+	–
demographic shocks	–	–	0	+
low return on human capital	–	–	+	+
low return on financial capital	+	+	0	–
political risks	–	–	0	+
Strong incentives to:				
save	–	–	0	+
work	–	0	0	+
invest in human capital	–	0	+	0
Efficient allocation of labour (portability of claims)	+	+	–	+
Poverty alleviation	+	–	–	0
Low administrative costs	+	+	+	0
Individual choice of participation and pension level	–	–	–	+

worker/retiree ratio on account of aging. Indeed, clear market signals become more important so that people can more flexibly allocate their time and other resources over various activities. Efficient international markets for capital, commodities, and services allow countries with different demographic developments to exploit their specific comparative advantages.

Social-insurance reform

Reform of the social-insurance system is essential to improve the efficiency of the labour market.[5] The effective retirement age has been falling over the past few decades, in part because of the increasing use of invalidity and early-retirement schemes. Tightening the requirements for benefits and promoting a lengthened working life will increase the period over which individuals are contributing to pensions and reduce the period over which they will be claiming them. Thus the trade-off between equity and efficiency will be improved. Moreover, in addition to lower marginal tax rates, reduced insurance coverage also may contribute to more efficient retirement and other labour-market decisions.

Spreading and pooling risks

To diversify risks, the elderly may want to draw on a mix of assets. In particular, they can rely on the human capital of younger workers, not only through the intergenerational contracts implicit in PAYG and DB schemes but also through explicit financial claims in DB and DC schemes. In addition, they may want to spread risk to foreign economies by investing their part of pension saving abroad. Finally, they have the option of deferring retirement, or continuing to work (perhaps only part-time) after they reach the statutory retirement age.

Private pension provision

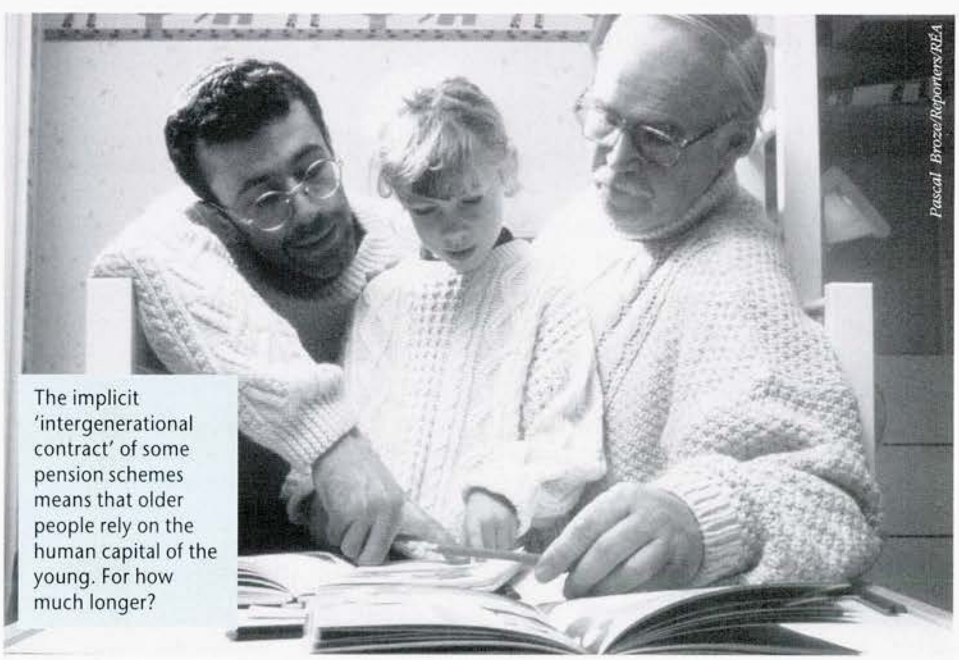
Another way of alleviating the burden of the elderly on the budget is to stimulate private pension provision. Indeed, countries that currently rely heavily on public PAYG systems, may reduce the benefits these systems offer to higher incomes, thus stimulating private, funded pension plans. Governments could stimulate DC systems by providing inflation-indexed bonds and by fostering intergenerational risk-sharing through the tax system.

Choices and Trade-offs

Some policy responses seem to offer satisfactory solutions in view of the principal demographic and labour-market trends currently foreseen. Others are more appropriate in specific sets of circumstances, which means that countries will face substantial trade-offs if they adopt them.

The volume of saving

The first such trade-off involves the volume of saving. A problem that arises in moving from public PAYG to private funded schemes is that, without an increase in the budget deficit, a rapid transition requires a substantial increase in



The implicit 'intergenerational contract' of some pension schemes means that older people rely on the human capital of the young. For how much longer?

4. *Beyond 2000: The New Social Policy Agenda.*
5. *See pp. 6–9.*

As the elderly population grows more heterogeneous, the net contribution to the budget should be based less on age and more on income.

national saving. That may put a high burden on current generations and cause a short-term decline in employment because of high labour costs and lower labour supply, both effects being caused by increases in taxation (the bulk of which will inevitably be borne by labour). A trade-off between saving and employment thus emerges. Tax incentives to encourage savings for private pensions may reduce the burden on current generations. But these incentives tend to reduce government tax revenues and hence public saving; as a result, the national saving rage may not increase. In addition, tax arbitrage may follow as people shift assets into low-tax savings instruments.

The composition of saving

Saving can occur in not only financial assets but also human capital. Investing in the human capital of older people allows them to remain in the work force for longer, thereby reducing the call for fiscal transfers. Investing in the human capital of younger people (through, for example, public education or training) raises wages, thereby broadening the tax base and allowing higher PAYG benefits. But, unlike human-capital investments in older people, investments in human capital of the young do still require fiscal transfers. Moreover, relying on the human capital of the young (and the implicit intergenerational contract) may impose substantial political risks on the elderly: younger voters may simply repudiate the 'contract'. To mitigate these risks, the elderly can invest in young workers also by investing their financial assets in their own country. In this way, they acquire an explicit rather than implicit claim on younger workers employed in domestic firms.

■ ■

Growing old raises the expected return on human capital by providing the opportunity to deploy it over a longer period. Moreover, by leading longer, healthy lives, older people are in a position to contribute more to society in general and to national budgets in particular. Finally, aging allows OECD countries to exploit the comparative advantages that come with age (such as the acquisition of experience and financial assets) by trading with younger societies.

But aging does require countries to adapt their economies. Since the effects are rather predictable, countries have still time to act. Gradually phasing in policy measures at an early stage avoids abrupt and painful policy corrections that cannot be avoided later on. ■

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A Verdict on Aid to the Sahel

David Naudet and Jean-Marc Pradelle

Since the drought of 1973–74, the Sahel is no longer front-page news. The region has not experienced a major famine in almost 25 years and its economy is gradually beginning to be modernised. The 'second generation' of development co-operation with the Sahel must be tailored to the region's changing requirements. To mark its twentieth anniversary, the Club du Sahel decided to see what lessons could be learned from experiences of the past two decades.[1]

The impact of international aid on Sahelian countries is clear when one examines their infrastructure, institutions, agriculture and public-health sectors or their access to drinking water. Its influence can be seen even in the formulation of public policy and the emergence of a civil society.

It could be argued that development projects, as well as the process of structural adjustment, are externally driven. But this characteristic has not prevented them from radically transforming the areas in which they take place. Development aid has also encouraged innovation and the exchange of information, and has helped forge links between the region and the outside world. In view of the low volume of trade and private investment flows, it would be fair to say that foreign aid has been a major factor, together with migration, in removing barriers which isolated Sahelian countries, both regionally and internationally.

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Aid has had a far-reaching impact on sectors where it has been concentrated (telecommunications is one). But it has had little impact, if any, on larger and more dynamic activities, not least growth in secondary cities, the informal sector or agriculture in urban perimeters. Indeed, aid can even have adverse impacts, the most obvious ones being the increase in international debt and the removing of a sense of responsibility from Sahelian managers and civil servants.

Mixed Results

There are diverging perceptions of the impact of aid on the Sahel. A large number of projects has been implemented. But the contribution of aid to the stimulation of growth or reduction of poverty has been relatively disappointing. Sahelian countries are currently among the poorest in the world. The results of aid are often unsustainable, a point on which all parties involved are in agreement, and which leaves a feeling of impotence, even of failure.

Nonetheless, the outcome has not been entirely negative if assessed according to the long-term changes in the region. Genuine social progress has been made over the past two decades, despite the doubling of the popula-

1. Review of the First Generation of Aid to the Sahel, 1996, *available free of charge from the Club du Sahel at the OECD*; ***The Record of 25 Years of Aid to the Sahel**, OECD Publications, Paris, forthcoming 1997.*


M. Huet/Hoaqui

Aid that aims to improve Sahelian capacities must operate at a different rhythm from crisis aid.

A Verdict on Aid to the Sahel

tion. The human development indicator (HDI) developed under the United Nations Development Programme (UNDP) shows that sustained progress has been made in all the countries of the Sahel. And although economic indicators show virtually no sign of improvement, Sahelian societies and activities have become increasingly diversified. The traditional activities – cereal cultivation and nomadic livestock-breeding – now account for little more than 10–30% of their GDP.

The past decade has also been marked by the rise of democracy and civil society. Associations are now important elements in the economic and social life of the Sahel. In Chad, for example, parents' associations are now responsible for administering a large share of the educational system, building some 3,500 classrooms during the 1980s and paying, in cash and in kind, the salaries of 2,500 teachers.[2]

The 1983–84 drought did not lead to famine. Food insecurity, the common heritage of Sahelian countries, has clearly improved; food dependency is now modest and steadily declining. According to the Food and Agriculture Organisation, in 1992 the share of imports in total food consumption (expressed in calories) fell below 20% for the first time in ten years, despite the continued growth in the population. Although many challenges, chiefly that of poverty, still remain to be met, the region has changed dramatically over the past twenty years. Sahelian societies are on the move.

An analysis of aid to the Sahel lends weight to the perception that the principal limitations on the effectiveness of aid in general are the conditions under which it is implemented. Most dysfunctions in aid-delivery mechanisms have now been clearly identified. From initial concept to final evaluation, development aid is primarily controlled and managed by donors. As a result, it is seen as something to be endured rather than desired. In order for projects to secure recipient 'participation', donors are often obliged to include some kind of 'carrot' in the project design. Implementing mechanisms which duplicate and operate in parallel to organisations that already exist often appear to undermine rather

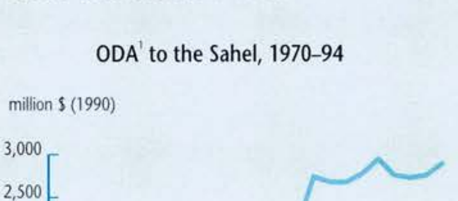
2. *Jean-Marie Cour and David Naudet, 'West Africa in 2020',* ***The OECD Observer****, No. 200, June/July 1996.*

FOCUS

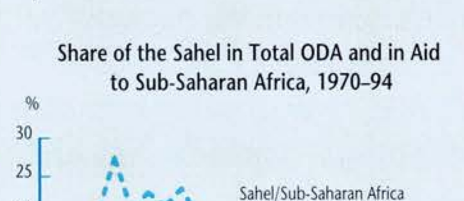
The Sahel – A Major Aid Effort, Though Not an Exceptional One

Aid to the Sahel increased by a factor of 4.6 in constant terms between the early 1970s and the mid-1990s. It rose in particular in the periods after the two major droughts in the Sahel in 1973–74 and 1984–85. In 1994, the volume of aid to the Sahel remained comparable to that received in 1986.

ODA[1] to the Sahel, 1970–94



Share of the Sahel in Total ODA and in Aid to Sub-Saharan Africa, 1970–94



1. Official development assistance.
Source: Club du Sahel, OECD

Since the mid-1970s, the share of total official development assistance (ODA) accounted for by the Sahel has remained relatively stable, at around 5%. In contrast, the region's share of ODA to sub-Saharan Africa has declined, falling from over 25% after the 1973–74 crisis to around 15% since the early 1990s.

Over the period 1990–94, external aid amounted to 17% of the region's GDP. This share had been under 10% in the early 1970s but was over 20% in the late '80s. Per capita aid followed a similar trend, although at a slower pace, rising from $35 in the early 1970s to $63 in the early '90s. These figures should nonetheless be treated with caution since, in many respects, aid volumes and data relating to specific recipient countries are not readily comparable because of non-material flows, expenditure in donor countries, differences in aggregate prices, and so on.

Although volumes of aid to the Sahel are relatively high, an international comparison shows them to be consistent with the resources and size of Sahelian countries. Although the Sahel receives a substantial amount of aid, it is because the region is made up of small countries with low incomes and not because of any specific characteristics of a political, ecological or other nature.

As part of a steady long-term trend, aid is increasingly being directed towards 'services': financial services (debt, balance-of-payments support), management assistance (programme aid), social services. At the same time, the more 'material' aspects of aid are becoming relatively less important: food aid, infrastructure, support for productive services (including agriculture).

Aid accounts for almost all of the financial flows to the Sahel. Remittances from emigrants, about which very little is known, and income from a limited number of exports are the only other external resources. At the current stage in globalisation, this situation means that external aid has a highly specific role to play in the Sahel region.

W. Gartung/Laif/RÉA

Slow but fundamental change: Sahelian institutions are ready to take a more responsible role in the deployment of aid.

than strengthen Sahelian institutions. In too many instances aid projects appear to be over-ambitious or -optimistic. As a general rule, dialogue between donors and recipients is strained and difficult, based on negotiation rather than co-operation. Lastly, it has long been argued that there are too many projects and that co-ordination remains poor. In short, the final outcome is driven by supply rather than demand, inhibiting the motivation and commitment of the recipients. In addition, there is so much diversity in the supply of aid that at times it borders on the anarchic.

There are four lessons to be learned from these errors. First, the model of aid delivery based on emergency situations has to be abandoned. Experience in the Sahel shows that aid practices and instruments have far too often taken a crisis-management approach in which the donor, using fairly standard tools, assumes all responsibility for the action undertaken. It is true that on several occasions aid to the Sahel was directed at resolving major problems, such as food crises of recent years and the financial crisis in the 1980s. It is also true that at the time the Sahel countries seemed to be virtually incapable of dealing with these problems. In these particular cases, where the aim was to manage an extreme situation and prevent similar crises from occurring, the international community intervened with massive emergency aid which was sometimes delivered in an authoritarian manner.

Aid aimed at improving Sahelian capacities and creating opportunities must operate in a different manner. Rather than driving and directing, its role is to support and enable. That is a role with neither a beginning nor an end and one – unlike, say, the construction of infrastructure which is primarily a technical activity of limited duration – in which the human factor is all-important.

Too often, there is a tendency to view a given village, economic activity or administrative service in the Sahel as an institution in crisis which must at all costs be reformed according to the ideals of the industrialised countries. Participation in such ventures is encouraged through financial and material incentives to both recipient governments and project participants. This makes little sense and has few beneficial effects. It is the exact opposite of assistance which attempts to provide support for the development and implementation of initiatives. Development aid is clearly a complex undertaking. It has to be based on a wide range of instruments that can adapt aid to the type of problem encountered, and not the other way around.

The second lesson to be learned from past experience follows from the first. To date, regardless of specific local requirements and demands, the type of aid provided has largely been determined by the objectives pursued and instruments available. Aid experts sometimes seem to behave like vendors selling off-the-shelf products such as agricultural-development projects, structural-adjustment programmes or different types of support units. Aid programmes thus tend to be more effective at deploying aid instruments than at providing solutions to the very real problems of the Sahel. The inevitable outcome is that recipients are reluctant to participate; and when they do agree to use instruments which they find alien, they may well reject them once the project/programme has been completed. This criticism has been partly heeded by some aid agencies, and the past few years have witnessed the emergence of more flexible and concerted approaches which place as much emphasis on the process as on the ultimate objective. These 'process-based' (as opposed to 'project-based') approaches are demanding in terms of the modifications agencies must make to their administrative procedures. They call for lengthy dialogue, sometimes leading to limited intervention. The aid actions which ensue could thus be difficult to plan and may not always have high visibility.

The third lesson to be learned is that, if aid is to be effective, partners in the Sahel have to be made accountable. With the gradual disappearance of financial participation by recipient governments in programmes and projects, the aid market has in many cases been reversed. Donors often appear to be getting recipient countries to accept their aid projects rather than actually providing the aid. As a result, the 'sale' of a project is accompanied by a variety of benefits to the receiving institutions, such as the supply of equipment, subsidies and, in many cases, wages.

The lack of any contribution by recipient countries in exchange for aid lies at the heart of dysfunctions in the aid system. It blinds providers to the real nature of demand in the Sahel. This counterpart contribution is the only signal which allows such demand to be identified, confirmed and then prioritised. Aid to the Sahel is currently perceived as a free good, or a service which recipients are actually paid to use. So there should be no surprise if this service is used too liberally and without regard to the consequences.

Sahelian governments now fulfil only partly their roles as the natural intermediaries between the aspirations of their populations and the aid supplied by donors. There is not much mutual trust between these states and donor countries. Indeed, the dialogue between the populations of Sahelian countries themselves is not always as good as it might be. There are currently too

BACKGROUND

The Club du Sahel – A Regional Approach Based on a Lively Partnership

Since its creation, in late 1976, until the middle of the 1980s, the Club du Sahel devoted itself to analysing issues involving food security and efforts to combat desertification in the member countries of the CILSS, the intergovernmental organisation which at that time was the only Sahelian regional organisation actively participating in the Club. A growing number of OECD countries then began to take an interest in the Sahel, with ten of them funding and participating in the Club by as early as 1985. During this period, drawing on the experience of the OECD, the Club developed a working method based on high-quality information and an active dialogue. In particular, the Club developed the food-aid charter which has since inspired similar initiatives elsewhere.

From 1985 onwards, the work of the Club on production and markets was extended to the whole of West Africa, and especially the economic poles in the coastal countries (Nigeria, Côte d'Ivoire, Ghana and others). The Club was also specifically asked to carry out two prospective analyses, the first, in 1987, regarding the future of the Sahel region, and the second, in 1994, on the future of West Africa.[1] Actors from civil society now regularly participate in the work of the Club through regional networks or professional organisations. There is also more collaboration with the North, with the involvement of other OECD countries, the likelihood of more participation by the World Bank and the European Union, and openings towards NGOs.

The next challenge will be to improve aid performance, although probably with fewer resources (and certainly less money per inhabitant); the aim will be for aid to become the catalyst for change within the region. This is the task to which the Club intends to contribute, drawing on the lessons it has learned from its experience. To mark the 20th anniversary of the Club, its members are considering the possibility of creating an 'aid implementation charter', the objective of which would be to adapt instruments to requirements, to ensure that in the future aid recipients play a more open and accountable role in the aid process and to consider a gradual reduction in the role of official assistance as the region becomes increasingly integrated into the world economy. This charter will make detailed proposals and will provide for the instruments necessary to ensure its implementation.

*1. **Preparing for the Future: A Vision of West Africa in the Year 2020**, OECD Publications, Paris, forthcoming 1997.*

many intermediaries in the aid process, ranging from co-ordinating structures to implementing agencies, NGOs, associations, and so on. These structures are approved and funded by aid agencies and, as a result, tend to focus on the supply side rather than relaying demand to the donors.

Sahelian institutions, in both government and civil society, are increasingly willing to assume more responsibility for the implementation of development aid. Consideration must be given to this slow but fundamental change. But above all, mechanisms such as genuine 'counterpart' contributions from aid recipients have to be deployed to help promote accountability and give the providers of funding a means of identifying and assessing the relative importance of demand and commitment from the Sahel.

The fourth lesson follows from the three previous ones and applies to the general attitude of donor countries. The desire of donors to obtain results which they can see and evaluate often takes precedence over the longer-term concerns which nonetheless remain the real objectives of development. In order to show that in making investments they are properly responding to their mandates, donors set up their own financial networks and systems for exchanging information and building relationships within receiving institutions. These serve to maintain close control over the implementation of projects. This short-circuiting works against the existing institutions and as a result erodes their coherence. The root of the problem therefore lies in the way in which donors manage financial risk-taking and try to assure the outcome of projects.

At present, projects are evaluated on a non-systematic and individual basis with the aim of obtaining precise and quantifiable results. This blinkered approach to the outcome of projects is motivated by a fear of failure. The 'minimum-risk' strategy of donors inevitably leads to minimum results. A broader vision of the results of long-term aid, by sector or by area, is required – one which looks at broad impacts rather than end-of-project results. Donors therefore have to work together and make joint assessments, agreed upon by both donors and recipients, of the main actions to be undertaken. These shared impact evaluations could provide a basis for a wide-ranging debate, both inside and outside the Sahel, and thus become highly effective instruments for 'aid reform'.

The current aid crisis poses a serious threat to the Sahel. Failure to acknowledge all too obvious results of past aid efforts,[3] together with a refusal to adopt a very long-term approach to development in the Sahel, may well prompt funding agencies to recommend a rapid strategic withdrawal from the region. On the other hand, this crisis offers a real opportunity to completely overhaul some aid relationships with which both parties are dissatisfied.

Those involved in giving aid to the Sahel have to meet a two-fold challenge. First, they must change their approach to development aid in the Sahel. They must stop insisting that Sahelian recipients adapt to the constraints and administrative methods of co-operation agencies and recognise that, instead, it is the agencies which must adapt to development dynamics of demand from the Sahel. Second, they must rebuild the climate of trust which has largely been lost between the partners, in particular by encouraging the articulation of what is required in a clear and more accountable manner. It is only by meeting this two-fold challenge that a foundation can be laid for a second generation of co-operation between the Sahel and its external partners.

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A Bright Outlook for Communications

Sam Paltridge and Dimitri Ypsilanti

The communications sector is experiencing strong growth, which on present trends, especially in mobile communication and Internet development, is expected to continue. This conclusion arises from the OECD's biennial survey of the sector, based on a comprehensive analysis of the most recent comparative data of performance indicators for broadcasting and telecommunication services.[1]

Over the past decade there has been increasing recognition of the importance of access to communication infrastructures and services for economic and social development. This realisation has spurred the expansion of public switched telecommunication networks (PSTNs) providing voice and data services. An additional 18 million new mainlines were added in 1995, an expansion of 7% in network size for the OECD area. There was strong growth even in countries with high mainline telephone penetration rates as a result of demand for second residential connections because of increasing demand for access to the Internet.

Demand for high-speed local-access networks driven by the Internet promises to generate the next wave of infrastructure development, as well as provide multiple new paths for communication. There has been a doubling in the number of Internet 'hosts' every year since 1991, resulting in 16.1 million hosts in the OECD by early 1997.[2] The number of hosts per thousand inhabitants has risen over this period from 0.57 to

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1. ***Communications Outlook 1997**, OECD Publications, Paris, 1997.*

2. *Internet hosts are identifiable computers with a direct connection to the Internet.*

A Bright Outlook for Communications

close on 15, but national rates of diffusion vary considerably (Table).[3]

Demand for high-speed access to the Internet is also encouraging cable TV companies to upgrade their networks to offer interactive capabilities rather than simply the traditional one-way broadcasting. Terrestrial and satellite broadcasters are also developing technologies that will allow Internet services to be transmitted over the radio spectrum. Technological convergence between different network platforms has led countries to identify cable TV networks as an important platform for launching new multimedia services and providing competition in local infrastructure. By mid-1996, for example, British cable companies already provided more than 1.5 million telecommunication mainlines.

But the use of cable TV networks to compete with traditional suppliers for communication services (including access to the Internet) may vary substantially across the OECD. At the end of 1995 there were a little over 114 million subscribers to cable TV in OECD countries, with the average number of households taking cable TV at only 33% of the total number of households compared with 93% for telecommunication. In a number of countries, indeed, such as Greece and Italy, cable television has not yet been launched. A second factor (with exceptions such as Canada, Japan, the United Kingdom and the United States) is that the incumbent monopoly public telecommunication operator (PTO) is a leading provider of cable TV networks, and the share of the market enjoyed by PTOs is growing. So by the time full infrastructure competition is permitted, the existing alternative network infrastructures already belong to the PTO, precluding the opportunity of a headstart for a competitive market.

An important factor in infrastructure growth is mobile communication: there has been a sevenfold increase in subscribers between 1990 and 1995.[4] In 1995, indeed, 27 million new cellular mobile subscribers were added in the OECD area bringing the total to 74 million – a figure that handsomely surpassed the 18 million new telecommunication mainlines added in that year. The largest markets for mobile communication are in Japan and the United States: in Japan,

Table
Internet Hosts per 1,000 Inhabitants[1]

	January 1996	January 1997
Finland	40.82	55.51
Iceland	32.66	43.70
Norway	20.27	39.38
United States	23.01	38.44
Australia	17.15	28.51
Sweden	16.98	26.39
New Zealand	14.97	23.61
Canada	12.60	20.38
Denmark	9.91	20.37
Switzerland	12.12	18.23
Netherlands	11.31	17.50
Austria	6.55	11.43
United Kingdom	7.71	10.09
Germany	5.55	8.84
Luxembourg	4.25	8.49
Ireland	4.20	7.56
Belgium	3.01	6.37
Japan	2.15	5.86
France	2.36	4.22
Czech Republic	1.62	3.98
Hungary	1.12	2.92
Spain	1.37	2.81
Portugal	0.94	2.63
Italy	1.28	2.61
Greece	0.84	1.52
Poland	0.65	1.41
Mexico	0.15	0.33
Turkey	0.09	0.21
OECD average	**8.87**	**14.94**

1. Countries ranked according to 1997 figures.
Sources: Network Wizards, OECD

between March and December 1996, the total number of mobile communication subscribers more than doubled, to reach over 23 million. And as countries eliminate their duopoly market structures and allow new firms to enter, mobile growth will go on expanding.

Employment in PTOs has shown a downward trend over the past decade. By the end of 1995 PTOs in the OECD area employed 2.4 million people. Yet the data available record employment only in PTOs, whereas it is in the new network-based activities – mobile cellular networks, resale, value-added services, Internet access, and so on – that employment is growing most strongly. Thus, in countries such as the United States, despite considerable downsizing by leading PTOs over the last decade, telecommunication employment in 1995 was almost identical to that in 1985.

The upgrading and expansion of the PSTNs by PTOs in the OECD area generated a total of \$119 billion in investment expenditure in 1995, equivalent to 2.6% of OECD gross fixed capital formation. Investment in European networks, particularly within the EU area, nonetheless dropped appreciably compared with the past decade especially because the surge in telecommunication investment in the new Länder of Germany came to an end.[5] By way of contrast, investment in North America, driven by strong growth in mobile infrastructure investment, particularly in the United States, increased markedly. Capital expenditure was also up in Australia, Japan and New Zealand.

Revenue Growth

Expansion of communication networks is reflected also in the growth of the market for public telecommunication services in the OECD area: in 1995 it had revenues of \$519 billion, an increase of 13% over 1994. Revenue per mainline continues to increase, with an average revenue of a little over \$1,100 per line (or \$520 per capita) in 1995.

Revenue from telecommunication services in 1995 was equivalent to 2.3% of GDP in the OECD, only a slightly larger proportion than ten years previously. The public telecommunication sector has thus grown roughly in proportion with the economy as a whole, despite the expanding use of telecommunication in OECD economies. The apparent discrepancy can be explained by the decline in telecommunication prices; many services, moreover, are now being provided by companies more efficiently outside the traditional public telecommunications sector once typified by monopolies.

One of the most important factors in the growth of PTO revenues has been the development of mobile communication, which earned \$64 billion in 1995, a doubling of the market in only two years. The contribution of mobile communications to total PTO revenue thus increased to more than 12% in the OECD area, surpassing international communication services in earning capacity.

But mobile communication revenue per subscriber is now tending to fall, in part because of price reductions from increasing competition, although mainly from the trend toward flexible tariff options and the increasing number of residential subscribers, who make fewer calls than business users. The popularity of flexible tariffs has been the prime reason for the enormous growth of the mobile market between 1992 and 1995.

The bulk of the 'Internet revenue' accruing to PTOs has been for traditional infrastructure products and services, such as leased lines, additional mainlines and the increasing length of local calls. The majority of people accessing the Internet use leased lines or the PSTN (via a PC and modem). In contrast to mobile communication, for which PTOs developed a separate tariff structure, the pricing of the building blocks for the Internet has been inherited from a world in which telephony was the leading application, although many PTOs are investigating new pricing structures that may be better suited to the development of the Internet.

Provision of Internet access promises to be a very large market for PTOs since virtually all potential Internet users are already their customers. PTOs, indeed, are likely to become formidable competitors in this market because they own and manage access to existing customers and have the requisite networking skills. Yet, as with mobile communication, the provision of the infrastructure necessary for Internet access will not be in the domain of PTOs alone.

The revenue increases accruing to PTOs from Internet services have tended to be overshadowed by discussion of the potential for the Internet to be used as a means of bypassing 'traditional' international telecommunication – a parallel of the debate over mobile communication during the 1980s, when a number of PTOs feared that new technology and market liberalisation would threaten their 'core' revenues. A decade later, instead of supplanting sources of traditional network revenue, mobile communication has dramatically expanded the market. If past experience is a reasonable guide, those PTOs that embrace the Internet as an opportunity to do likewise will be best placed to remain competitive in the years to come.

In terms of market size, the audio-visual sector of the communication industry is much smaller than the telecommunication market: broadcasting revenue per inhabitant is about one-fifth of that from telecommunications. The largest share of the audio-visual market stems from broadcasting. In 1994, it is estimated that the market for broadcasting services in the OECD area was \$87 billion and the cable television market around \$30 billion.

Price Performance

The OECD has been undertaking analysis of telecommunication tariffs since 1990[6] – a task that is becoming more complex as competition grows, and as a result of the growing range of discount plans now available in competitive markets and, increasingly, in monopoly markets ahead of liberalisation.

The cost of the OECD 'average business basket' for telephony services is now around \$600; in 1990 it stood at \$870 for the same number of calls. The net decline in the index of the business basket has occurred through higher fixed charges (primarily higher line rentals) and lower charges for use (mainly reductions in long-distance prices). The reduction over the same period in the index for the average OECD residential basket has been much less (2.4%), so that by 1996 it was \$271, compared to \$301 in 1990. Some of the main reasons for this slowness were the raising of fixed charges in Greece, Turkey, Belgium, Italy and Japan, compensated by reductions in long distance usage charges in most countries.

Price performance in competitive markets has been very different from those in non-competitive markets (Figure, p. 22). All countries with monopolies reduced the average usage charge (or kept it constant) between 1995 and 1996. Five countries (France, Germany, Portugal, Spain, Turkey), out of 15 non-competitive markets, reduced their usage charges by more than 10% in this period. For the European Union countries this reduction reflects tariff restructuring ahead of the market liberalisation scheduled for 1998. In several other countries, such as Finland, New Zealand and Sweden, the emergence of local telecommunication competition has led for the first time to a reduction in fixed charges for business users. The price of the residential basket of telecommunication tariffs increased in competitive markets by 2.3% between 1995 and 1996; in non-competitive markets the increase was 9.3%.

Since 1990 charges for longer distances have decreased by some 30–35% in competitive markets and by around 20% in non-competitive markets. Over the same period the local call charge has risen by 13.5% in competitive markets and by 34.8% in monopoly markets. As a result, the difference between the prices for local and long-distance services is diminishing, from 20 times higher for local distance, on average over the OECD area, to a mere five times in 1995.

This rebalancing of tariffs has important implications for access to information infrastructure services like the Internet. PTOs are rebalancing tariffs based on traditional patterns of telephony use. But local telephone calls in the OECD area last on average less than three minutes whereas callers to the Internet or on-line data-bases make much longer calls. In view of the new patterns of network use, moreover, the impact of

*3. Sam Paltridge, 'How Competition Helps the Internet', **The OECD Observer**, No. 201, August/September 1996.*

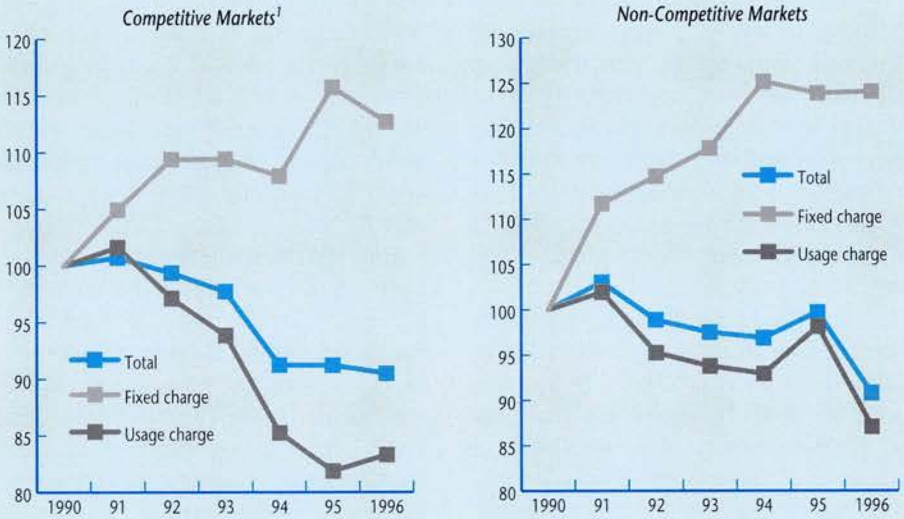
*4. Sam Paltridge, 'Upwardly Mobile Telephony', **The OECD Observer**, No. 196, October/November 1995.*

5. Between 1991 and 1995 telephone penetration rates in the new Länder rose from 17.9 to 38.9 per 100 inhabitants.

6. The OECD tariff comparison model with recent updates is available from Eurodata Foundation, London (fax: +44 171 629 1359).

A Bright Outlook for Communications

Figure
Business Tariff Trends in the OECD Area, 1990–96
1990 = 100



1. The countries with competitive markets are: from 1990, United States, United Kingdom, Japan, New Zealand; from 1992, Canada, Australia; from 1993, Sweden; from 1994, Finland.
Source: OECD

rebalancing on different users varies enormously throughout the OECD because of the different methods of charging for local calls. Some countries have measured rates, some unmeasured rates and others flat rates for local calls. In some countries with relatively expensive measured rates, therefore, the growth of new services may be slowed. In countries with flat or unmeasured rates there is some debate as to whether networks designed for relatively short calls will become congested and, if so, how quickly they can be upgraded to cope with new patterns of use.

Different methods of charging for local telecommunication do not result in large differences in the price of a basket for telephony services, although they do generate very large differences in the PSTN price of 'on-line' or Internet access: for instance, 20 hours costs six times more in Austria than in Canada. When tariff rebalancing raises measured charges for local calls, it magnifies these differences for an Internet-access basket of PSTN services. Between 1995 and 1996, for example, Canada raised the price of line rentals, increasing the cost of 20 hours of Internet access over the PSTN from (US) \$9.32 to \$11.99. In Sweden, where the price of local calls was raised, the cost of the same basket increased from \$19.77 to \$34.55. The impact of this rebalancing meant the price difference between the two countries went from double to triple. For users of telephony services, by contrast, the price of a residential telephony basket, based on standard prices, is still less expensive in Sweden than in Canada. Clearly rebalancing has a different impact on telephony users, who also enjoy lower long-distance prices, than on Internet or on-line users. As the market for the Internet grows, it will add to the complexity of rebalancing decisions.

In mid-1995 the pricing of dial-up Internet access, from Internet Access Providers (IAPs), was very expensive.[7] Since then prices for access to the Internet by dial-up users have plummeted. In addition complex pricing structures have, in general, given way to simple, flat-rate plans, and connection fees have been abolished. This change in pricing was driven by competition between IAPs. Local telecommunication charges, by contrast, where there is virtually no competition, remained stable or rose. The result is that local calls now make up the largest part of the cost of the OECD dial-up Internet basket.

The reform of telecommunication market structures made important progress last year. But the reform process still has to take into account the convergence between broadcasting and telecommunications, which is blurring the differences between previously distinct services. The broadcast of audio signals over the Internet has now become relatively commonplace. Video technologies are beginning to be used to broadcast over the Internet, thus challenging the traditional concept of broadcasting as point-to-multipoint transmission. The Internet is crystallising new ways of thinking about the delivery of network-based services.

■ ■

Even though existing telecommunication policies are still relevant to a converged communication marketplace, most OECD countries will have to review their telecommunication and broadcasting legislation and regulatory frameworks so as to take these new developments into account. In the short term, the most important challenge will be to encourage competition in the 'local loop' and ensure that newly liberalised infrastructure and voice markets become fully competitive. ■

7. Information Infrastructure Convergence and Pricing: The Internet, *available free of charge from the Information, Computer and Communications Policy Division of the OECD Directorate for Science, Technology and Industry or on the Internet on the ICCP home-page, at http://www.oecd.org/dsti/gd_docs/s96_xxe.html.*

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Agricultural Trends and Issues to 2001

Pierre Charlebois and Josef Schmidhuber

The OECD's annual projections of developments on global agricultural markets suggest three major trends between now and the year 2001: a general recovery in agricultural commodity prices by the turn of the century; a reduction in government stocks of grain – and thus, perhaps, more price variability; a continuous shift in trade from raw materials to processed products – and a re-distribution of market shares in favour of countries with market-orientated agricultural sectors.[1]

Forecasting long-term developments in global markets for agricultural commodities is a complex task. Many important factors are difficult to predict and their influence on the markets may change with time. Every year, nonetheless, the OECD attempts to identify broad tendencies and analyses the main uncertainties for the five years to come. To generate this outlook, the Organisation combines expertise from its member countries with an internally consistent modelling framework, the 'Aglink' model. The figures that result emerge from an interactive process, where findings from the model results are cross-checked, adjusted and validated by national experts in the working groups of the OECD Committee for Agriculture. This process is repeated every year to account for changes in macro-economic developments or agricultural policies, such as the new seven-year farm legislation in the United States.

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Rising Grain Prices

An important conclusion in last year's analysis was that grain prices could not be sustained at the peaks which prevailed during the 1995/96 season.[2] High prices would ration demand and trigger increased supplies, driving prices lower again. This assessment has proven to be correct. Lower set-aside rates in the European Union, a general increase in the area planted to wheat and coarse grains, and favourable weather conditions in the main cereal-producing regions in the world led to a strong increase in the production of wheat and coarse grain in 1996/97. In addition, there have been substantial adjustments in demand, particularly for coarse grain for use in feed, which fell in 1995/96 by 9% and 7% respectively in OECD and non-OECD countries. These changes in supply and demand have led world prices for wheat and coarse grains to fall by 24% and 21% respectively in 1996/97 from their 1995/96 peaks.

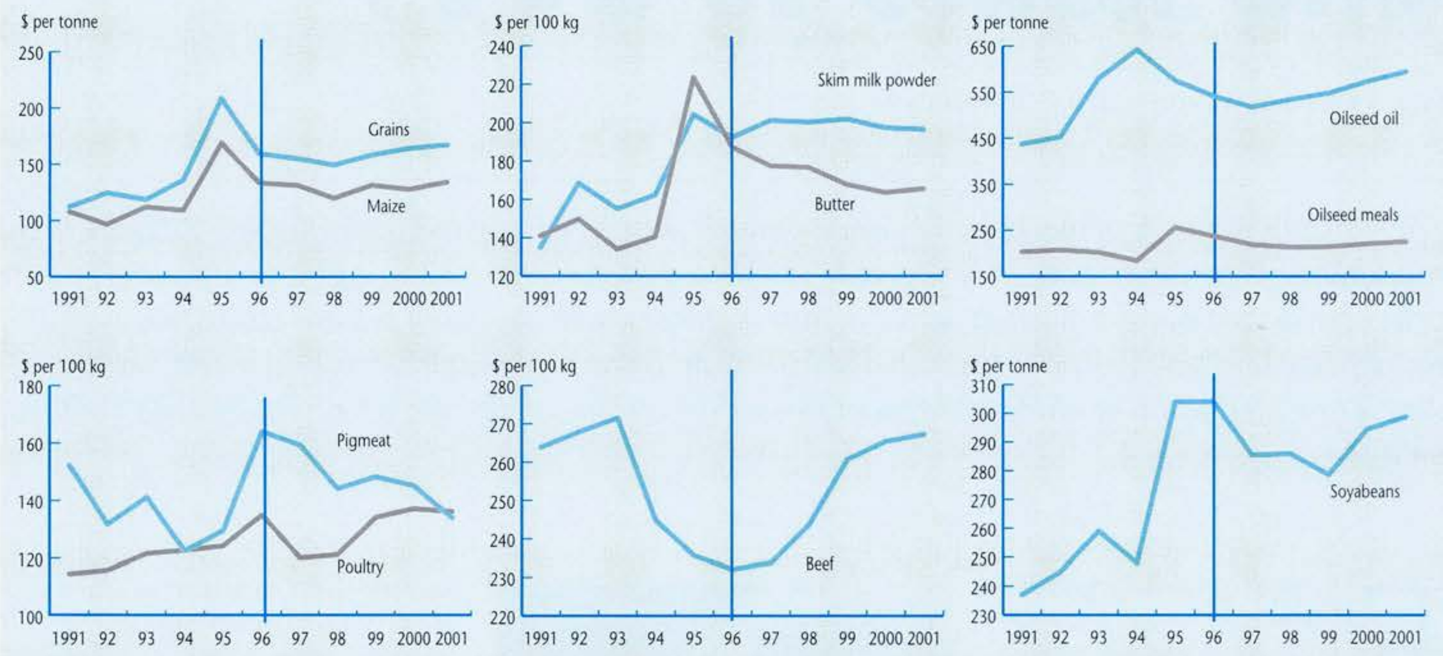
But over the longer term, world cereal prices in nominal terms – and those for oilseeds – are projected to strengthen. Policy measures taken in recent years, both national and multilateral, have reduced government intervention in grain markets and supported a recovery in international prices. In addition, growing demand for meat in non-OECD countries translates into rising international demand for feed grain and into larger cereal imports in the non-OECD area, except the region of the former Soviet Union, which could become self-sufficient by the end of the century. Low stocks of wheat and coarse grain are also expected to trigger some demand for rebuilding reserves. As a result, world prices in nominal terms for wheat, coarse grains and oilseeds are projected to remain above their 1991–95 average.

1. ***The Agricultural Outlook: 1997–2001***, *OECD Publications, Paris, 1997.*

2. *Loek Boonekamp and Yves Cathelinaud, 'Agricultural Markets from Now to 2000',* ***The OECD Observer***, *No. 199, April/May 1996.*

Agricultural Trends and Issues to 2001

Figure 1
An Overview of Price Prospects, 1991– 2001



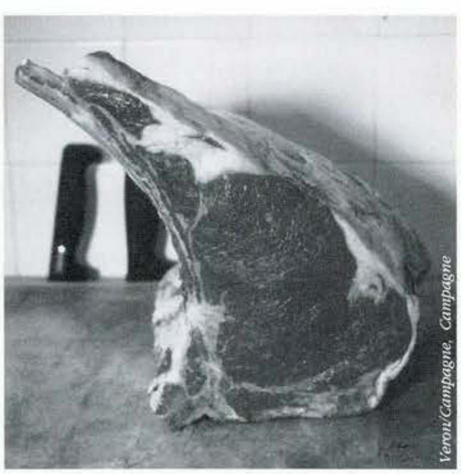
Source: OECD

Mixed Outlook for Meat

The price outlook for livestock products is mixed. Beef prices in the Pacific market and in the European Union are not expected to recover in the short term. Beef cow inventories in North America and Australia have reached cyclical peaks, likely to result in ample supplies until 1998, although increasing demand for beef in Asia will shorten the period of low prices compared to previous cycles. Prices could strengthen again by the turn of the century when livestock inventories will return to their cyclical lows.

Other factors reduce the growth in meat production. Feed costs, which in many countries are expected to be higher than in the early '90s, will act as a constraint. Increased environmental protection raises the cost of livestock production. Lower export subsidies and reduced domestic support put a break on production in many OECD countries. Emergency measures taken in the European Union in view of the BSE crisis will reduce EU beef production.

But these effects will at least partly be offset by a number of other factors. There is strong demand for meat in non-OECD countries, substantial growth in productivity, especially in the US pig industry and, most important, a global shift in consumer preferences towards poultry meat. All in all, these factors are expected to result in an increase in OECD beef, pork and poultry-meat production by some 2%, 7% and 17% respectively, between 1996 and 2001. Nevertheless, the average rate of growth over this period will be less than during the first half of the 1990s.



Diary Products Stable

Dairy quota regimes are expected to remain in place in all OECD countries where they are in force. Production in quota countries has to be contained at volumes consistent with Uruguay Round commitments on minimum access and export subsidies. There is also little or no increase in per capita consumption of milk and dairy products in OECD countries, and on balance therefore, quotas are likely to remain mostly unchanged.

The situation is much different where milk production is not subject to production quotas. Seven non-quota countries taken together – Australia, New Zealand, the United States, Mexico, Turkey, the Czech Republic and Poland – produced 45% of total OECD milk output in 1995. Their combined production is projected to increase by 16 mt (or 14%) between 1996 and 2001 because of growing demand for cheese and whole milk powder, in particular in non-OECD countries, a strong demand for cheese in the United States and substantial productivity gains in Mexico. Demand for butter and skimmed milk powder nonetheless continues to be weak because of the growing popularity of whole milk powder for reconstituting fluid milk in many developing countries. With higher production and lower growth in demand, the recent price increase in world dairy markets is unlikely to continue, particularly for skim milk powder and butter. In 1995 price peaks were exacerbated by an unexpected increase in butter imports by the former Soviet Union. Already in 1996, prices fell, and, for butter, they are likely to fall even more over the next five years.

Questions and Uncertainties

A number of uncertainties surround these projections. They include the assumptions made about agricultural policies, productivity growth, constraints on crop land and cereal stocks, as well as changes in food consumption. These factors have implications both for medium-term trends and short-term fluctuations around them. Their relative importance may nonetheless change gradually. Higher food imports stimulated by rising incomes, for instance, provided an important contribution to robust world prices in the past, but it is not clear how strong this trend will be over the medium term. How fast


Bouroullec/Campagne, Campagne

and how much will cereal production increase over the medium term outside the OECD area? And how will reform in agricultural policy and trade affect exports from OECD countries?

The evolution of cereal production in non-OECD countries is probably the most crucial uncertainty in the medium-term outlook. There is still potential for bringing additional crop land into production, but it could be less fertile and production more susceptible to the vagaries of weather. There is also still the potential for further growth in yields, both through new techniques and more intense use of inputs. Many countries, particularly India and China, have demonstrated the ability to raise yields substantially in the past, but the importance of adopting more sustainable production methods could curb this growth in the longer term.

Another important issue is the continuing shift towards more trade in processed or value-added products. In 1985, roughly half of global agricultural trade was in high-value products. By the end of the decade, this share is expected to increase to 75%, with rising meat exports from OECD countries forecast to account for most of the expansion. The United States and Canada in particular are likely to expand their market shares, encouraged by high growth in productivity and a favourable regulatory environment in the livestock sector.

Much of the expansion in demand is concentrated in Asia, where rapidly rising incomes will attract high-value products. The development of high-value product markets will nonetheless depend on the extent to which the projected growth in incomes materialises. If it is lower than expected, it could put a brake on Asian meat imports and thus curb OECD meat exports.

Within Asia, China is the main source of uncertainty. Persisting infrastructural deficiencies, coupled with vigorous increases in incomes and rapid urbanisation, have fuelled growth in imports of wheat and increasingly of coarse grains and poultry meat.[3] Although China is forecast to remain an important wheat importer, the growth in imports is likely to slow down. The next five-year plan favours policies likely to boost domestic grain production and to increase urban food supplies. The use of centralised trade controls and a lack of information on stocks make it difficult to predict when, what and how much China will purchase.

Developments in the EU beef sector constitute another important element of uncertainty in this outlook. Beef consumption in the European Union had been on a downward trend for more than a decade before the BSE scare led to an unprecedented and sudden slump. And it is still far from certain that demand will return to pre-BSE volumes by the end of the decade, as the OECD's projections assume. In that case, a substantial increase in EU beef intervention stocks could be much more likely, even though this movement should be limited to the next few years. The emergency measures already endorsed, such as early marketing schemes and calf-slaughter programmes, are expected to reduce production and hence non-marketable surpluses. In view of the relatively long production-cycle that beef requires, the impact of these measures will be felt most strongly towards the end of the decade.

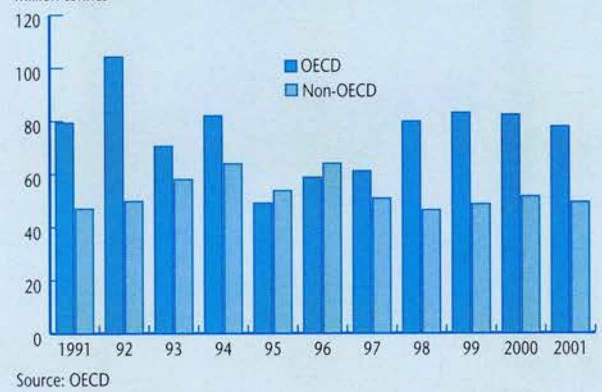
Global grain stocks carried into the 1996/97 season were the lowest since the mid-1970s, after a number of poor crops in a period of robust demand. Low stocks are likely to remain a feature for the entire five years of the outlook. With low stocks and growing demand, 'normal' fluctuations in the size of grain harvests could result in wider year-to-year price fluctuations. But the composition and distribution of stocks are also changing, with government-held stocks projected to remain

*3. Barrie Stevens, 'China Enters the 21st Century', **The OECD Observer**, No. 201, August/September 1996.*

low and private stocks increasing, thus improving their accessibility. Storage capacity for spreading sales within a season is also expected to increase.

Price fluctuations within a season have become more pronounced than those from year-to-year, thus attracting private investment in storage and, probably, moderating intra-seasonal price movements. Investments by multinational grain-trading companies in grain elevators and port facilities in Argentina, for instance, resulted in increased storage capacity, which brought more flexibility in the timing of sales. Even so, storage is doubtless still insufficient to accommodate an entire harvest, but the prospect of benefiting from rising prices during the crop year is likely to attract further investment. More flexibility provides profit opportunities for farmers and grain traders and will in turn reduce seasonal price variability.

Figure 2
World Grain Stocks, 1991–2001



Source: OECD

Lower grain stocks raise the questions of food security and the minimum safe volume of stocks. The importance of the relevant indicators, such as minimum stock-to-use ratios to ensure food security, is currently being re-examined. Some of these indicators were established more than 20 years ago and their validity was based on the market structures then prevailing. These structures have changed. The policy environment is different, and there have been substantial improvements in productivity and technology in the handling, transportation, marketing and use of grains. Another important change has been brought about by the wider dispersion of stocks, easier access to market information, and more transparency.

Market transparency, indeed, has improved substantially. Global communications are becoming better and faster and some features specific to the grain market are now in place. There are clearer and swifter market-reporting systems, particularly in OECD countries. Early-warning systems help to track developments in regions outside the main markets, providing a growing number of producers and importers with more information on production, prices, export availabilities and import requirements. Market participants can thus react in a more timely fashion to possible shortages.

Through Reform to More Stability?

Recent years have seen more reliance on markets and a decline in the role of governments in influencing supply and demand for agricultural commodities. The new seven-year farm legislation in the United States, for instance, provides for more market-orientated agricultural policies over the medium term. And internationally, the achievements of the GATT underpin a general commitment to freer trade.

Reduced border protection allows more consumers and producers to react to price signals from an enlarged world market, thereby reducing necessary adjustments in international prices.

Donall/Campagne, Campagne

Fewer export subsidies should limit the disposal of domestic surpluses onto the international market, and thereby prevent the depressed prices. With fewer distortions, trade will be able to better address shortages and surpluses. Price signals will be more reliable in guiding production decisions. But the stabilising impacts of policy reform on markets will depend on the binding nature of the commitments in practice.[4]

So far, trade reforms, such as the tariffication of non-tariff barriers, have only brought limited integration of domestic and world markets. Recent developments also put the efficacy of export-subsidy constraints into question. High international grain prices in 1995/96 rendered both EU and US wheat and coarse grains internationally competitive. The unused 'subsidy entitlements' can now be carried over into any year of the implementation period of the Uruguay Round agreement (except for the last one) and could result in higher subsidised exports over the medium term. In practice, though, additional exports will be limited by budgetary constraints.

All in all, future price fluctuations will essentially depend on the extent to which fluctuations in US and EU grain production will be absorbed by changes in domestic stocks or translate into changes in exports. Holding stocks from one season to another can be costly and may exceed the costs of subsidising exports. Higher subsidised exports, in turn, tend to heighten the refunds per ton and could provoke or add to existing trade policy tensions.

■ ■

A number of policy messages emerge from this outlook. First, although high government support continues to distort resource allocation in agriculture, progress has been made in some countries, with reform towards more market-oriented policies. That enables OECD countries to respond flexibly to the growing demand for food outside the OECD area even though, over the medium term, nominal world-market prices will rise only moderately.

4. Carmel Cahill, 'OECD Agriculture after Uruguay', ***The OECD Observer****, No. 196, October/November 1995.*

Although policy reform is continuing, many OECD countries, particularly Japan and the EU, continue to maintain domestic prices well above those on world markets. For a number of commodities, especially milk and grains, measures to control supply have been necessary to help strike a market balance domestically. But that can mean losing market share in international trade, as supply control, coupled with high domestic prices and Uruguay Round restrictions on subsidised exports, prevent countries from competing effectively in the rapidly growing food markets outside the OECD area – an effect that, with growth in domestic markets often tailing off, is all the more damaging for the countries concerned.

The outlook over the medium term suggests only a modest rebound in global grain stocks, making an efficiently functioning world marketplace more critical than ever. Reform of agricultural policy must therefore sustain the momentum for developing and maintaining an environment in which production and consumption can respond freely to price signals and trade flows. With fewer distortions, indeed, trade will be able to address shortages more efficiently, and price signals will be more reliable in guiding decisions on production. ■

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How Agriculture Benefits the Environment

Wilfrid Legg and Luis Portugal

Agriculture, like many other sectors, has seen the political importance of the environment increase. Environmental considerations have now become a major element in agricultural policy, both to reduce environmental damage and to enhance agriculture's benefits to the environment.[1]

The agricultural sectors in OECD countries are changing rapidly. Fewer people are employed on fewer farms, many of them working part-time. Farmers increasingly purchase inputs from the non-farm sector and sell under contract to the food-processing and marketing sector. Advances in technology (especially in farm chemicals, machinery and biotechnology) and better information on farm practices are available to farmers. And they are more conscious of the importance of farming sustainably – to ensure that there will be sufficient resources in the future to provide enough food, safely and in 'environmentally friendly' ways.[2] Indeed, many farmers and farm businesses have responded to the increasing pressure from consumer and environmental groups to improve their pest-, disease- and fertiliser-management.

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Farmers are also aware that the public expects them to contribute to the management of the countryside, conserve and improve the landscape, and provide spaces for recreation and tourism. The value of some of these benefits is captured by farmers through the market; some is not, such as maintaining biodiversity and wildlife habitats, or the 'positive externality' of a pleasant countryside. In many countries farmers have also to face environmental regulations and meet standards, particularly on water quality, the use of pesticides, and the disposal of animal waste – all of which can raise their production costs and depress their international competitiveness.

In agriculture, the application of the 'polluter pays' principle (which requires that polluters pay for the costs of meeting the degree of environmental protection decreed by government) often

1. ***Environmental Benefits from Agriculture: Issues and Policies – The Helsinki Seminar***, *OECD Publications, Paris, forthcoming, 1997.*

2. ***Sustainable Agriculture: Concepts, Issues and Policies in OECD Countries***, *OECD Publications, Paris, 1995.*

How Agriculture Benefits the Environment


Saustier/Campagne, Campagne

Benchmarks can guide a range of farming practices – such as pest-, disease- and fertiliser-management – though they are difficult to establish.

involves farmers having to meet limits for nitrates and other chemical run-off into water courses, or obey regulations on the use of pesticides. But its application to agriculture has often been poorly enforced, and can be impeded by practical problems, given the large number of farms and the difficulties in simply identifying who is doing the polluting. Moreover, it is not always easy to define property rights, which determine the environmental impacts that should be accounted for by farmers. In the event, it is often the taxpayer who ends up bearing the cost of reducing the discharge of by-products or chemical residues, through government payments to farmers to meet the costs of (for example) investments to deal with waste.

Where farming practices that maintain the quality and quantity of natural resources foster the future viability of farms, farmers have a direct incentive to adopt them. For example, by attending to the quality of the soil, farmers can reap future yields of crops at lower cost than they could otherwise. But such incentives require that farmers be aware of the environmental costs and benefits of their activities, that the market reflect these effects, which can be influenced by agricultural and environmental policies, and that farmers have the resources and the knowledge to farm in environmentally sustainable ways.

Some of these developments have been linked with high volumes of government support for farming, which on average is equivalent to around 40% of the value of agricultural production, and two thirds of which is to support farm prices.[3]

First, Define Your Benefits

For some countries the environmental benefits of agriculture are defined as no more than biophysical and ecological settings with rare flora and fauna that have gradually evolved in conjunction with farming practices and can be threatened by current systems of agricultural production. This approach is generally the one followed in North America, Australia and New Zealand. For other countries the benefits can also include landscape and cultural features, as well as the contribution of agriculture to rural development and thus to balanced national and regional growth – generally the case in Europe and Japan.[4]

Under guidelines or regulations defining, for example, 'good farming practices', a benchmark might represent what each government expects farmers or landowners to provide at their own cost and in their role as 'stewards' of natural resources. But a simple change in a benchmark (or reference figure) can alter the definition of particular farming practices as having harmful or beneficial environmental effects. If agricultural activities provide benefits above the benchmark, but for which the market does not pay farmers (such as enhancing biodiversity or wildlife habitats or maintaining an attractive landscape), it could be argued that they are providing a service which should then be recompensed. Where farmers' activities result in environmental damage in relation to the benchmark, then, as the polluter-pays principle suggests, they (or others) should be charged (or meet the cost of restoration) – for water pollution or spoiling the landscape, for example.

But clear definitions of 'good farming practices', and benchmarks against which environmental effects could be judged, are difficult to establish, because agricultural policies themselves have changed the 'base line' against which environmental effects could be assessed: many policies have been in place for decades, influencing the use of inputs and farming practices. In addition, some environmental effects take time to appear, especially when derived from the effects of pesticide residues and fertilisers on wildlife and water courses; and landscape impacts are often the result of the practices of many farms in a given area. Establishing benchmarks, which vary within and across countries, and over time, could nonetheless help policy-makers distinguish between harmful and beneficial effects

3. ***Agricultural Policies, Markets and Trade in OECD Countries. Monitoring and Evaluation 1966***, *OECD Publications, Paris, 1996.*

4. ***Amenities for Rural Development: Policy Examples***, *OECD Publications, Paris, 1996.*

FOCUS

The Agri-environmental 'Accompanying Measures' of the CAP

The payments made to farmers under the Common Agricultural Policy of the EU for efforts to maintain or improve the environment can be grouped into four main types of measure.

- *Land-management measures encourage low-intensity farming, lower quantities of inputs and organic farming, the main aim being to alleviate the pressure of farming on the environment. Some programmes encourage farmers to maintain genetic diversity, both of traditional crop varieties and of types of farm animals now in danger of extinction.*
- *Other measures seek to maintain traditional features of the landscape (stone walls, terracing and hedges, for example) and traditional craft skills – features valued not only for their aesthetic appeal but also for maintaining biodiversity – and to protect and enhance biodiversity through, for instance, the reduction of pesticides.*
- *The long-term set-aside of land and the maintenance of abandoned land can encourage the continuation of extensive agriculture or low-intensity grazing which may contribute to support biodiversity and reduce risk of fire or erosion.*[1]
- *The provision of information, training and demonstration can promote good farming practices and encourage public access and public leisure on land.*

These measures must be made available in each EU country, although none of the measures is compulsory on any individual farmer, who may choose whether to join one or more of them. For those who decide to commit themselves, the associated obligations must be observed for at least five years; for long-term set-aside the minimum obligation is for 20 years. The design of each measure, its implementation and evaluation are the responsibility of central government, though its operation is often decentralised to the regions. In 1996, these measures accounted for over 2 billion ECU, representing about 5% of the total budgetary expenditure on the CAP.

1. The environmental effects of agricultural land-diversion schemes are analysed in Leo Maier, 'Letting the Land Rest', ***The OECD Observer****, No. 203, December1996/January 1997.*

and could help them design and implement policies.

What Policy Framework?

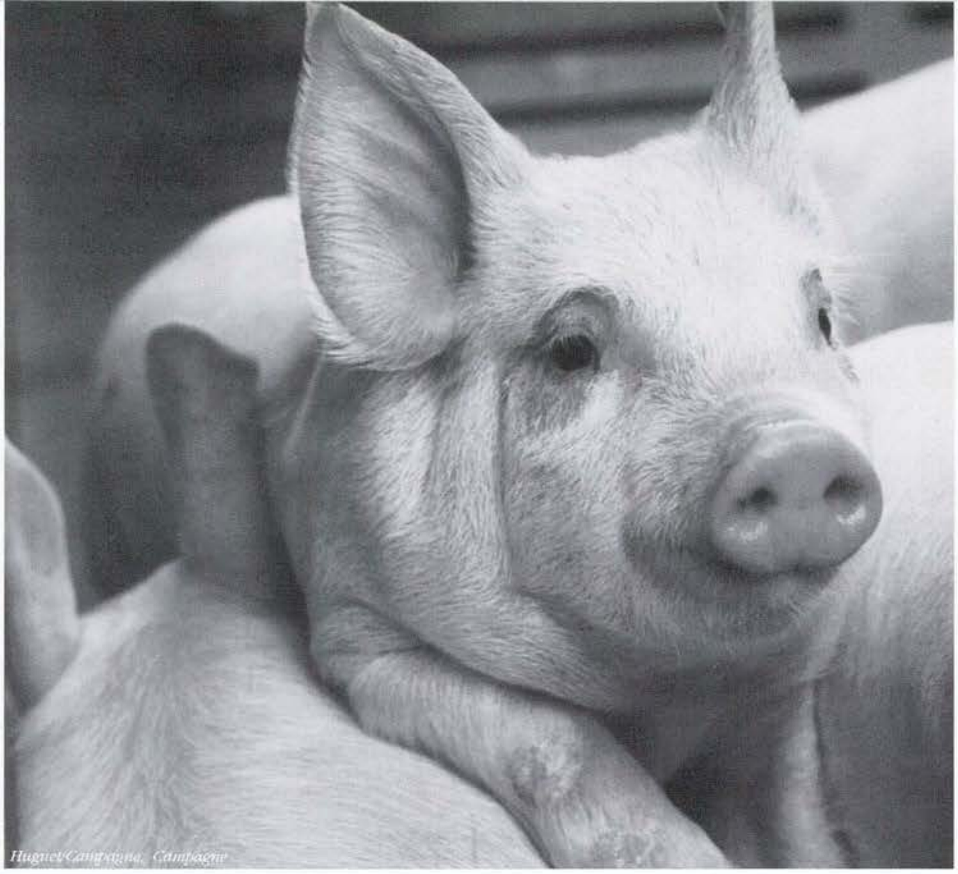
Policy implications can arise where environmental effects are not captured in markets. But one has to ensure that policy measures do improve the environment rather than make matters worse. One way to this end is to provide payments to farmers (for benefits), or levy charges on them (for harm). But that again requires the establishment of a well-defined set of property rights, embodying the entitlements and duties associated with the ownership or use of resources – for agriculture, particularly land and water.

Some of the environmental benefits that people expect farmers to provide have a value that is captured by the market; others do not.

It is generally recognised that reform of agricultural policy, by reducing production-linked support, will lower incentives that encourage farmers to use so many chemicals, will reduce intensive cropping and livestock practices, and will limit farming on environmentally fragile land. But reform may not be enough to achieve the desired degree of environmental outcomes (in part because markets are lacking or incomplete for some environmental benefits), and may have to be complemented with other measures which directly target the provision of these environmental benefits. But the policy reform of agricultural policy underway in all OECD countries could lead to some problems associated with, for example, the abandonment of land or 'traditional' agricultural practices in some regions.

An important element in reform is to target support away from production towards schemes to improve the ability of farmers to develop alternative sources of income, through for example, training and advice, start-up grants, and so on. They can, for example, provide rural amenities, which are diverse in nature, such as tourism or organic food production. A coherent approach to agricultural, environmental and rural-development policies will therefore both contribute to agricultural sustainability and give due recognition to regional diversity and local priorities. And to ensure that agriculture is economically and environmentally sustainable, the sector has to be exposed to consistent policy and market signals.

But the structure and size of farms, the population density, and the priorities attached to the environment vary considerably from one OECD country to another. Although that makes the designing of single policy solutions inappropriate, it is important that all policies take a balanced approach. If farmers are remunerated for any environmental benefits beyond those they provide in the course of their farming activities,



Hogging the subsidy? Government grants to farmers for investments to cope with animal wastes can mean an additional burden for the taxpayer.

they should also be obliged to take account of any environmental costs they impose.

Paying Farmers for the Environment?

Many of the policy measures intended to address the environmental benefits of agriculture have only recently been introduced and, in general, their effects have not yet been assessed. The approaches adopted range from local and regional initiatives, voluntary schemes,[5] through the dissemination of research results, education and training and regulation, to financial incentives and disincentives to farmers.[6] For example, the 'accompanying measures' to the 1992 reform of the Common Agricultural Policy (CAP) in the European Union provide payments to farmers who undertake, maintain or improve their environmental performance (box, p. 29). There are a number of similar policy measures currently in force in other OECD countries, in Europe in particular. Some of these payments are well targeted. Others are not, and are implemented without a full evaluation of the environmental benefits and associated costs. Payments are often, for example, applied uniformly in both national or regional schemes, even though the benefits may be locally concentrated or site-specific.[7]

To be cost-effective in achieving their objectives, and to avoid distorting agricultural markets, payments should be:

- transparent in their objectives and operation
- targeted to ensure the provision of the desired benefits, which would not be otherwise provided above the recognised benchmark or reference point
- tailored to particular environmental situations, limited to cover the costs of providing the benefits, and accompanied by adequate advice and information
- evaluated as to their environmental effects, the results of which would feed back into the possible adaptation of programmes to ensure lower-cost solutions
- monitored to ensure compliance and cost-effective implementation.

Payments should be used only where alternative approaches are unlikely to achieve the given objective. As far as is possible, they should be directly linked to environmental outcomes, or farming practices which foster them, rather than indirectly to the volume or type of production, or factors of production. Payments should also be based on sound scientific knowledge of physical and biological processes of the effects of specific practices. To be consistent, incentives to produce benefits should be used in conjunction with penalties for damage – and not be restricted to farmers, but available to anyone who can provide the environmental improvements in question.

■ ■

Much is known about the economic and policy issues involved, and the practical possibilities for improving environmental performance in agriculture. But this knowledge is often not applied, not least because it is poorly disseminated among farmers. Both national governments and regional and local governments and agencies can help here – although a thorough understanding of how agricultural and environmental policies 'mesh' still requires much more work. The OECD has an important role to play in the development of national and regional indicators on the environment and on policies to help with the assessment of how policy is performing,[8] and the comparative analysis of policy approaches across countries. ■

*5. Ronald Steenblik, 'When Farmers Fend for the Environment', **The OECD Observer**, No. 203, December 1996/January 1997.*

6. A number of country case-studies – to be made available free of charge from the OECD Directorate for Food, Agriculture and Fisheries in the course of 1997 – will provide a wealth of detail about such schemes.

*7. A first attempt of establishing operational criteria for direct payments for farmers was made in **Agricultural Policy Reform: New Approaches – The Role of Direct Income Payments**, OECD Publication, Paris 1994; Wilfrid Legg, 'Direct Payments for Farmers?', **The OECD Observer**, No. 185, December 1993/January 1994.*

*8. Kevin Parris, 'Environmental Indicators for Agriculture', **The OECD Observer**, No. 203, December 1996/January 1997.*

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Science and Society: Avoiding a Gulf

Jean-Éric Aubert

Contaminated blood, lethal growth hormones, mad cow disease: three alarms the tragic consequences of which have cast a pall over scientific expertise and the use that politicians make of it. At a recent symposium, the OECD explored public perceptions of science and technology and their impact on the strategic choices that will have to be made with the approach of the 21st century.[1]

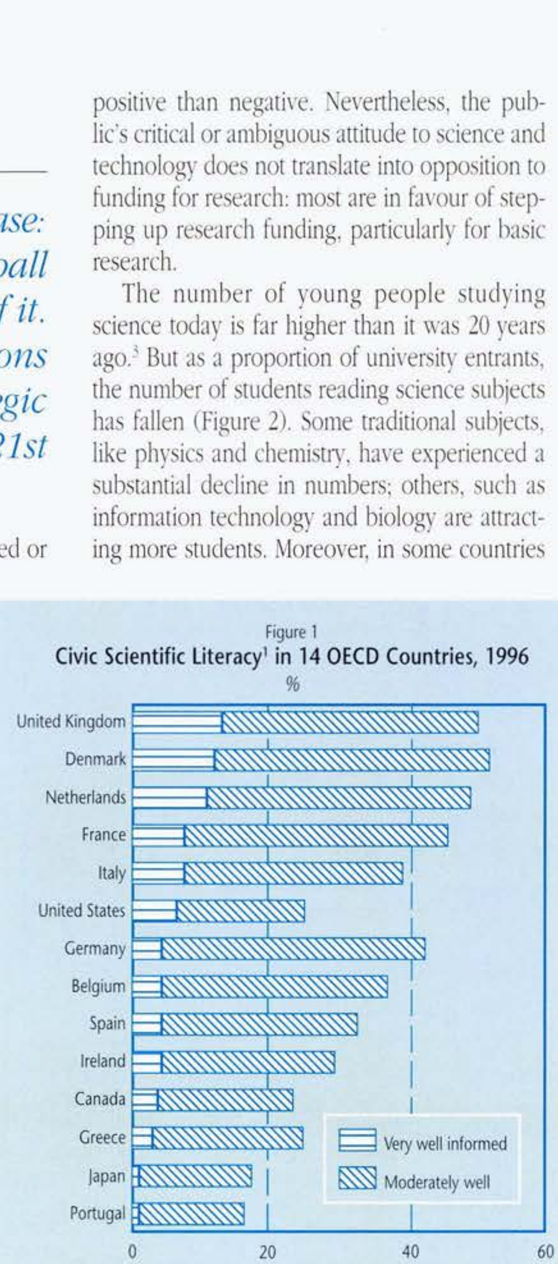
The complex relationship between science and society goes well beyond public reactions to the alarms that have recently been experienced. The public's guarded support for science and technology and the budget constraints affecting almost all industrialised countries are currently putting a brake on, even threatening, public funding for R&D programmes. Young people generally are showing less interest than they used to in science subjects and careers in science. The danger of this relative disinterest is that over the next ten years, when many of the present generation of researchers retire, there may not be enough young researchers to take over. The fact, moreover, that such large numbers of young people are not technically literate affects their ability to find jobs in economies that are facing constant technological change.

A comparative analysis of surveys conducted in 14 OECD countries[2] confirmed that in most countries the public is indeed interested in science: close to 50% of those interviewed, and in some cases more, claimed to be interested or very interested in science and technology. (Curiously, the one exception was Japan where the degree of interest is substantially lower and has slightly declined in recent years, particularly among the young.) In contrast, substantially fewer people claim to have an understanding of scientific issues and methods: only around 10% of adults said that they felt capable of taking part in a discussion on controversial scientific issues.

The surveys also showed that, in all countries, people's perceptions of science and technology were both positive and negative (Figure 1): they were aware of the benefits, but afraid of the potential dangers or risks involved. This ambivalence is found in all countries, although the overall attitude is more positive than negative. Nevertheless, the public's critical or ambiguous attitude to science and technology does not translate into opposition to funding for research: most are in favour of stepping up research funding, particularly for basic research.

The number of young people studying science today is far higher than it was 20 years ago.[3] But as a proportion of university entrants, the number of students reading science subjects has fallen (Figure 2). Some traditional subjects, like physics and chemistry, have experienced a substantial decline in numbers; others, such as information technology and biology are attracting more students. Moreover, in some countries

Figure 1
Civic Scientific Literacy[1] in 14 OECD Countries, 1996



1. The extent of scientific literacy is judged by answers to questions about natural, physical or other phenomena put to substantial samples of the population. The questions were limited in number (ten at most) and similar, if not identical, from country to country.

Source: Jon D. Miller, Center for the Advancement of Scientific Literacy, Chicago.

1. A study on this subject is in preparation.

2. Public Understanding of Science and Technology in OECD Member Countries: A Comparative Analysis, *paper presented at the Symposium on Public Understanding of Science and Technology, held in Tokyo on 5–6 December 1996, available free of charge from the Science and Technology Policy Division of the OECD Directorate for Science, Technology and Industry.*

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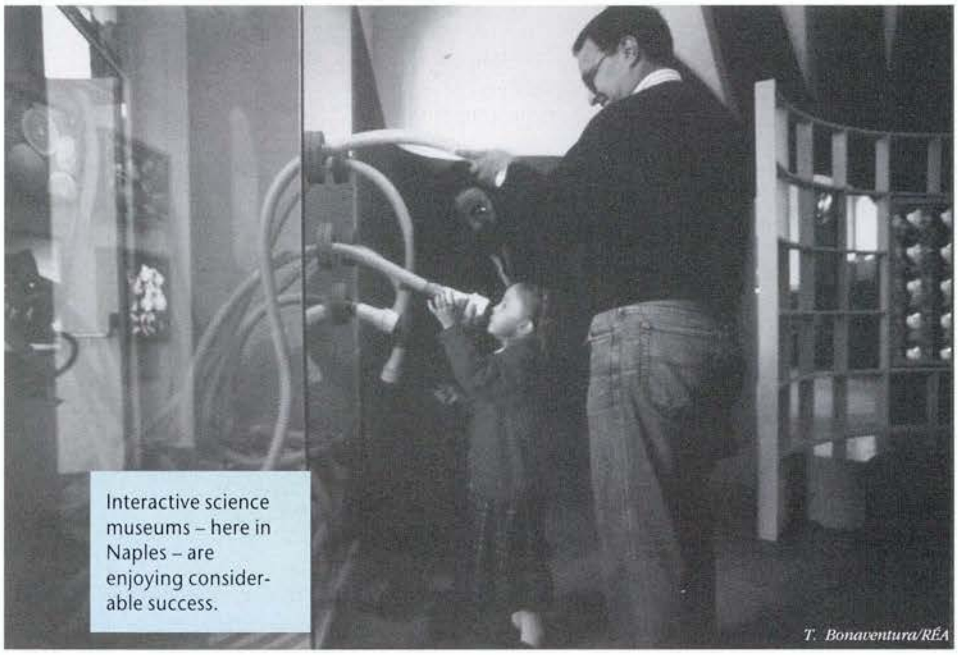


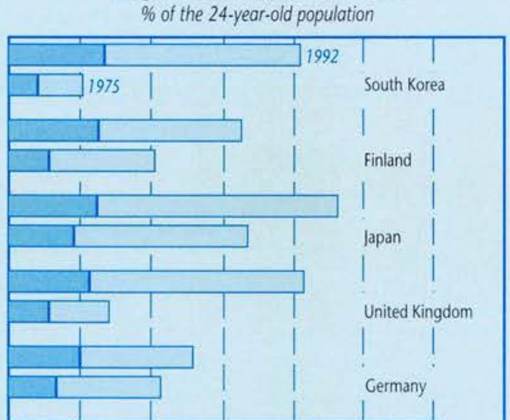
Interactive science museums – here in Naples – are enjoying considerable success.

T. Bonaventura/RÉA

the intake of science and engineering students has been slowly falling off over the past few years.

The survey data on careers in science and technology are less clear cut. In countries where in-depth surveys have been conducted, the numbers of graduates who go on to a career in science after university is either unchanged or slightly down. The fact that young graduates are going into other sectors of the eco-nomy is, if anything, a useful development (because they pass on scientific knowledge and methods to society at large). The real problem, and a much more mundane one at that, lies elsewhere. It is simply that if careers in science no longer appeal to young people, eventually science institutes may simply not have the numbers of staff that they require for their future development.

Figure 2
Natural Science and Engineering in Total First University Degrees in Eight OECD Countries, 1975–92
% of the 24-year-old population



Source: *Science & Engineering Indicators*, Natural Science Foundation, Washington DC, 1996

There are a number of reasons that science graduates look elsewhere for a career. Salaries may be less attractive than in other sectors, such as banking and finance, where science graduates are highly sought after. But there is also the feeling that scientific research is becoming increasingly compartmentalised and specialised and consequently less interesting.

Governments have been trying to interest the public in science and technology for many years – since the beginning of the Industrial Revolution, indeed, as an endless stream of encyclopaedias and 'universal exhibitions' demonstrates. With the arrival of new technologies fifteen or so years ago, governments began to step up their efforts. Every country now has its science museums or science centres, its science and technology day, or week, its television broadcasts and the like. And yet these efforts have failed to produce the desired effect.

What more can be done? Or how can current practices be improved upon? These are the questions that the participants at the Symposium set out to answer.

The Importance of Education

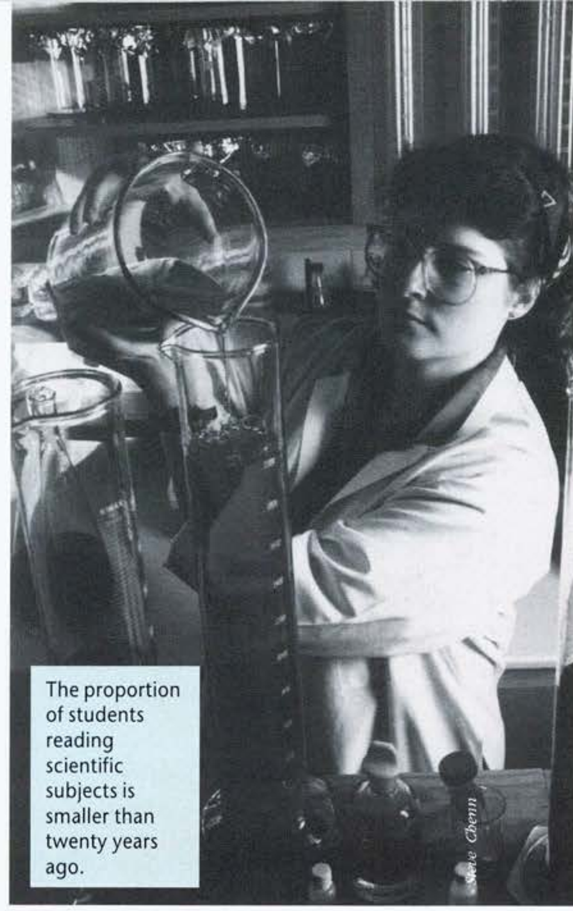
It is in primary and secondary school that the foundations are laid. It is essentially there that a life-long interest in science and technology can be instilled, as the comparative surveys showed. Anything that can be done later in life will not be enough to fill the gaps left at this early stage. But, if there is to be a real change in science and technology teaching, attitudes and methods will have to change: students will have to be better motivated, teachers and parents more involved, lessons based on pupils' everyday experience and on practical problems (environmental or other).[4]

New forms of teaching can produce real progress, as Professor Leon Lederman, winner of the Nobel Prize for physics, showed in his account of his own experience with young people from underprivileged areas of Chicago. Excellent results can be obtained even in problem settings, by introducing innovative programmes, involving scientists, re-arranging the teaching environment to encourage pupils' creativity, using recent findings in cognitive science to train teachers in innovative teaching methods, and so on. Tens of thousands of teachers and hundreds of thousands of primary- and secondary-school pupils were involved in the programme, which in only a few years raised pupils' marks in science and mathematics tests well above the national average for the United States.

A study from Sweden showed that an approach to mathematics teaching that is too abstract can put young people off science. It should not be too difficult to reverse the trend by redesigning programmes and curricula. As a general rule, if young people are to be genuinely helped to take their place in a society where

3. *'Are Science and Technology of Waning Interest to Youth?', paper drafted for the Symposium, available free of charge from the Science and Technology Policy Division of the OECD Directorate for Science, Technology and Industry.*

4. Changing the Subject: Innovations in Science, Mathematics and Technology Education, *OECD/Routledge Press, 1996.*



The proportion of students reading scientific subjects is smaller than twenty years ago.

Steve Chenn

science and technology are becoming increasingly pervasive, mathematics should no longer be used as a selection tool, as many countries still do.

The most successful science museums are those which have some relevance to visitors' everyday lives, firing their imagination and inspiring them, often taking advantage of interactive media. Such museums are even more effective when they bring together scientists and the teaching community and facilitate exchanges between the two worlds, as in museums in Trieste and Luleå, one in the south of Europe, the other in the far north, whose experiences were described at the Symposium.

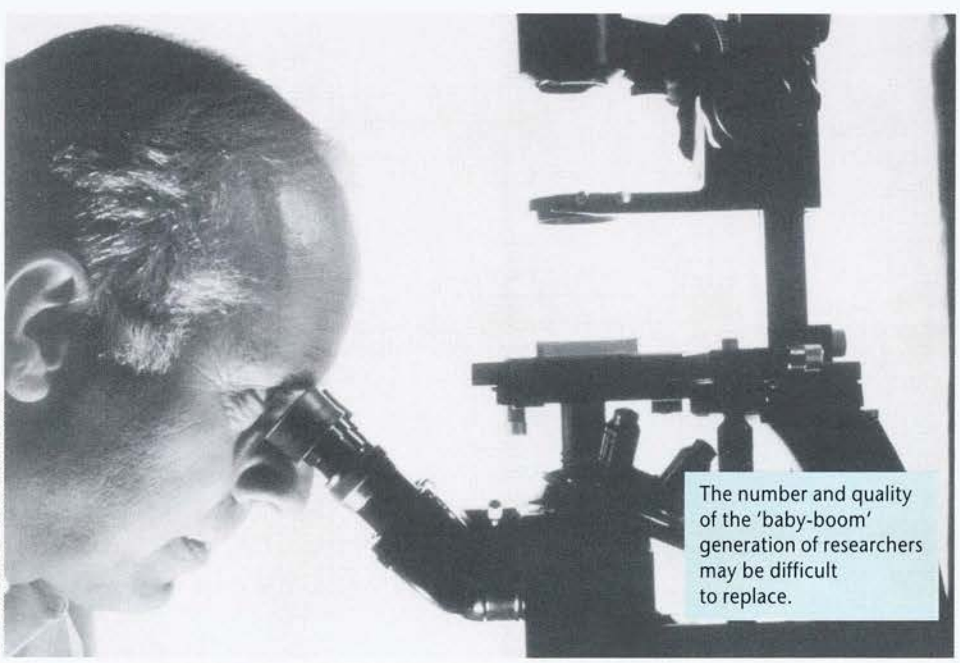
Governments and the research community both attach much importance to the media, and rightly so, since in most countries television is by far the main source of information on science and technology used by the general public. Japan, for example, has announced the launch of a 24-hour national science channel. But science programmes are not always well produced at present, and the uninitiated can sometimes find them impenetrable. Programmes based on a narrative approach, which appeal to the viewer's imagination and work up from the concrete to more complex and abstract concepts, are probably the best introduction to the world of science and technology.

A proposal was made at the Symposium to set up an international channel that would broadcast the best programmes from each country. This channel could be hooked up to user-friendly Internet servers so that interested communities throughout the world – scientists, teachers, the public – could express their views, requirements and criticisms on the materials proposed.

Developing a Dialogue

Lastly, the Symposium discussed the importance of governments' committing themselves to developing a policy dialogue which would, for example, allow the public to be consulted before decisions on R&D priorities are made and to take part in ethics committees or technology assessment mechanisms. In each country there would be the structures that best suited its own traditions, but the importance of a policy dialogue was clearly emphasised both by the Danish Minister for Research and Information Technology, who cited his own country's experience with public involvement in designing an R&D strategy, and by Professor Wataru Mori, Science and Technology Advisor to the Prime Minister of Japan, who advocated public 'informed consent' on major national science and technology decisions. The Japanese government has also decided to launch a large-scale programme involving all the relevant actors (scientists, teachers, journalists, and so on), with the aim of training large numbers of 'science interpreters' to facilitate communication between the public and scientists.

Disseminating knowledge is as important as generating it. Incentives, including professional promotion, must be introduced to encourage scientists to publicise their work. The target audience – young people, the general public, politicians and so on – also has to be motivated. Information, even complex information, is much more easily assimilated when it is relevant to people's immediate concerns. The dialogue with any audience therefore has to be emotional, even though the development of science and technology relies primarily on rational argument. ■



The number and quality of the 'baby-boom' generation of researchers may be difficult to replace.

R. Nowitz/Photo Researchers/Cosmos

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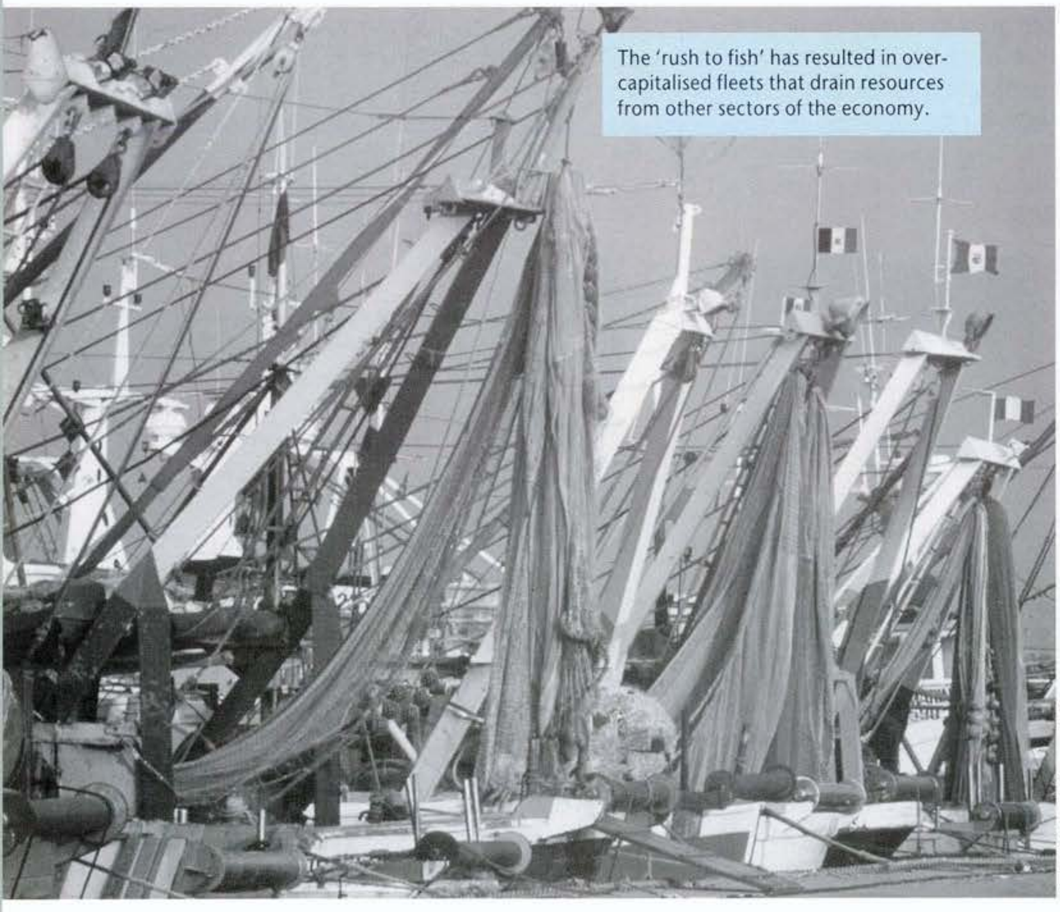
Can Private Property Rescue Fisheries?

William Emerson

The world's press regularly carries warnings that over-fishing is emptying the seas of their most important commercial stocks. Indeed, the economic signals arising from the institutional framework governing fishing encourage fishermen to act apparently logically but in defiance of their own long-term interests – with drastic effects on fish stocks. Radical overhaul appears to be the only solution.[1]



The 'rush to fish' has resulted in over-capitalised fleets that drain resources from other sectors of the economy.

Carlo Borlenghi/Sea and See

Any commercial fishing activity, whether undertaken by small scale, inshore vessels or large, sea-faring, factory trawlers, is a complex activity, often involving conflicting biological, social and economic goals. The exploitation of fish stocks provides employment in many areas of the world. Fishery products are furthermore an important food source which, obviously, is threatened when fish stocks decline. Over the past few decades agriculture has responded to increasing populations and growing demand for adequate nutrition with a spectacular increase in productivity.[2] But the fisheries sector has failed to do so.

Within the 200-mile Extended Economic Zones (EEZs) of coastal countries, marine resources are generally the property of 'the people', with the government playing the role of trustee. Under this arrangement, as with the regional agreements covering many high-seas fisheries, many marine fisheries have been left 'open': no single boat or fleet has the right to exclude another from harvesting any part of the resource. Any individual fisher who leaves fish to grow and reproduce – a vital element in any healthy marine ecosystem – thus risks losing them to less considerate rivals. There is therefore little incentive among producers to conserve fish for future use. This absence of private ownership of marine fisheries is the fundamental cause of poor economic performance and biological over-exploitation.

In an attempt to prevent over-fishing, government has therefore intervened with regulation. The management instruments used are of

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three basic kinds. Output controls set annual quotas on harvest volumes; once the quota has been reached, the fishery is closed for the year. Input controls limit the number of vessels that are allowed to fish (by requiring a license, for example) or other factors of production. Third, there are technical measures which protect undersized fish or spawning areas, including the specification of minimum mesh sizes which allow smaller fish to escape and grow to a commercial size. Most fisheries are managed using a combination of all three types. But in spite of the plethora of measures that governments have deployed, most fail to achieve their stated objectives.

First, from a biological perspective, the state of fish stocks has generally not improved following the introduction of such measures; harvest volumes of some species (Atlantic cod and halibut, for example) may, indeed, be reaching a point at which recovery is impossible. The reasons are numerous. Appropriate harvests are difficult to assess. The difficulty of monitoring fish in their natural environment means that scientific information is expensive to collect and difficult to analyse. Fish stocks, moreover, are very sensitive to changing environmental conditions: stocks that are healthy one year may be in a precarious condition the following one because of changes in water currents, temperature gradients, relative salinity or the availability of nutrients.

One solution to this uncertainty might be to adopt the 'precautionary approach' espoused in the *Code of Conduct for Responsible Fisheries* proposed by the Food and Agriculture Organisation of the UN.[3] It requires that, in the absence of sufficient information, harvest volumes be set below those compatible with the natural reproduction rates of the fish stock in question. The implementation of such a decision might nonetheless run into political difficulties: in the short run it would mean a loss of income for the fishermen harvesting the species coming under protection. In the long term, of course, harvests would be expected to increase as the stocks rebuild.

Management measures have also failed from an economic perspective, since they have not brought excessive fishing intensity under control. The result has been a vicious circle of decreased landings, lower revenues and intensified effort to make up the shortfall. In fisheries where governments have implemented quotas (seasonal or annual), the incentive facing individual operators is to catch as much as they can before the quota is reached. They therefore buy larger, more powerful vessels, fish longer hours, and so on, to outperform their competitors.[4] The overcapitalised fleets which result drain resources away from other sectors of the economy where they could achieve higher returns – and the world's governments already spend some $54 billion to subsidise an industry that lands only $70 billion worth of fish.[5]

From a marketing perspective, too, quotas have had undesirable consequences. As fishermen concentrate their effort at the beginning of the season, markets are glutted with fish – which lowers prices (either because of excess supply or because the fish have to be frozen and sold at a lower price later on) and, too, the quality (and price) for fish that is not handled properly. There is also the incentive to limit the fish counted against a quota to the highest-quality specimens (and the biggest ones when they attract a premium). Fish which do not fetch the highest price are then often discarded.

The schemes implemented to try to counter such widespread failure – circumscribing access to fisheries by insisting that participating vessels hold a license – cannot control the amount of capital that is invested in a fishery. Licensed participants respond by increasing the fishing power

FOCUS

Bottomless By-catch?

'By-catch' – that portion of the catch that is not specifically being targeted – has recently become one of the most important issues in fishery management. It occurs because fishing vessels are not able to limit their catch to a target species. The fate of by-catch is a function of economic, legal or personal considerations. If there is a market for it, and the price justifies landing the fish, it will indeed be landed; otherwise, it is simply discarded at sea. If by-catch is composed of illegal species (undersized fish, for example), they too will be jettisoned. If fishers are allocated a landing quota on a species-by-species basis, they may choose to cull the more valuable fish and discard what remains (a practice referred to as 'highgrading').

The global volume of by-catch is estimated to be in the neighbourhood of 27 million metric tons, a staggering amount when compared to global landings of about 98 million metric tons. In 'clean' fisheries, where the combination of gear and stock composition result in yields limited to the target species, by-catch can be insignificant. But in others the figures can be startling: in the shrimp fishery, for example, by-catch has been estimated to be in excess of 16 million metric tons.

There is no easy solution to this problem. Some countries require that fishers land all the marine life they harvest. This is a potentially costly undertaking when there is no market for the landed products. It is, furthermore, a difficult measure to monitor without an observer on board every vessel. Other countries place no restrictions on the amount of by-catch and its fate, which can lead to considerable wastage. Advances in the selectivity of gear may also reduce the harvest of non-targeted species. But there is no certainty as to the best way forward: research in this area is costly.

1. ***Towards Sustainable Fisheries: Economic Aspects of the Management of Living Marine Resources**, OECD Publications, Paris, forthcoming 1997.*

2. *At the World Food Summit held in Rome on 13–17 November 1996, the international community reaffirmed its commitment to eradicating hunger and agreed on a plan of action for increasing the year-round availability of food, improving access to supplies, and reducing the number of malnourished people. Scientific and technological progress have played a key role in increasing yields in the agricultural sector. Likewise improvements in the development of aquaculture have contributed to an increased share in the overall supply of fish. See David Blandford and Gérard Viatte, 'Ensuring Global Food Security' and Donald J. Johnston, 'Food Security and Sustainable Agriculture', **The OECD Observer**, No. 203, December 1996/January 1997.*

3. *FAO, Rome, 1995.*

4. *In 1988 the FAO estimated that the annual operating costs for the world's fishing fleet was $92 billion while annual revenue was put at $70 billion. This left the world fishing fleet facing a deficit of some $22 billion (without accounting for capital servicing and similar costs).*

5. The State of World Fisheries and Agriculture, *FAO, Rome, 1995.*

Can Private Property Rescue Fisheries?

FOCUS

Hope for Halibut?

The commercial Pacific halibut fishery off the western coast of Canada and the United States began in 1888. Until 1990 the fishery was managed by a variety of measures, including limits on the amount of fish that could be harvested on an annual basis, control of the number of licenses issued to participants, restrictions on the types of gear used, and closure of fishing areas to protect immature fish. Stock abundance and harvest volumes fluctuated throughout this period, with the fishing season lasting anywhere from the whole year to 65 days (the season ends when the annual quota is harvested).

In 1990, because of higher prices for halibut, the fishery – which had very recently provided income and employment on a year-round basis – attracted so many vessels that the entire quota was harvested in six days. This 'race to fish' resulted in an over-capitalised fleet, loss of gear, increased injuries and market gluts, leading to much lower prices, both for fresh and frozen fish.

Canada therefore introduced individual vessel quotas between 1991 and 1993, whereby boats were allocated a portion of the resource. Because operators were given ownership of a share of the resource, they now had an incentive to harvest it in a manner that maximised the returns on their investment. The result has been an increase in the fishing season from six days to eight months, an increase in fish quality, higher prices, and a reduction in the fleet size. In 1995 the United States introduced individual transferable quotas (ITQs) which can be sold or transferred; the results of the programme are awaited with interest.

of their vessel ('capital stuffing') in order to outperform other operators. Measures of this nature, if unsupported by other approaches, also fail to control the amount of fish that is harvested.

Stipulations of minimum mesh sizes which allow smaller fish to escape and grow to a larger commercial size have also failed to bring about the results expected by policy-makers. Enforcement is difficult, as vessels often switch between different fisheries (the same vessel may, for example, fish for cod and for hake during the same fishing trip, thus making it difficult for enforcement officials to ascertain what gear was used to harvest which species). Moreover, the relationship between minimum harvest size and resource viability (so as to judge when a stock is overfished) is not clearly understood.

Market Mechanisms to the Rescue?

Yet the story is not entirely bleak. Fisheries which have introduced market mechanisms have generally fared well. Under such schemes individual fishers acquire a share (quota) of the resource and harvest it in the most desirable manner, generally attempting to maximise returns on their investment, subject to whatever legal constraints the government has implemented. Since the fishers own (or lease) the quota, each share owner has an incentive to ensure that the stocks are harvested in a manner that will guarantee their future sustainability. In cases where these stocks are transferable (that is, they can be sold), the system also promotes the participation of the most efficient fishermen.[6]

As a rule these types of mechanisms have worked well in 'directed' fisheries which only harvest one species of fish (thus avoiding the necessity of purchasing quota which is exactly proportionate to the composition of the landed species) and in fisheries where landings are fairly stable from year to year (investors must be confident that they will be able to land the quota they purchased).

Sardine fisheries are among the many hundreds around the world where harvests have dropped dramatically.

L. Beebe/Sea and See

FOCUS

Towards Sustainable Fisheries

The selection of effective management instruments is complex since the effect of each type of instrument depends on a number of factors. The OECD Committee for Fisheries has examined the management instruments used in more than a hundred fisheries in OECD countries to discover their economic, biological, social and administrative consequences. The study does not aim to specify which management instruments should be used or to rank their effectiveness but to assess the economic consequences of different management approaches.

A management regime which does not adequately limit fishing capacity can lead to over-exploitation and poor economic performance. The introduction of rights-based management systems – such as transferable individual licenses, individual quotas or the right to exclusive fishing in a given area – has been proven to alleviate many of the problems involved. But a problem with the introduction of such systems is that they might cause problems of structural adjustment, including lower employment opportunities and distributional conflicts. Another successful approach has proven to be co-management, including community-based management systems and partnering arrangements. These systems increase fishermen's participation in the management process, not least by devolving management responsibilities.

The OECD will continue to work to promote responsible and sustainable fisheries but from an integrated approach, examining both the supply-side and demand-side effects resulting from a move towards these ends.

But in the high seas, where no individual country has the exclusive jurisdiction of the resource, access cannot be limited, and without the introduction of proper management regimes, the future of these fisheries is in jeopardy.[7] That calls for the establishment of regional fisheries organisations or agreements whose mandate is to ensure the effective conservation and management of international resources. The international community has already agreed on a number of measures whose aim is to ensure that exploitation is compatible with the productivity of the resources.[8]

Decoux/REA

The one that got away? Minimum net sizes have not been effective in protecting fish stocks.

An essential element in an effective regime is the co-operation and support of the industry itself. Policy-making under co-management regimes benefits from practical knowledge of the resource (fishers are often very sceptical of 'scientific' advice) and, once fishers feel they have more of a stake in the success of the policy measures, the result is often improved compliance.

■ ■

There are no universal solutions to the problems of fisheries management. The most fitting remedies will vary from country to country and from period to period. They will also depend on the unique combination of the economic, biological, technological and social characteristics making up each fishery. Management decisions will have to aim at long-term responsibility and not be driven by short-term profits. The correct solutions for responsible fisheries require astute judgement in blending a complex range of policy instruments to suit the circumstances of individual fisheries – and bold political decisions that are often unpopular in the short term, since eliminating over-capacity will deprive people of jobs. ■

6. Carl-Christian Schmidt, 'The Net Effects of Over-fishing', ***The OECD Observer****, No. 184, October/November 1993.*

7. William Emerson, 'Hitting the High Seas', ***The OECD Observer****, No. 195, August/September 1995.*

8. More recently, these include the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks and the 1993 Agreement to Promote Compliance with International Conservation and Management by Fishing Vessels on the High Seas.

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The New OECD Members and Liberalisation

Robert Ley and Pierre Poret

The Czech Republic became a member of the OECD in December 1995, Hungary in May 1996, Poland in November 1996 and Korea in December 1996.[1] For all four countries, joining the OECD meant undertaking substantial liberalisation commitments, under the OECD instruments, in foreign direct investment, international capital movements and services. These commitments will foster the modernisation of their economies and the maintenance of sound macro-economic policies and market-oriented structural reforms.

An essential condition of the accession of any country to OECD membership is its acceptance of the obligations of the OECD Codes of Liberalisation of Capital Movements and Current Invisible Operations (box, p. 40). Under the Codes, member countries have legally binding obligations to notify the OECD of existing restrictions in foreign direct investment (FDI), capital movements and cross-border trade in services, not to introduce additional restrictions (except under specific conditions), to apply any measures without discrimination among OECD countries, and to submit themselves to a peer-review process that aims progressively to remove remaining restrictions over time. New members are also required to endorse the 1976 OECD Declaration on International Investment and Multinational Enterprises and related Decisions, in particular the 'National Treatment' instrument, under which members undertake to grant national treatment to foreign-controlled enterprises established under their jurisdiction and the Guidelines on Multinational Enterprises (box, p. 41).

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Although each application to OECD membership is judged on its own merits, all candidate countries are expected to meet the following standards:

- full compliance with the non-discrimination, transparency and 'standstill' principles
- liberalisation of long-term capital movements and a timetable for future further liberalisation
- an open and transparent regime for FDI
- no restrictions on payments and transfers in connection with international current-account transactions
- a relaxation of restrictions on cross-border trade in services, principally financial services.

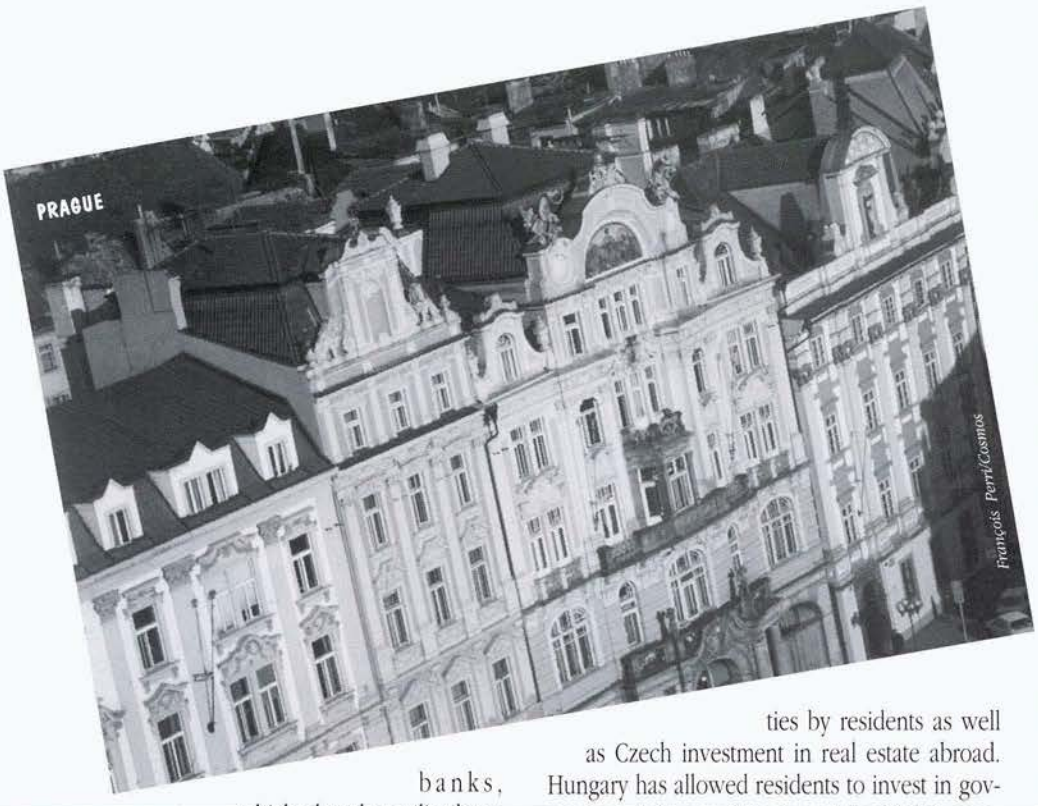
Standstill, Transparency and Non-discrimination

The reservations of these new members to specific items in the Codes all accurately reflect existing laws, regulations and practices, thereby serving well the purpose of transparency. New members have all refrained from proposing 'precautionary' reservations under the Codes (that is, those which would have preserved the possibility of introducing restrictions on operations which are currently free), thus ensuring effective compliance with the so-called 'standstill' principle under which a country accepts to be bound not to take steps backwards. Neither the Czech Republic, Hungary nor Poland asked for any dispensation for sectors for which they had not already undertaken formal liberalisation obligations under the 'Europe Agreement' – their agreement of association with the European Union – or the General Agreement on Trade in Services (GATS), but where no restrictions in fact apply.

All the new members have also accepted not to apply any measures which may have the effect of discriminating among OECD countries. Reciprocity conditions have been removed from domestic laws and regulations, in particular from financial services where such conditions are common. In addition, the three European new members have committed themselves to extend to all OECD countries any liberalisation measures falling under the purview of the Codes that they may take under their 'Europe Agreements'. Korea removed minimum-size requirements for the establishment of foreign insurance companies and

1. The Slovak Republic's application for membership of the OECD is being examined.

2. The law nonetheless entitles the Czech authorities to discourage certain capital inflows through a requirement on resident borrowers to deposit in non-interest bearing accounts a certain percentage of the money inflow involved. Yet this safeguard provision is to be used only temporarily and in cases of emergency. So far, it has not been applied.



banks, which placed at a disadvantage those OECD countries with smaller insurance and banking industries.

Toward the Abolition of Capital Controls

For many years before accession, capital movements, and more particularly capital outflows by residents, were extensively restricted in the Czech Republic, Hungary and Poland, because of a desire to direct national saving towards domestic investment, fears of potentially destabilising capital flows, or the concern to protect inexperienced domestic investors against excessive risk-taking.

During the accession process, by contrast, all three countries achieved full liberalisation of direct investment abroad by residents, outward trade credits and personal capital movements abroad. This move did not raise major difficulties because these operations are not the most directly affected by the course of domestic economic policies. In addition, other capital outflows by residents have been liberalised to varying degrees. The Czech Republic has fully liberalised the purchase abroad of any foreign securities by residents as well as Czech investment in real estate abroad. Hungary has allowed residents to invest in government debt securities issued by OECD countries and securities issued by OECD-based enterprises with a rating. Poland has liberalised resident purchases abroad of foreign shares and debt securities with maturities of one year or more, as well as outward financial credits with maturities of more than one year. None of these countries maintains restrictions on capital outflows by non-residents.

The Czech Republic, Hungary and Poland have been even more open to capital inflows, although, as many other emerging market economies, they are concerned to avoid excessive short-term capital inflows that might create unwelcome exchange-rate and inflationary pressures. In the Czech Republic, the foreign-exchange law passed in October 1995 removed the requirement of prior approval for almost all categories of capital inflows.[2] Hungary and Poland liberalised all capital inflows, except through debt instruments of a maturity of less than one year.

Korea's capital-control regime presents a sharp contrast with those prevailing in most central and eastern European countries. As early as the 1980s, Korea took far-reaching liberalisation measures on capital outflows, including portfolio investment abroad, admission of foreign securities on Korean markets, outward financial credits and bank deposits abroad, the liberalisation of which was further advanced or extended in scope during the accession process.

These measures are expected to help alleviate possible difficulties with large capital inflows, for which Korea has retained many restrictions, especially when they may correspond to the creation of debt; the

The New OECD Members and Liberalisation

concern is to prevent exchange-rate appreciation and a further widening of the current-account deficit. Restrictions on inward trade credits are nonetheless to be relaxed further. In addition, the ceiling on the total amount of domestic securities which can be issued abroad and most qualification requirements to be met by resident issuers will be removed by the end of 1999. Existing ceilings on foreign portfolio investment in Korean stocks are also to be relaxed progressively, and will be fully abolished by the end of 2000. Easier access to the bond market has been provided to foreign investors.

Still, the large number of remaining reservations to the Capital Movements Code proposed by all four candidate countries remained a matter of concern for the OECD. The countries themselves were fully aware of the drawbacks of capital controls, which create inefficiencies, are often ineffective and do not offer a substitute for appropriate macro-economic policies. The Czech Republic and Hungary adopted the objective of abolishing all remaining capital controls within a period of three to four years, if the economic situation evolves according to expectations. Korea's objective is also to abolish remaining capital controls progressively over the next five years, subject to stable macro-economic conditions, which the Korean government will strive to promote. Poland took an important additional step by undertaking a legally binding commitment to remove all remaining capital controls by the end of 1999.

Liberalising FDI

At the outset of the process for accession to OECD membership, the Czech Republic and Hungary had a very liberal regime for FDI, including the absence of any general screening mechanism whether for new 'greenfield' investments or for the take-over of, and participation in, existing enterprises established in their territory, and a limited number of sectoral restrictions which also can be found in other OECD countries, such as those relating to transport.

Both countries removed remaining restrictions on FDI in the form of loans and in certain sectors (auditing in the Czech Republic, for example, and the financial sector in Hungary). Remaining

3. Poland, like Hungary, also undertook to remove restrictions on establishment in the form of a branch (that is, an entity not incorporated under domestic law), by the end of 1998 at the latest. The Czech Republic has no such restrictions.

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The OECD Codes of Liberalisation

The OECD Codes of Liberalisation of Capital Movements and Current Invisible Operations have the legal status of an OECD Decision binding on all the members.[1] In adhering to the Codes, member countries undertake to remove restrictions on specified lists of capital movements and invisible operations. The Capital Movements Code covers all cross-border capital operations, including foreign direct investment (FDI) and the right of establishment. The liberalisation list under the Current Invisible Codes includes current payments and transfers in connection with business, industry, foreign trade, personal income, and travel and tourism, as well as cross-border trade in transport services, financial services and films.

The primary objective of liberalisation under the Codes is that the residents of different OECD countries should be as free to deal with one another as residents of the same country. Members are not required to extend preferential treatment to non-residents on their territory, but they do have to allow residents to transact freely with non-residents in any operations abroad. The approach adopted is to engage the member countries in a process of progressive liberalisation, allowing reasonable scope for countries to move towards the ultimate objective in varying ways and speeds, according to their individual economic circumstances.

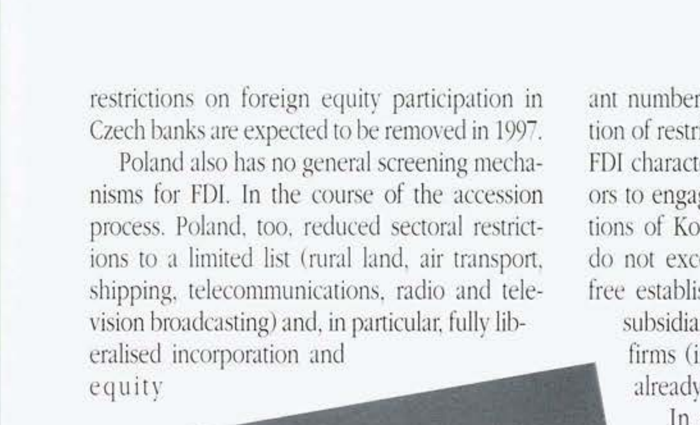
A member unable to liberalise all operations (that is, transfers to cover international transactions and the underlying transaction itself) is permitted to lodge a reservation against specific items when it adheres to the Codes. By lodging a reservation, the country retains the right to maintain restrictions on the operations concerned while also benefitting from liberalisation by other member countries. Remaining restrictions (as well as any liberalisation measures) must nonetheless be applied in a non-discriminatory fashion among the operators in different OECD countries, and full transparency is required. Peer pressure reviews encourage members to pursue liberalisation.

Unless an operation is contained on 'List B' of the Capital Movements Code (essentially short-term financial operations and non-resident acquisitions of real estate), a reservation once withdrawn may not be lodged anew, nor can limited reservations be broadened. These 'standstill' provisions act with an important ratchet effect to preserve the degree of liberalisation already achieved and to promote the progressive roll-back of restrictive measures. A country may nevertheless desire to re-impose restrictions. These cases are covered by the derogation procedure, which provides for a temporary dispensation from the obligation to preserve the freedom of operations not covered by reservations. But a derogation may be invoked only if a member can demonstrate the necessity of re-introducing restrictions because of serious balance-of-payments difficulties or a major economic or financial disturbance.

1. An overview of the Codes can be found in ***Introduction to the OECD Codes of Liberalisation****, OECD Publications, Paris, 1995. Details of the Codes and members' current reservations are given in* ***Code of Liberalisation of Capital Movements*** *and* ***Code of Liberalisation of Current Invisible Operations****, OECD Publications, Paris, both forthcoming 1997.*

restrictions on foreign equity participation in Czech banks are expected to be removed in 1997.

Poland also has no general screening mechanisms for FDI. In the course of the accession process, Poland, too, reduced sectoral restrictions to a limited list (rural land, air transport, shipping, telecommunications, radio and television broadcasting) and, in particular, fully liberalised incorporation and equity



Svietlo/Campagne, Campagne

participation by foreign investors in the insurance, banking and other financial services sectors.[3] Poland also undertook to allow the acquisition of real estate by foreign-controlled enterprises when necessary for the conduct of their business.

The Czech Republic, Hungary and Poland committed themselves to ensure that foreign investors will be given equal access with domestic investors on the basis of transparent rules and procedures in their privatisation programmes.

Korea has a long tradition of regulating FDI, and its regime remains less liberal than those prevailing in the other new members. Korea's liberalisation effort in the period leading up to OECD membership was nonetheless substantial. It included, *inter alia*, the removal of an important number of sectoral restrictions; the relaxation of restrictions on intra-company loans of an FDI character; the possibility for foreign investors to engage in 'friendly' mergers and acquisitions of Korean enterprises whose total assets do not exceed a specified threshold; and the free establishment, from 1 December 1998, of subsidiaries of foreign banks and securities firms (in addition to branches which were already permitted).

In addition, the Korean authorities agreed that no 'market need' test will be applied for the establishment of foreign insurers, banks and other financial institutions. They undertook to make every effort to ensure that foreign direct investors will be given access to the financial-services sectors on the basis of predictable and transparent rules and implementing procedures. They further indicated their intention to reconsider, by the end of 1998, the necessity of the remaining restrictions in sectors – broadcasting, telecommunications, publishing, news agencies, and so on – where the concerns underlying the restrictions can be met by other, non-discriminatory means.

The four new members proposed a number of exceptions to the National Treatment principle which closely parallel their specific reservations under the Code on the establishment of enterprises by foreign investors. They also accepted the Guidelines on multinational enterprises, including the provisions dealing with the right of employees to trade-union representation, and agreed to contribute to their implementation.

Free Convertibility for Current Payments

Although the Czech Republic, Hungary and Poland had already removed many restrictions on the convertibility of the domestic currency into foreign ones for making payments and transfers in international current-account transactions,

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The 1976 Declaration on International Investment and Multinational Enterprises

The 1976 Declaration by the governments of OECD countries on international investment and multinational enterprises constitutes a policy commitment to improve the investment climate, encourage the positive contribution multinational enterprises (MNEs) can make to economic and social progress and minimise and resolve difficulties which may arise from their operations. The Declaration consists of four elements, defined in decisions by the OECD Council.

National Treatment instrument (NTI)
Member countries should accord to foreign-controlled enterprises after their establishment on their territories treatment no less favourable than that accorded in like situations to domestic enterprises. Countries are obliged to notify any exceptions to national treatment to the OECD for examination. The examinations result in reports to the Council, which formulates proposals for action to the country concerned. The examination reports are published in the series OECD Reviews of Foreign Direct Investment.

The Guidelines for Multinational Enterprises
These constitute a set of voluntary rules of conduct, whose observance is encouraged by OECD governments, to ensure that MNEs operate in harmony with the policies of host countries. These standards cover the full range of MNE operations, with separate chapters on information disclosure, competition, financing, taxation, employment and industrial relations, environment, and science and technology. Solving problems arising in specific cases is a matter for the 'National Contact Points' (usually a government office in a member country).

Conflicting requirements
Members shall co-operate in order to avoid or minimise the imposition of conflicting requirements on multinational enterprises.

International investment incentives and disincentives
Members recognise the importance of giving due weight to the interest of other member countries affected by relevant laws and practices; they endeavour to make measures as transparent as possible.

The New OECD Members and Liberalisation

a number of restrictions remained. During the course of their accession, these three countries removed all remaining restrictions on convertibility and thus achieved 'Article VIII' status in the International Monetary Fund Agreement, which provides an internationally recognised benchmark for current-account convertibility.

For the Czech Republic this achievement implied primarily the termination of its bilateral payments agreement with the Slovak Republic. More substantial liberalisation measures were involved for Poland and Hungary. In particular, in Poland, the so-called Kantors – foreign-exchange bureaux through which residents can obtain unlimited foreign currencies – were allowed to buy foreign exchange from resident banks, thereby terminating the possibility of multiple exchange rates because of market segmentation. Hungary allowed residents to make payments for travel expenditures abroad without any restrictions and to increase substantially their access to cash foreign-exchange allowances for tourism abroad.

Korea had already met the requirements of Article VIII of the IMF Agreement in 1988, so liberalisation in this area was not an issue during the accession process.

Market Access for Financial Services

The Czech Republic, Hungary and Poland maintain restrictions on the supply by non-resident (non-established) suppliers of a range of insurance, banking and other financial services on their territories which are more comprehensive overall than is the case for most OECD countries. During the accession process, nonetheless, remaining restrictions on reinsurance, advisory and agency services were removed. Hungary and Poland also fully liberalised insurance services for goods in international trade.

Korea undertook substantial liberalisation commitments in financial services, including the full liberalisation of life insurance, reinsurance, custodial services and advisory and agency services (as from December 1998). As a result, Korea's position is overall comparable with the position of longer-established OECD member countries.

■ ■

It is too early to assess the economic impact of accession commitments undertaken by these new members, as most of the benefits of liberalisation will be felt in the medium and long term. The measures undertaken for FDI and other long-term capital inflows, in particular, are expected to help bring stable productive capital into the domestic business sector, promote transfers of modern technology and expertise from abroad, and enhance competition in the domestic economy. Participation of foreign investors, on the basis of national treatment, in privatisation programmes will contribute to their success. Similarly, the liberalisation of outward direct investment and other long-term capital outflows, together with the additional rights that OECD membership provides under the Codes to investors from new member countries, will help domestic firms and financial institutions to expand business opportunities abroad and allow risk-reducing portfolio diversification.

More generally, the stated objective of the new members to remove remaining capital controls within the next coming years will contribute to maintaining the momentum for a forward-looking global economic strategy. They are bound to persevere with sound macro-economic policies and market-oriented structural reforms, not least in the financial sector, if the full benefit of the freedom of capital movements is to be realised. The prospects of future liberalisation will also reinforce the confidence of both foreign and domestic investors, thereby fostering economic stability.

So that developments in, and the implications of, the implementation of their accession commitments can be closely monitored, the new members agreed that full reviews of their positions under the Codes and National Treatment instrument should be held two years from their accession. And as OECD members, their economic policies will benefit from the Organisation's analysis and the accumulated experience of its existing member countries. ■

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New Zealand's Radical Reforms

Paul E. Atkinson

In a little over a decade the New Zealand economy, once characterised by a high degree of interventionism, has been radically transformed. There has been a dramatic improvement in economic performance in recent years. The New Zealand experience offers a rich array of ideas for other countries re-examining their own economic and social arrangements, although the transferability of these ideas will depend on the ability of these countries to adapt them to their own social and political context.[1]

From its early settlement during the nineteenth century, New Zealand had an economy based on natural resources, with lucrative exports – not least pastoral products such as wool, meat and dairy products – sold mainly to the United Kingdom. The high incomes that resulted encouraged further immigration, as well as capital inflows that financed development. As recently as 1960, per capita incomes in New Zealand were surpassed only by those in the United States and Switzerland. But decline had already set in and by the mid-1980s New Zealand was one of the poorest of the advanced countries (Figure 1). With the threat of continued outward migration, indeed, even its status as a developed country could not be taken for granted.

The seeds of this decline were probably sown as early as the 1930s, when world commodity prices collapsed and the international lending which sustained the capital inflows on which the economy depended ceased. The resulting depression changed the intellectual and political climate in New Zealand, ushering in a bigger role for the state in the management of the economy and encouraging efforts to be more self-reliant – even autarchic.

In the years following the Second World War economic management in New Zealand became highly interventionist. There were frequent shifts in budgetary policy to manage aggregate demand. The national currency was open to being, and increasingly indeed was, devalued to sustain demand. A cradle-to-grave welfare system, largely supported by taxation, was developed. There was frequent resort to controls in labour, product and financial markets. Reliance was placed on the state for financial support or for the actual operation of many industrial and commercial activities. And an elaborate system of border protection to encourage a diversified manufacturing base was established.

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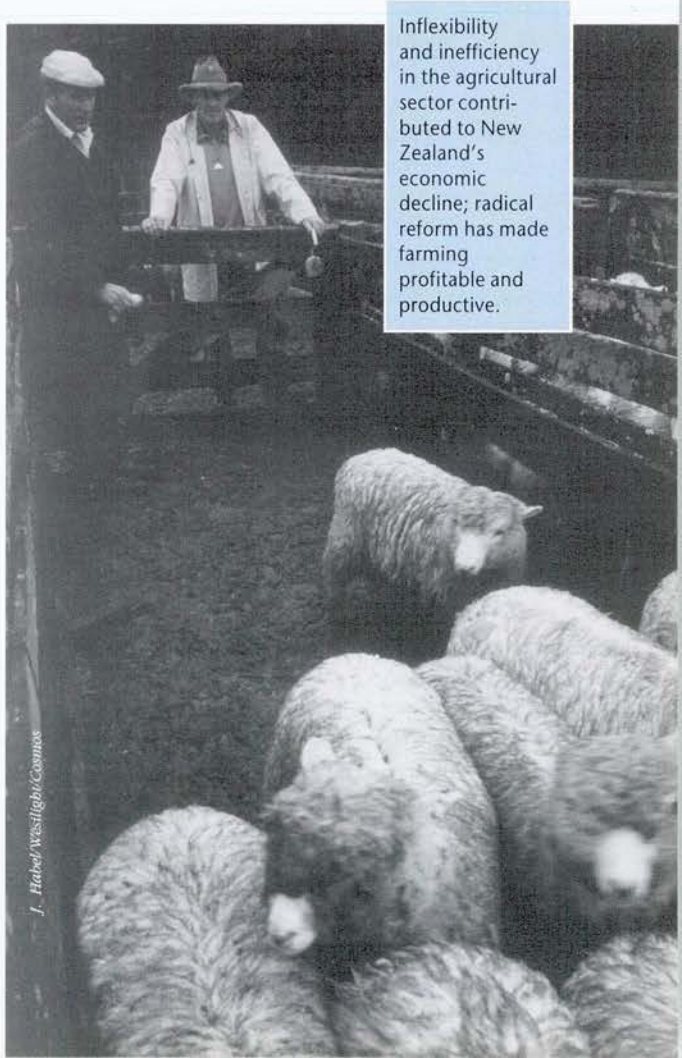
1. ***OECD Economic Surveys: New Zealand***, *OECD Publications, Paris, 1996; Donald T. Brash,* New Zealand's Remarkable Reforms, *Occasional Paper No. 100, Institute of Economic Affairs, London, 1996; Graham C. Scott,* Government Reform in New Zealand, *Occasional Paper 140, International Monetary Fund, Washington DC, October 1996.*



Inflexibility and inefficiency in the agricultural sector contributed to New Zealand's economic decline; radical reform has made farming profitable and productive.

J. Habel/Westlight/Cosmos

New Zealand's Radical Reforms

Many of these trends were reflected in economic policies in other advanced countries, of course, but mostly they were more pronounced in New Zealand. And the exceptionally high degrees of border protection, which were more typical of the developing world, were almost impervious to the liberalising trend that operated in advanced countries in the northern hemisphere from the 1950s.

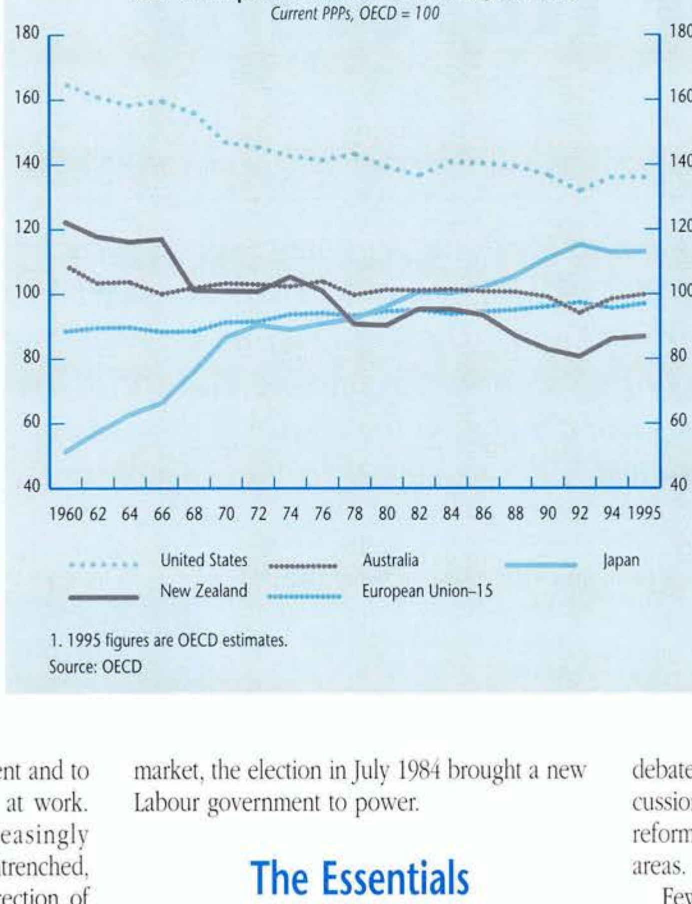
The sudden rise in oil prices in 1973–74 brought a rude shock nearly everywhere. But in New Zealand the terms of trade collapse that followed was less damaging than the accession of the United Kingdom to the European Community which occurred around the same time. The Common Agricultural Policy increasingly restricted New Zealand's access to what had historically been its core export market. The policy response was to resist adjustment and to reinforce the adverse trends already at work. Budgetary policy became increasingly destabilising, high inflation became entrenched, waste resulting from the political direction of investment decisions became more pervasive, detailed controls in labour and financial markets were reinforced, and the government resorted with growing frequency and volume to international capital markets to finance its budget and current-account deficits.

Intellectually, by the early 1980s, there had been a widespread international rejection of the sort of policies which New Zealand had been following. And most Latin American countries, whose policy approaches had much in common with New Zealand's, had lost access to the international financing on which, again like New Zealand, they had come to depend. Against that background, with the distortions and macro-economic imbalances in New Zealand obvious to anyone who cared to look, and in the midst of a collapse of confidence in the foreign-exchange market, the election in July 1984 brought a new Labour government to power.

Figure 1

GDP Per Capita in Five OECD Countries, 1960–95[1]

Current PPPs, OECD = 100



1. 1995 figures are OECD estimates.
Source: OECD

The Essentials of Reform

It would not be fair to say that no economic reforms had been undertaken before then. Steps had been taken to liberalise road transport, for example, and the Closer Economic Relationship agreement with Australia was an important first step in opening the country to the international economy. But such changes had been *ad hoc* and incremental. Stimulated and supported by the atmosphere of crisis in which the election had occurred, the new Labour government embarked on a series of sweeping reforms which affected nearly all aspects of the New Zealand economy. The broad thrust of these reforms was not only maintained but reinforced following the transfer of power back to the National Party in 1990, and the recent arrival of a new coalition government appears unlikely to lead to a major reversal.

The process of reform was guided by a number of lines of thought which appeared to provide an alternative to the inward-looking and interventionist framework which had evolved during the previous half-century. Although they could be regarded as conservative, even 'right wing', they were also consistent with a concern about distributional questions and social issues. The Labour government, in particular, saw economic reform at least partly as a means of generating the resources required to improve the social safety net and social services. The National government which succeeded it was prepared to take harder decisions about the costs of the welfare state. Although the scope and design of the welfare state are still the subject of political debate in New Zealand, the outcome of this discussion seems unlikely to affect the bulk of the reforms that have been put in place in other areas.

Few sectors of the economy escaped scrutiny. Two major changes were made almost immediately. First, financial markets were liberalised rapidly, and all controls on interest rates, borrowing and lending activities and foreign-exchange transactions removed. In March 1985, the exchange rate was allowed to float. No public money has been spent on foreign-exchange market intervention to influence the exchange rate since. A light supervisory framework has been put in place which focuses mainly on resolving problems expeditiously once they have occurred; it gives little emphasis to preventitive regulation.

Second, in view of the mounting budget costs, subsidies and other support to agriculture were withdrawn. OECD figures for producer subsidy equivalents show that New Zealand is now virtually alone among developed countries in obliging farmers to adapt fully to global market conditions (Figure 2).

Subsequently, the macro-economic policy framework was redefined. The Reserve Bank Act made price stability the goal of monetary policy. The Act did not make the Bank fully 'independent' of the Government, as is often reported, partly since complete independence was not felt to be desirable and partly because there are no constitutional means for doing so. Rather, it transferred responsibility for day-to-day operating decisions from the Minister of Finance to the Governor of the Reserve Bank, and established a contracting framework to ensure accountability. The Fiscal Responsibility Act established principles of responsible fiscal management, and required transparent and detailed explanation by the government of the day about the reasons for any departure from these principles and about how it proposes to return to them.

Government trading and commercial activities have been largely separated from bureaucratic management and control and set up as businesses (corporatised). Many have been privatised. The privatisation programme since 1988 may be the most extensive of any developed country.

Budgeting, management and accounting in the 'core' government (that is, departments and non-commercial agencies) have been reformed to facilitate better management and more accurate assessment of performance. Accounts, which were previously prepared on a simple cash basis, must now conform to generally accepted accounting principles that apply to private businesses. The new accounting system requires both accrual and cash accounting, separate current and capital budgets, and provision of balance-sheet information as well as income and operating statements. Department heads are employed on fixed-term contracts of up to five years, which specify what ministers expect from the department in terms of performance, and the budget allocation with which the department head finances those services. At the same time, the department head is now allowed considerable discretion in managing this budget allocation. In particular, decisions over staff sizes and their pay have been devolved to department heads.

Comprehensive tax reforms have generally broadened the base, flattened rates and integrated business and personal tax systems.

Quantitative restrictions on imports were replaced by tariff equivalents, exposing virtually all product markets to the possibility of competition. Tariffs have since been made more uniform and substantially reduced.

The State Sector Act (1988) and, more importantly, the Employment Contracts Act (1991) have made employment contracts similar to other types of contracts. Employers and employees can choose with whom, and within what structures, they associate. All bargaining is toward an employment contract, which can be either collective or individual. The aim of the legislation has been to encourage decentralised bargaining in enterprises themselves. That would allow pay and work practices in individual companies to adapt themselves to conditions specific to particular industries, regions or an enterprise's own circumstances.

Social policies have been addressed less comprehensively but changes have occurred.

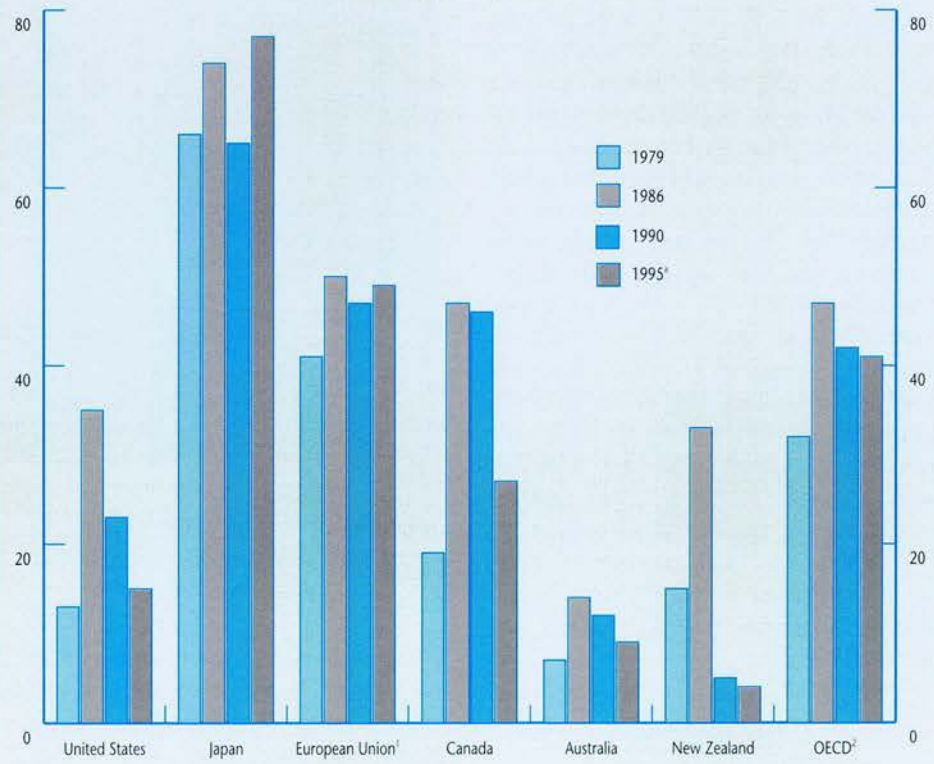
The National Government has made changes to contain the costs of income support, but programmes have not been radically transformed. Spending is about where it was ten years ago (more than 11% of GDP) and the number of beneficiaries continues to rise rapidly.

And housing policy now offers low-income households a supplement in the form of a cash grant or voucher which replaces housing assistance previously delivered in the form of subsi-

Figure 2

Producer Subsidy Equivalents, 1979–95

% of value of agricultural production



a. Provisional.
1. EC-10 for 1979; EC-12 for 1986; includes all of Germany since 1990; EC-15 for 1995.
2. Weighted average.
Source: OECD

New Zealand's Radical Reforms

dised rent or loans for home-ownership. In health care, a 'contract system' similar to that in the United Kingdom has been created.

The Response to Reform

The effects of the reforms can be examined from two different angles. First, did the reforms, taken individually, succeed in addressing the specific problems at which they were aimed? And, second, taking into account the adjustment costs that were inevitably involved, did performance improve as a whole?

A number of individual reforms scored clear successes. Most importantly, the macro-economic imbalances which were leading the country towards crisis have largely been addressed, and, indeed, New Zealand's international credit-rating has been upgraded twice to just below AAA (the highest available rating) by the main rating agencies. There has been a massive improvement in the budget position: the surplus is now large and appears likely to continue. Net government indebtedness is declining sharply from more than 50% of GDP in 1991 to below 30% now and a projected 20% by 1998. The New Zealand government, ten years ago one of the world largest borrowers in international capital markets, has now eliminated its net foreign-currency debt. The current-account deficit has likewise come down substantially, from nearly 9% of GDP in 1984 to around 4% last year, despite strong growth in recent years and capacity constraints which are often relieved by higher imports. Inflation, too, has come down from the 10–20% range during the 1970s and most of the '80s to around 2%.

Other successes are also apparent in terms of making the economy more efficient and raising living standards. The productivity and financial performance of state trading activities (many now privatised) have generally improved, and in many cases real output prices have fallen. In the coal industry, for example, the workforce was halved while output increased. The port companies formed by the harbour boards cut their workforce by 50%, lowered prices by between 20% and 50%, and reduced turnaround time for ships by as much as 56% at the port of Tauronga. Telecoms Corporation reduced staffing by around two-thirds between 1987 and 1995, and increased productivity by 85%. The waiting time for a telephone has fallen from six weeks to one day. New Zealand Rail Ltd cut freight rates by 50% in real terms between 1983 and 1990, and reduced staff by 60%.

The agricultural sector has been restructured, declining in relative size as livestock numbers fell sharply. Productivity has risen strongly and farming is generally profitable despite the lack of government support and continuing barriers in many countries to New Zealand's exports.

More competition has emerged, with favourable effects on price, quality and availability, in domestic air transport, cars, consumer electronics and appliances, and financial services.

In spite of these successes, the jury is still out as far as economic performance as a whole is concerned. Since the early 1990s the economy has performed very well – strong growth, rising employment, stable prices – and the threat of a Latin America-style crisis and depopulation appears to have passed. But from the time that the exchange rate was floated in March 1985, allowing disinflationary monetary policies to become effective, New Zealand enjoyed little or no growth for more than six years, with employment falling by around 6%. And New Zealand continued to lose ground in international terms (Figure 1). The aggregate figures for the whole economy, furthermore, hide the extent of the adjustments that virtually all regions of the country were forced to make at one stage or another, but which occurred at different times. Signs are encouraging, but more time will be required before it will be possible to conclude that there has been a clear change in long-term trends or simply a strong cyclical correction after a long period of stagnation.

The Politics of Reform

The Labour government came to power in 1984 with a clear mandate to do something, but it had given no indication of what it would do. Furthermore, most of the changes, taken individually, were controversial, and many were clearly unpopular. Yet the Government was returned in 1987 with an unchanged majority in Parliament, and, despite six years of virtually no growth, the reform process survived both a later loss of cohesion by Labour and a transfer of

Social policies have been addressed less comprehensively although some changes have been made in housing, income support and health care.


Gérard Boutin/Hoaqui

power to the conservative National Party in 1990. The coalition government which came to power in late 1996 also appears likely to consolidate the bulk of the changes which have occurred. How was the reform process held together politically?

An important element of the answer is that the pace and sequencing of reform, an issue which has generated a good deal of nonsense in the economics literature, was geared to generating and sustaining support for it. Roger Douglas, the driving force behind the process as Finance Minister until late 1988, argued that the process should be fast, comprehensive and involve large packages that should keep coming until the process was complete. Successful reforms themselves would operate to build the necessary consensus. In this way, Douglas argued, the cost of reform in each area would quickly be offset from the benefits in other areas; rapid reform would keep the initiative in the hands of the government, while packaging groups of reforms together allowed losers from one set of reforms to be compensated as winners from another.

By moving rapidly and boldly, Douglas and his colleagues made it difficult for vested interests to coalesce in opposition to reform and allowed the government to focus the debate broadly on the large problems the country had to confront, rather than narrowly on the impact of change on special interests. Indeed, rapid reform on a broad front tended to spread the burden of reform equitably, enhancing its perceived legitimacy.

Two observations should be added to this analysis. First, the comprehensive reform of the financial sector and the withdrawal of subsidies to agricultural shortly after the Labour government took office in 1984 played a major role in paving the way politically for the larger process by altering notions of what was possible. Notice had thus been served: radical action was possible, and problems would be addressed comprehensively. Furthermore, the direction of change had been mapped out clearly: institutions would be changed, individuals and businesses would make more of their own economic decisions and face responsibility for the consequences of their decisions, and the country had to adapt to a larger international economic environment.

Second, an unsung hero in these bold moves was the Prime Minister, David Lange. As his own Foreign Minister, he had plenty of problems unrelated to the economy to keep him occupied, and it would have been easy for him to remain detached from Douglas when the political heat turned up. In fact, when the going got tough, Lange stepped forward and took the worst of the pressure, spoke clearly and honestly about unpleasant realities that people did not want to hear about, and reaffirmed his support for both Douglas and the direction in which the reforms were taking the country. He never allowed his Minister of Finance to twist in the wind. So long as the Lange-Douglas relationship maintained its cohesion, there was no alternative to the reform process. By the time they fell out, in 1988, it was irreversible.

■ ■

The New Zealand experience clearly offers a rich array of ideas for other countries re-examining their own economic and social arrangements. Nearly all important aspects of its economy have been reformed to some degree or other, and in several a striking amount of radical, even path-breaking, thinking has been put into practical effect, not least in the public sector. New Zealand's widespread use of a contracting framework as a device to place responsibility for decision-making where those decisions can most intelligently be made, and to ensure accountability for them, is well worth close examination. The management of the political aspects of the process, too, and in particular the readiness of senior politicians to invest time and energy arguing, explaining, selling and defending the case for reform to the public, merits attention.

But there may be limits to the extent to which the New Zealand experience could be transferred. First, the social and political context differs across countries, which reduces the applicability of technocratic analyses and comparisons. It is important either to adapt reforms to the local context or to ensure that the persuasion and open debate keep the consensus and economic changes moving together. Second, a central focus now emerging in many countries is how to impose limits on the welfare state. Here New Zealand has made some cost-saving efforts, but little of a very fundamental nature has happened. The New Zealand experience may offer fewer lessons here. Finally, attempting to draw selectively and partially from the New Zealand experience to address only the 'most serious' problems may be difficult. As reforms are implemented, they can be expected to generate pressures that highlight problems and distortions elsewhere. In New Zealand, these were used to prepare the political ground for extending the reforms. If the process had not moved forward rapidly, political pressures for a reversal might have been difficult to resist. Reform along similar lines elsewhere may have to be complete or not at all. ■

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France
The Labour Market

Patrice Vergriete

Labour-market conditions have deteriorated considerably in France since the early 1970s. After a period of virtually full employment, the unemployment rate is now running close to 12.5%, putting France well above the OECD average. Around 2.5 million people, moreover, are now enrolled in active labour-market programmes. It is the low-skilled workers who have been hit hardest. Other noteworthy features are the decline in private-sector employment, the sharp fall in the employment rate for young people and older workers, and the scale of long-term unemployment.[1]

The rise in unemployment has come in two phases. Over the first period, extending into the mid-1980s, the number of jobs fell sharply, particularly in the private sector. In the second period, up to the present day, employment has remained relatively flat, with a slower upward trend in unemployment.

This two-stage progression is mirrored in the economy itself, since the main factors responsible for the rise in structural unemployment are not the same in both periods. Up until the mid-1980s, the primary reason for the sharp decline in labour-market conditions was the failure to adjust quickly enough to more moderate growth. The 1950s and '60s had seen very high growth in productivity and output, allowing very large wage increases. But when the cycle of growth petered out in the early 1970s, the rise in real wages did not slacken pace immediately and outstripped the increases in productivity.

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There were a number of reasons for the delay in adjusting real wages. First, the government continued for a long time to hope that growth would return to its previous rate, and on several occasions attempted to kick-start the economy through wage increases, raising the minimum wage by more than the rate of productivity growth. Second, the highly centralised wage-bargaining system prevented the negotiators from considering the direct practical implications of their actions for employment. Firms in difficulty had no means of opting out of collective agreements, and a number went into bankruptcy as a result. Last, rigid indexing on inflation frustrated any *ex post* correction of nominal wage trends through prices.

As a result of the steep rise in real wages, the labour share in the value added of businesses rose, reducing their return on capital. The adverse impact on growth and employment was immediate. The structural unemployment rate passed the 10% mark in the early 1980s and a multi-speed – or, more precisely, multi-tier – labour market emerged. This is, indeed, still a strong feature of the labour market in France today. The tier structure, from top to bottom, comprises employees with indefinite-term contracts, who are well protected by the law and by collective agreements, those who go from one fixed-term contract to another without long spells of unemployment in between, people who alternate between spells of unemployment and spells on employment programmes, and the long-term unemployed and those excluded from the labour market.

From the mid-1980s on, nonetheless, the rise in the average real net wage did become more moderate: 8% between 1984 and 1992, and zero if the structural effects associated with the rise in the average skill content of jobs are excluded. Average skills have risen substantially, with higher numbers of senior and intermediate professionals in employment and a sharp drop in the total number of unskilled and low-paid workers.[2] There are a number of explanations for this phenomenon: technological progress geared towards highly skilled workers, competition from low-wage countries, stronger demand for high value-added goods, large numbers of skilled workers entering the labour market (the result of a more effective education system), and the long-standing high relative cost of labour of the lowest-paid employees. This trend in skills is clearly advantageous in the long term. But the short-term effect of indirectly replacing unskilled, low-paid workers by more highly skilled and highly paid ones has been to reduce the job content of growth.[3]

Another factor also lessened the impetus that wage moderation could have given to employment. The refocusing of monetary policy, which led to a sharp rise in real interest rates in the mid-1980s, much increased financing costs for companies and compelled managers to reduce the share of labour in value added. Higher real interest rates also made investors more demand-

*1. **OECD Economic Surveys: France**, OECD Publications, Paris, 1997.*

2. Between 1987 and 1992, the overall number of senior management and professionals rose by 44% and that of intermediate professionals by 14%, while the number of unskilled workers in industry fell by 15%.

3. The job content of growth is the number of jobs created per percentage point of growth: the lower the growth rate required to hold employment steady, the higher the job content.

4. Social-security contributions at the minimum wage are now only 28.6% of gross salary, compared with 46.8% at twice the minimum wage.

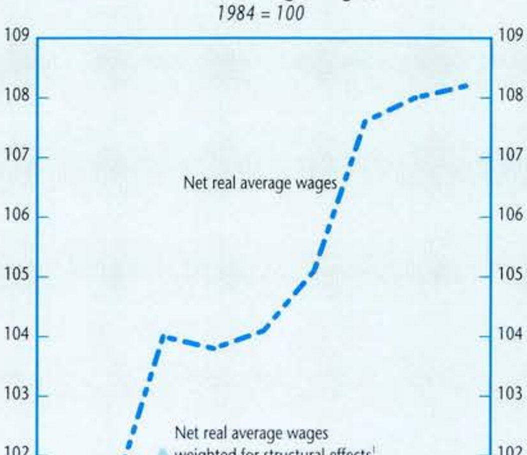
5. For instance, the job initiative contract (CIE); the back-to-work contract (CRE) for the long-term unemployed; assistance in finding young people their first job (APEJ); support for unemployed persons starting businesses (ACCRE).

6. In the private sector, 80% of part-time workers earn less than 1.2 times the minimum wage.

Figure

Trends in Net Real Average Wages, 1984–92

1984 = 100



1. The 'structural effects' are derived from the assymetrical evolution of the composition of aggregate employment according to qualification. The lower curve aims to eliminate this effect by calculating, for each year, the net real average wage assuming no change in the composition of employment. The reference position here is the average composition of employment between 1984 and 1992.

Sources: INSEE, OECD

ing over financial returns. There was thus a period of transition when a proportion of the gains from higher productivity were not ploughed back into the production process but were allocated to raise the share of value added going first to lenders and then to shareholders. But this transition period, which was no less than an institutional change, now seems to be over, and if competitive conditions are maintained the share of labour in business value added should not drop further.

Since the mid-1980s the government has deployed a varied employment policy. The focus was first on updating a compulsory contribution system left over from the days when France had full employment. To reduce the high tax burden on employment, other sources of income were included in the basis of assessment for social-security payments through the new general social-security contribution. Successive governments then attempted to reduce indirect labour costs for those workers most at risk of unemployment. Employers' contributions started to go down for young people in the mid-1980s, and more particularly for the lowest-paid in 1993.[4] The social-security contribution schedule, which was regressive in the early 1980s, is now highly progressive.

Various active labour-market policies[5] have also been introduced over the past 15 years. The number of people on these programmes has risen steeply, as has the amount of money the government spends on them. But the vast array of different schemes and the frequent changes in format have complicated provision. Recently, therefore, the government has started assessing the programmes with a view to streamlining them.

The focus then shifted again as, influenced by the idea of work-sharing, the government attempted to develop part-time working, principally through the introduction in 1992 of a partial exemption from employers' social-security contributions to complement the support for employing low-paid workers.[6] Part-time work then really took off, with its share in total employment rising from 5.9% in 1973 to 15.8% at the start of 1996. But the budgetary outlay has been high. Moreover, part-time working is accepted reluctantly rather than chosen: in 1995, 38% of workers on part-time contracts would have liked to work longer hours, compared with 29% in 1991. Government policy has thus indirectly led to a sharing of work among the most vulnerable workers.

Finally, although the first cycle of university education is still performing unsatisfactorily, the education and vocational training system has developed considerably. Young people's initial educational attainment has improved considerably since the early 1980s. As a consequence, the average skills of the working population seem, in fact, to have outstripped the average skill content of jobs, to the point that there has not yet been any mismatch of skill supply and demand. This strengthening of the knowledge-base, together with a continuing effort in R&D, is the dynamic element of employment policy. In this respect government action seems to be very much on the right lines since, against a backdrop of increasing internationalisation, human capital has become the real foundation of the wealth of nations.

Two periods thus emerge from analysis of the labour market in France. The transition took place in the mid-1980s, when economic agents became aware of the importance of adapting to a new pattern of growth. At the same time, government policy generally became more effective.

Even so, for the reasons mentioned, this positive change did not lead to gains in terms of jobs, although the recent focus of employment policy does seem to have been successful in increasing the job content of growth over the past two years. These policies will therefore have to be strengthened if the unemployment rate is to be lowered substantially. ■

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Norway
Education and Training

Paul van den Noord

Like other OECD countries, Norway is in the process of adjusting to new technologies and the industrial restructuring they bring. The result is a rising demand for vocationally oriented human capital. After the turn of the century the economy will have to be restructured to make it less dependent on the oil activities on the Norwegian continental shelf and to revive the manufacturing industries that have suffered in the past from the real appreciation of the exchange rate associated with the oil wealth. The Norwegian education and training system could play its part in meeting these challenges by providing people with the appropriate skills and abilities.[1]

Economic activity in Norway has benefited enormously from the exploitation of oil and gas on the Norwegian Continental Shelf, allowing much higher real per capita earnings than would have been possible otherwise. Cross-country comparisons invariably rank Norway high with respect to aggregate output per worker – in line with developments in a number of other 'productivity leaders' in Europe, such as France, the Netherlands and Belgium (Table 1). After correction for petroleum production, by contrast, output per man hour in Norway reached 83% of the United States figure by 1993 (rather than 99%) – still above the average for the European OECD as a whole, but well below that of the leading countries.

Official projections suggest that oil and gas production will peak in the year 2000. To offset the losses in per capita income that might follow, the productivity growth of labour in the mainland economy would have to speed up. That would require additional human capital, not least through continued efforts in education and training. Raising the human capital invested in each member of the work force would also help to extend the effective retirement age, through longer job-tenure and earnings prospects and reduced incentives for early retirement (for example, through the disability pension scheme). Such a change could help compensate for the shrinking of the labour force expected from the aging of the population.

But aging also means that the expansion of human capital cannot be achieved only by renewing the workforce through the arrival of better-educated young people – the retraining of adult workers is even more desirable than in the past. Population aging, indeed, is one of the main motivations behind the OECD-wide emphasis on continued education, or 'life-long learning', an approach which has also been embraced by the Norwegian authorities.[2]

Table 1
Labour Productivity in 13 Countries[1]
100 = GDP per man-hour in the United States

	1913	*1929*	*1950*	*1973*	*1993*
United States	100	100	100	100	100
Norway	43	45	43	64	99
of which: mainland economy[2]	43	45	43	60	83
Netherlands	69	74	46	77	97
France	48	48	40	70	96
Belgium	61	55	42	64	90
Canada	75	66	75	83	83
Italy	37	35	31	64	82
United Kingdom	78	67	57	67	79
Sweden	44	38	49	76	75
Germany[3]	50	42	30	64	74
Japan	18	22	15	46	69
Denmark	58	59	43	63	68
Finland	33	32	31	57	60

1. Ranked according to 1993 figures.
2. Excluding offshore petroleum.
3. Including eastern Länder in 1993.
Source: OECD

Bottlenecks in the Education System

When unemployment increased during the prolonged recession of the late 1980s and early '90s, enrolment numbers in post-compulsory education surged as young people attempted to improve their chances in the labour market. As a result, although the number of pupils in compulsory education remained on the downward trend observed since the mid-1970s, that of students in upper-secondary education climbed from around 200,000 in 1988 to 240,000 in 1994 and in tertiary education from 100,000 to 170,000. This, in turn, resulted in a decline in the youth

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1. ***OECD Economic Surveys: Norway***, *OECD Publications, Paris, 1997.*

2. ***Education and Training – Learning and Working in a Society in Flux***, *OECD Publications, Paris, 1996;* ***Education and Employment***, *OECD Publications, Paris, 1995; Jean-Claude Paye, 'Strategies for a Learning Society',* ***The OECD Observer***, *No. 199, April/May 1996; Edwin Leuven and Albert Tuijnman, 'Life-long Learning: Who Pays?',* ***The OECD Observer***, *No. 199, April/May 1996.*

labour-force participation rate (by around 10 percentage points), which implied a radical break with the earlier trend when school enrolment and the participation rate of young people in the labour force moved up in tandem.

In no OECD country, indeed, do so many young people complete upper-secondary education as in Norway – almost 96% of the population at theoretical graduation age, compared with 78% on average in the OECD area as a whole. Since the majority of students opt for vocational education, the number of vocational student places and apprenticeships have been insufficient, prompting students to remain in the system while queuing for a place in the field of study of their first choice. The result has been long study durations which exacerbated the existing shortage of people with vocational qualifications. In 1994, therefore, the government ensured all teenagers a place in the upper-secondary school system, including apprenticeship training for those who have opted for vocational education – although it will take some years for the queue of students waiting for an apprenticeship to be resolved.

The higher-education system is likewise characterised by very long study durations, well beyond the legal minima. This situation is compounded by excess supply of university graduates on the labour market – in turn due to the sharp increases in university enrolment since the recession. The relatively generous system of student loans and grants, as well as the large number of students in part-time employment, has exacerbated this problem. The likelihood (or otherwise) of employment has recently been introduced as a consideration in the planning of student intake, but it remains uncertain to what degree that will reduce the risk of excess supply of university graduates, in particular in law, economics, business administration and social sciences.

Reflecting the shift in the composition of the student population from compulsory to (more resource-intensive) non-compulsory education, education expenditure per student has increased by around 20% in real terms since the mid-1980s, taking state spending on education from 5¾% of GDP in 1985 to almost 7% in 1995. Compulsory education has become more costly as well in this period, with the average class size declining from 19 to 17 pupils. This trend has been particularly pronounced in remote areas, an important consideration in such a sparsely populated country, where falling enrolment related to demographic developments has never been matched by an equivalent reduction in the number of classes per school, and the number of schools, because of local resistance and the likelihood of extended travelling times.

Official projections point to renewed increases in the number of pupils in compulsory education during the period 1995–2010, thus reversing the declining trend. Most of the increase occurs because of the lowering of the compulsory age for entering primary school from seven to six as of the school year 1997/98, which is more in line with the practice in other OECD countries. As a result, public expenditure on education as a share of GDP is likely to climb further in the foreseeable future.

After oil and gas production peak in 2000, the productivity of labour in the mainland economy will have to increase.

Continuing Education and Training

Since the mid-1960s Norwegian local authorities offer formal education for adults on a large scale, complementing the extensive national network of informal adult education. In addition, Norwegian enterprises spend annually an amount of around 3½% of their wage bill on job-related training, which is roughly in the middle of the 2–5% range for countries in the OECD area. Training expenditure per worker tends to vary considerably across firms, with companies employing mostly higher-educated workers spending the largest amounts. Interestingly, training received with a previous employer appears to have a stronger impact on an individual's earnings than the same training offered by the current employer, suggesting that such training is not very firm-specific.

Like most other OECD countries, Norway has programmes for labour-market training (LMT), aimed at maintaining or enhancing the skills of unemployed workers. In 1995, the Norwegian

Norway: Education and Training

government spent around 0.25% of GDP on LMT – well above the OECD average, but less than in the other Nordic countries. The experience with LMT programmes is somewhat mixed in Norway, although they seem to be more effective in raising employment probabilities than comparable programmes operated in, say, Sweden. Some studies suggest that the motivation of unemployed workers to seek training, rather than the training itself, is the key determinant of employability.

In view of the emerging shortages of labour with vocational qualifications, a shift of resources from higher to vocational upper-secondary education could be justified. But a better education and training system is not sufficient to generate a better match between demand and supply on the labour market. The students themselves have to be motivated to choose the fields of study in line with their talents and ambitions, but taking into account also the associated financial rewards. The development of in-house recruitment and counselling services in universities could serve as a catalyst for establishing a more rational attitude, especially if it were combined with enhanced wage flexibility in order to price human capital more accurately.

With fewer young people on the job market because of the aging population, the continuous training of adults is even more important than before.

Recent government initiatives to intensify the scrutiny of the higher education system – including a closer monitoring by the administration and a shift of public management from inputs to outputs, in line with the approach adopted in most OECD countries – are to be welcomed. The allocation of funds and student places across disciplines and institutions nonetheless continues to be based primarily on the historical record. It is thus unlikely that the resulting distribution of funds and students is optimal.

Job-related training in Norway, as elsewhere in the OECD area, mostly attracts workers whose job and earnings prospects are favourable to begin with. The people who most pressingly require an upgrading of their skills are thus often deprived of adequate training. Although LMT aims to offset this drawback, its efficacy is uncertain. Moreover, the tightening labour market (Table 2), would argue for a scaling-down of LMT. Instead, the incentives for job related training for young, lower skilled workers could be improved. This development, once again, would require more flexible pay structures. ■

Table 2

Unemployment by Tier of Education Achieved

%

	1985	1990	1992	1993	1994	1995
Unemployment rate of which:	2.5	5.2	5.9	6.0	5.4	4.9
Primary school	3.6	8.4	8.9	8.9	8.4	8.5
Lower secondary	2.9	5.6	6.4	6.3	6.0	5.1
Upper secondary	2.2	5.4	6.4	6.4	6.0	5.1
Tertiary	1.0	2.0	2.8	3.7	3.3	3.3

Source: Statistics Norway

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Indicators

Definitions and Notes

Gross Domestic Product	*Volume series, seasonally adjusted except for Czech Republic and Portugal*
Leading Indicator	*A composite indicator, based on other indicators of economic activity (employment, sales, income, etc.), which signals cyclical movements in industrial production from six to nine months in advance*
Consumer Price Index	*Measures changes in average retail prices of a fixed basket of goods and services*
Current Balance	*$ billion; not seasonally adjusted except for Australia, the United Kingdom and the United States*
Unemployment Rate	*% of civilian labour force – standardised unemployment rate; national definitions for Czech Republic, Iceland, Mexico, Switzerland and Turkey; seasonally adjusted apart from Turkey*
Interest Rate	*Three months, except for Greece (twelve months)*
..	*not available*

Source: **Main Economic Indicators**, *OECD Publications, Paris, March 1997.*

Australia

	period	% change from previous period	year
Gross Domestic Product	Q3 96	1.2	3.8
Leading Indicator	Dec. 96	0.3	4.3
Consumer Price Index	Q4 96	0.2	1.5
		current period	same period last year
Current Balance	Dec. 96	-1.12	-1.32
Unemployment Rate	Dec. 96	8.6	8.1
Interest Rate	Jan. 97	5.79	7.48

Austria

	period	% change from previous period	year
Gross Domestic Product	Q4 95	0.0	0.3
Leading Indicator	Oct. 96	1.0	5.8
Consumer Price Index	Jan. 97	0.1	1.9
		current period	same period last year
Current Balance	Nov. 96	-0.88	-0.84
Unemployment Rate	Dec. 96	4.0	4.0
Interest Rate	Feb. 97	3.30	3.32

Belgium

	period	% change from previous period	year
Gross Domestic Product	1995		1.9
Leading Indicator	Dec. 96	-0.9	7.0
Consumer Price Index	Jan. 97	0.7	2.3
		current period	same period last year
Current Balance	Q3 96	3.32	3.16
Unemployment Rate	Dec. 96	9.5	10.0
Interest Rate	Jan. 97	3.00	3.51

Canada

	period	% change from previous period	year
Gross Domestic Product	Q4 96	0.7	2.3
Leading Indicator	Jan. 97	2.7	12.5
Consumer Price Index	Jan. 97	0.2	2.2
		current period	same period last year
Current Balance	Q4 96	-0.52	0.93
Unemployment Rate	Dec. 96	9.7	9.4
Interest Rate	Feb. 97	3.10	5.21

Czech Republic

	period	% change from previous period	year
Gross Domestic Product	Q3 96	4.2	3.6
Leading Indicator		..	..
Consumer Price Index	Jan. 97	1.2	7.4
		current period	same period last year
Current Balance	Q3 96	-3.08	-0.99
Unemployment Rate	Jan. 97	3.5	2.7
Interest Rate	Feb. 97	12.32	10.87

Denmark

	period	% change from previous period	year
Gross Domestic Product	Q3 96	1.0	2.6
Leading Indicator	Dec. 96	1.1	10.6
Consumer Price Index	Jan. 97	0.2	2.7
		current period	same period last year
Current Balance	Q4 96	-1.36	-1.50
Unemployment Rate	Dec. 96	5.5	6.4
Interest Rate	Feb. 97	3.60	4.40

Finland

	period	% change from previous period	year
Gross Domestic Product	Q3 96	1.9	3.8
Leading Indicator	Oct. 96	0.4	8.8
Consumer Price Index	Jan. 97	-0.1	0.6
		current period	same period last year
Current Balance	Dec. 96	0.26	1.16
Unemployment Rate	Dec. 96	15.0	16.4
Interest Rate	Feb. 97	3.07	4.28

France

	period	% change from previous period	year
Gross Domestic Product	Q4 96	0.2	2.1
Leading Indicator	Jan. 97	-0.9	1.1
Consumer Price Index	Jan. 97	0.3	1.8
		current period	same period last year
Current Balance	Nov. 96	0.71	0.75
Unemployment Rate	Dec. 96	12.4	12.0
Interest Rate	Feb. 97	3.33	4.41

Germany

	period	% change from previous period	year
Gross Domestic Product	Q3 96	0.8	1.9
Leading Indicator	Jan. 97	1.2	5.6
Consumer Price Index	Jan. 97	0.5	1.8
		current period	same period last year
Current Balance	Nov. 96	0.21	0.41
Unemployment Rate	Dec. 96	9.3	8.6
Interest Rate	Jan. 97	3.14	3.61

Greece

	period	% change from previous period	year
Gross Domestic Product	1995		2.0
Leading Indicator	Jan. 97	0.2	3.3
Consumer Price Index	Jan. 97	-0.5	6.8
		current period	same period last year
Current Balance	Oct. 96	-0.70	-0.63
Unemployment Rate		..	..
Interest Rate	Feb. 97	10.50	13.40

Iceland

	period	% change from previous period	year
Gross Domestic Product	1995		2.1
Leading Indicator		..	..
Consumer Price Index	Feb. 97	0.1	1.9
		current period	same period last year
Current Balance	Q4 96	-0.06	-0.02
Unemployment Rate	Jan. 97	3.4	3.9
Interest Rate	Feb. 97	7.20	7.60

Note: figures for Hungary, Korea and Poland are in preparation.

Ireland

	period	% change from previous period	% change from previous year
Gross Domestic Product	1995		10.7
Leading Indicator	Jan. 97	0.0	12.4
Consumer Price Index	Q4 96	0.5	1.9
		current period	same period last year
Current Balance	Q3 96	1.14	0.57
Unemployment Rate	Dec. 96	11.8	12.4
Interest Rate	Dec. 96	5.89	5.48

Italy

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q3 96	0.6	0.7
Leading Indicator	Jan. 97	2.4	5.1
Consumer Price Index	Feb. 97	0.1	2.4
		current period	same period last year
Current Balance	Oct. 96	5.17	2.35
Unemployment Rate	Oct. 96	11.9	11.9
Interest Rate	Feb. 97	7.36	9.93

Japan

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q3 96	0.1	3.2
Leading Indicator	Jan. 97	0.5	2.5
Consumer Price Index	Jan. 97	-0.1	0.6
		current period	same period last year
Current Balance	Dec. 96	7.21	10.48
Unemployment Rate	Jan. 97	3.3	3.4
Interest Rate	Jan. 97	0.53	0.56

Luxembourg

	period	% change from previous period	% change from previous year
Gross Domestic Product	1995		3.8
Leading Indicator	Jan. 97	1.9	12.1
Consumer Price Index	Jan. 97	0.1	1.7
		current period	same period last year
Current Balance		..	..
Unemployment Rate	Dec. 96	3.5	2.9
Interest Rate		..	..

Mexico

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q4 96	1.3	7.6
Leading Indicator	Dec. 96	1.2	3.2
Consumer Price Index	Jan. 97	2.5	26.4
		current period	same period last year
Current Balance	Q3 96	-0.71	-0.27
Unemployment Rate	Dec. 96	5.0	6.9
Interest Rate	Jan. 97	24.60	41.57

Netherlands

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q4 96	0.5	2.8
Leading Indicator	Jan. 97	0.4	3.4
Consumer Price Index	Jan. 97	0.3	2.3
		current period	same period last year
Current Balance	Q3 96	5.39	4.73
Unemployment Rate	Nov. 96	6.5	7.0
Interest Rate	Feb. 97	3.01	3.10

New Zealand

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q3 96	0.9	2.1
Leading Indicator		..	..
Consumer Price Index	Q4 96	0.7	2.6
		current period	same period last year
Current Balance	Q3 96	-1.50	-1.09
Unemployment Rate	Q4 96	5.9	6.1
Interest Rate	Jan. 97	7.55	8.63

Norway

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q4 96	-0.8	3.5
Leading Indicator	Dec. 96	0.9	5.2
Consumer Price Index	Jan. 97	0.8	3.0
		current period	same period last year
Current Balance	Q4 96	2.59	0.61
Unemployment Rate	Q3 96	4.8	4.7
Interest Rate	Feb. 97	3.52	5.26

Portugal

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q2 96	3.2	3.6
Leading Indicator	Nov. 96	-2.2	-2.1
Consumer Price Index	Jan. 97	0.3	3.3
		current period	same period last year
Current Balance	Q4 95	-0.12	-1.04
Unemployment Rate	Dec. 96	7.1	7.3
Interest Rate	Jan. 97	6.18	8.41

Spain

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q4 96	0.8	2.6
Leading Indicator	Dec. 96	0.0	3.8
Consumer Price Index	Jan. 97	0.3	2.9
		current period	same period last year
Current Balance	Dec. 96	-0.76	0.21
Unemployment Rate	Dec. 96	22.2	22.6
Interest Rate	Feb. 97	5.89	8.71

Sweden

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q3 96	0.7	0.7
Leading Indicator	Dec. 96	1.0	10.3
Consumer Price Index	Jan. 97	-0.1	-0.4
		current period	same period last year
Current Balance	Dec. 96	0.23	-0.10
Unemployment Rate	Dec. 96	10.6	9.6
Interest Rate	Feb. 97	3.93	7.66

Switzerland

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q3 96	-0.2	-0.7
Leading Indicator	Jan. 97	0.6	4.8
Consumer Price Index	Feb. 97	0.2	0.8
		current period	same period last year
Current Balance	Q3 96	4.34	5.04
Unemployment Rate	Jan. 97	5.4	4.3
Interest Rate	Jan. 97	1.70	1.64

Turkey

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q2 96	0.0	8.2
Leading Indicator		..	..
Consumer Price Index	Feb. 97	5.7	77.7
		current period	same period last year
Current Balance	Q2 96	-1.63	-0.44
Unemployment Rate	Q2 96	6.3	7.2
Interest Rate	Jul. 96	95.58	66.98

United Kingdom

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q4 96	0.8	2.5
Leading Indicator	Jan. 97	-0.1	2.4
Consumer Price Index	Jan. 97	0.0	2.8
		current period	same period last year
Current Balance	Q3 96	-0.18	-2.76
Unemployment Rate	Dec. 96	7.5	8.5
Interest Rate	Feb. 97	6.19	6.16

United States

	period	% change from previous period	% change from previous year
Gross Domestic Product	Q4 96	1.0	3.2
Leading Indicator	Jan. 97	0.3	5.0
Consumer Price Index	Jan. 97	0.3	3.0
		current period	same period last year
Current Balance	Q3 96	-47.96	-37.69
Unemployment Rate	Jan. 97	5.4	5.7
Interest Rate	Feb. 97	5.37	5.15

Publications

January–March 1997

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February 1997

See Kevin Parris, 'Environmental Indicators for Agriculture', **The OECD Observer**, No. 203, December 1996/January 1997.

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FF70 £9 US$14 DM20 ¥1,500

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March 1997

See Leo Maier, 'Letting the Land Rest', **The OECD Observer**, No. 203, December 1996/January 1997.

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Development and Aid

Development Co-operation Report 1996

Efforts and Policies of the Members of the Development Assistance Committee

January 1997

See James H. Michel, 'A New Approach to Development' and Ebba Dohlman and Raundi Halvorson-Quevedo, 'Globalisation and Development', **The OECD Observer**, No. 204, February/March 1997.

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January 1997

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OECD Development Centre

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Also available as an electronic book and on Internet.

CCET (Centre for Co-operation with the Economies in Transition)

Lessons from the Economic Transition
Central and Eastern Europe in the 1990s

January 1997

This book presents an analysis on the main shortcomings and pitfalls in transition policies applied thus far and attempts to point the way forward to push the transition through to a successful conclusion. It highlights the complex interrelation between the requirements of the economics of the transition and the social and political constraints faced by the Central and Eastern European countries (CEECs).

The central questions of this book are: what have we learned from CEECs' economic transition to a market-based system?; and are there lessons to provide quidance to these countries to improve their policies in the future? The book has four major parts selected for their critical importance in explaining the results achieved to date and in assisting policy-makers for a successful transformation of these economies in the future. These four themes include the overall framework of the transition strategy, the restructuring and development of the enterprise sector, the unemployment problem and social issues, and the integration of CEECs into the world economy. The book presents a set of policy–oriented conclusions at the end of each part providing the reader with both thoughtful economic analyses and insightful policy conclusions.

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Education

Reviews of National Policies for Education

Greece

January 1997

Education in Greece faces many urgent and serious problems. The comprehensive description of the system, prepared by the Greek authorities and presented in Part One of this volume, makes this eminently clear.

The causes and magnitude of these problems are analysed, and specific proposals for measures to overcome them put forward. The emphasis throughout is on meeting the demand for education, improving the educational infrastructure, and raising the quality and relevance of education throughout the system.

For this to be done, the planning and management of education must be radically changed, decision-making less centralised, and objective systems of evaluation and accountability established.

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Energy

IEA (International Energy Agency)

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January 1997

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March 1997

The construction of the power infrastructure necessitated by the growth of demand for electricity in Asia will require large investments – ones that are well beyond what governments or multilateral lending institutions can provide. Consequently, mobilising private-sector participation in the process will be vital. In Asia a common first step has been to allow Independent Power Producers (IPPs) to enter what has, until recently, been a government-dominated field. Legal and regulatory structures in many countries in the region are being, or have been, modified to make it possible for this to occur.

Encouraging the entrance of IPPs can often lead to further reform of the electricity sector. For example, governments may wish to improve the competitiveness of state-owned utilities to ensure that they can compete with the IPPs. They seek to do this through mechanisms such as corporatisation, commercialisation, and/or privatisation. Developing the regulatory environment to match these changes is a key challenge for countries in the region.

The Asia Electricity Study looks in detail at the current situation and the outlook to 2010 for the electricity sector in three countries in Asia (Indonesia, the Philippines and Thailand). It analyses existing and planned electricity policies in areas such as financing, regulation, environment and end-use efficiency.

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Energy Policies of IEA Countries

Australia
1997 Review
February 1997
This IEA report provides a comprehensive in-depth assessment of the energy policies of Australia, including recommendations on future policy developments.

Although there is still room for improvement, mainly with regard to energy efficiency and climate change policies, Australia should be commended for its bold steps which have led to significant cost reduction and better energy availability both in the country and in the Asian region.

The report acknowledges the considerable progress made since the last in-depth review towards liberalising and increasing competition in the electricity and gas markets. Reforms will provide major benefits in terms of prices and cost reduction. They will also increase consumer choices and awareness thanks to a fair and competitive pricing and the reduction of cross subsidies.

There is room for improvement with regard to the energy efficiency policy and the policy to mitigate greenhouse gas emissions. As Australia is a federation, the Commonwealth government has relatively limited constitutional powers and subsequently there is a constant necessity to enhance and better co-ordinate Commonwealth and state policies which vary widely between states, especially in those areas where states have a large jurisdiction.
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NEA (Nuclear Energy Agency)

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See Jean-Philippe Barde and Stephen Smith, 'Do Economic Instruments Help the Environment?', **The OECD Observer**, No. 204, February/March 1997.
(97 97 01 1) ISBN 92-64-15360-8, 150pp.
FF120 £15 US$24 DM35 ¥2,550

Environmental Policies and Employment
February 1997
See Jean-Philippe Barde and Michel Potier, 'A 'Green' Impact on Jobs?', **The OECD Observer**, No. 198, February/March 1996.
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OECD Environmental Performance Reviews

France
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This report is part of the OECD Environmental Performance Review Programme which conducts peer reviews of environmental conditions and progress in each OECD country. It scrutinises efforts to meet both domestic objectives and international commitments. Evaluating progress in reducing the pollution burden, improving natural resource management, integrating environmental and economic policies, and strengthening international co-operation are also central to these reviews. The analyses presented are supported by a broad range of economic and environmental data.

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Investment Policies in Latin America and Multilateral Rules on Investment
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CCET (Centre for Co-operation with the Economies in Transition)

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February 1997

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January 1977

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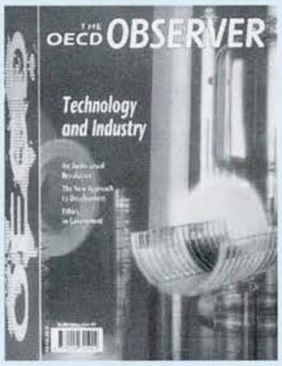

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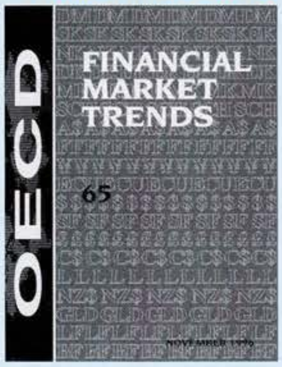

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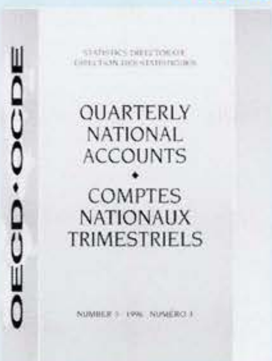

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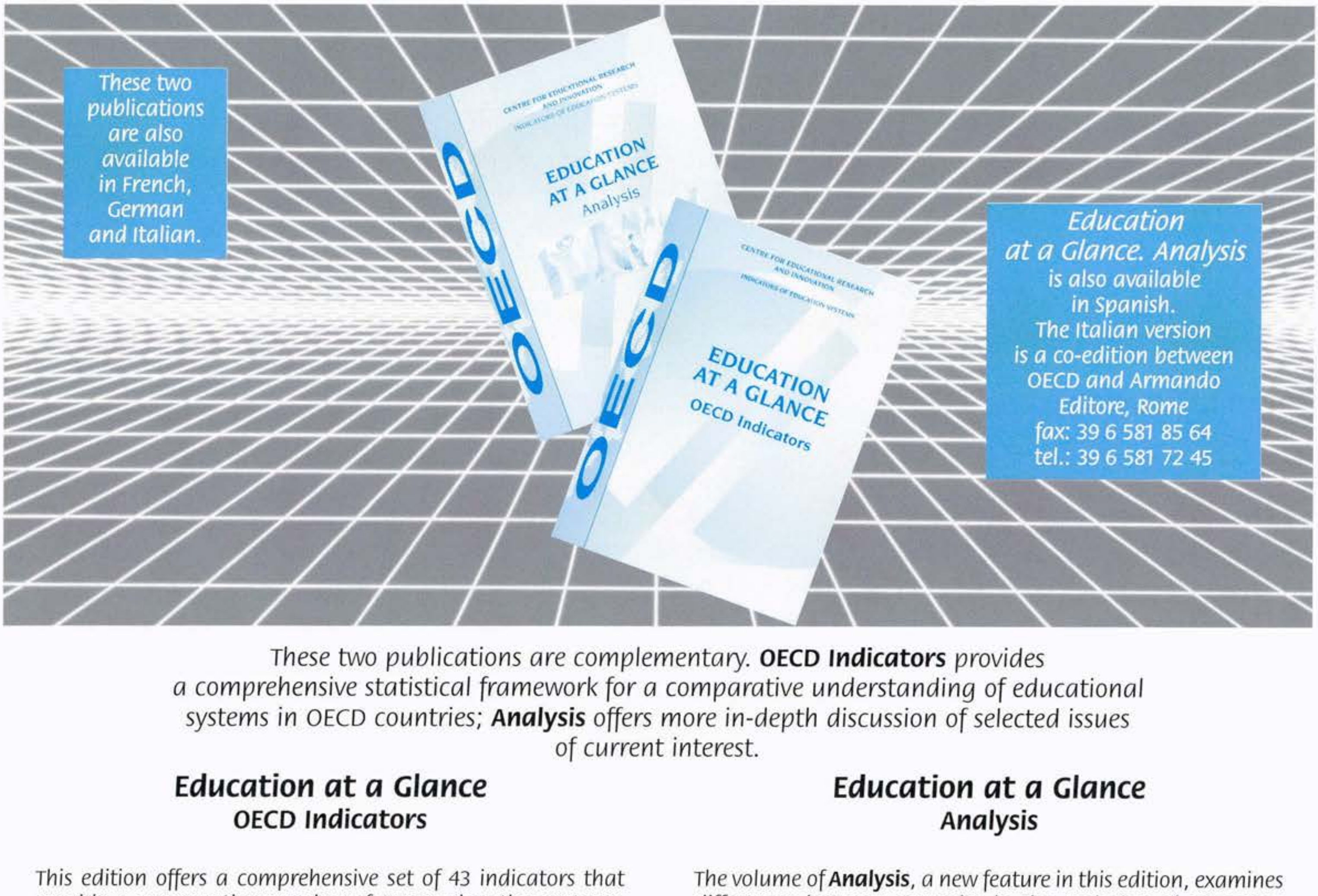

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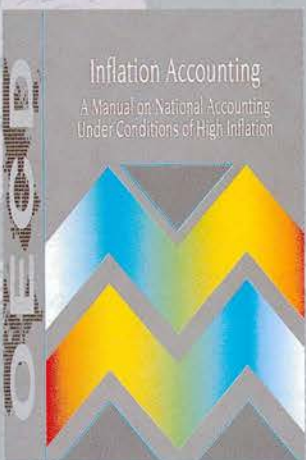

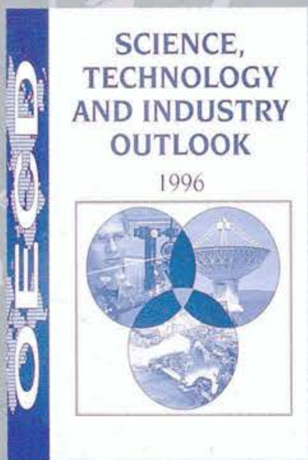

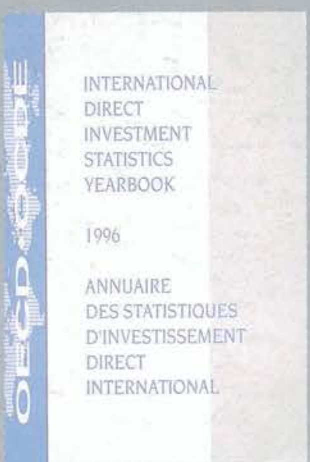

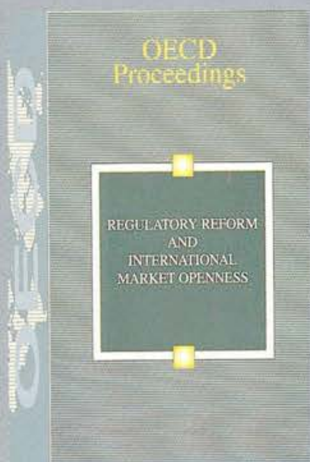

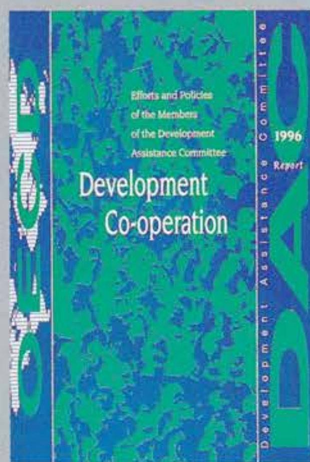

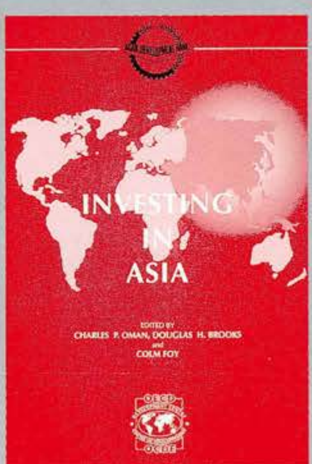

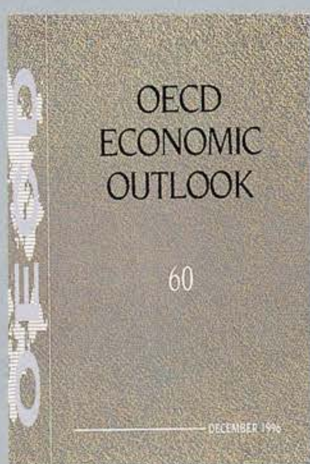

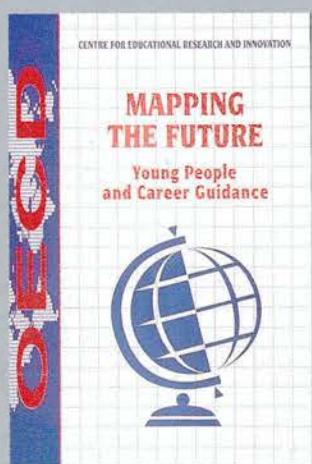

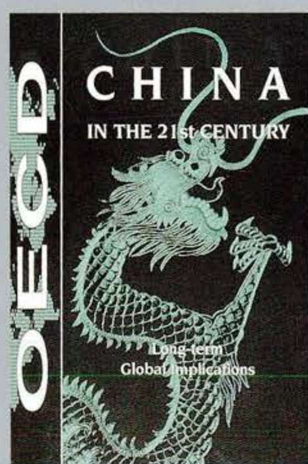

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